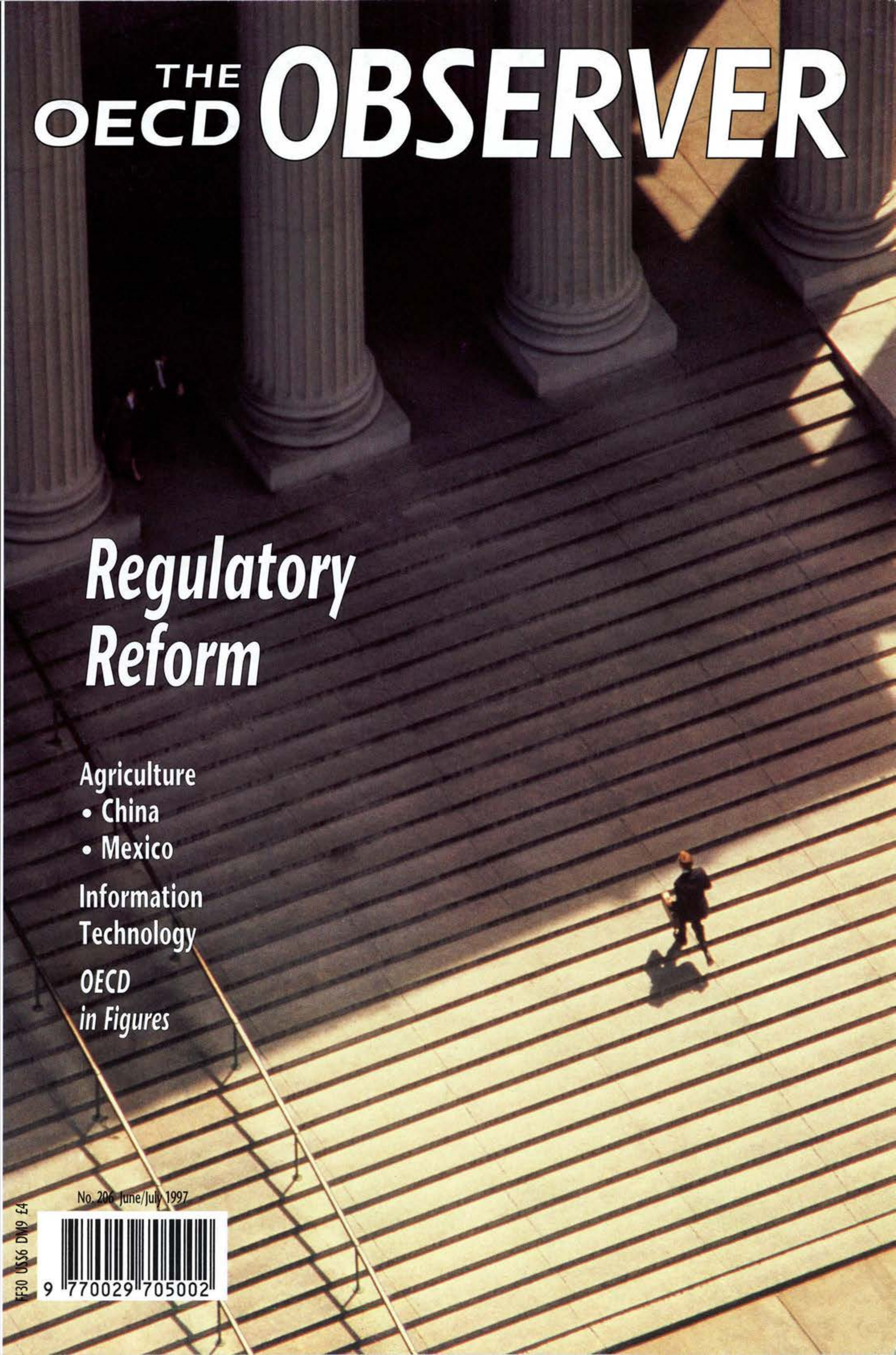

THE OECD OBSERVER

Regulatory Reform

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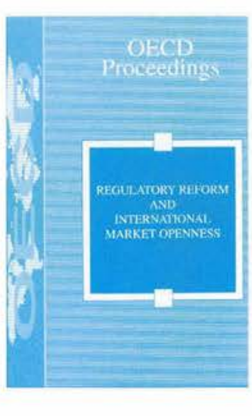

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Reforming Regulation

Donald J. Johnston, Secretary-General of the OECD

Fundamental questions about the respective roles of the state and the market lie at the heart of the current debate about regulatory reform. Governments are grappling with a double challenge: they have to reduce obstacles to the dynamic market forces that drive efficiency and innovation in an increasingly competitive, globalising economy; and they have to find more efficient ways to protect and promote important public-policy goals. Regulatory reform helps them deal with both.

Reform can serve as a powerful stimulus to improved economic performance. Deregulation, for example, facilitates competition, which leads firms to reduce costs, improve the quality of products and services, offer wider choice to customers and enhance productivity. Equally important, the pruning of excessive or poorly designed rules and paperwork requirements that may have grown up over decades frees resources for more productive uses in the delivery of goods and services at more competitive prices.

The potential impact of regulatory reform is particularly pronounced for small and medium-sized enterprises, which account for between 40 and 80% (depending on the country) of employment in OECD economies, provide a disproportionate share of new jobs, and are the source of much technological change. Such firms are hardest hit by regulations – they have the least capacity to navigate their way through the complexities of regulatory and bureaucratic networks, and the relative cost of compliance is higher than for larger firms.

Reform can have short-term costs, not least through its impact on jobs in the sectors exposed to increased competition. But the experience of countries that have undertaken reform suggests that initial job losses often are more than offset by new jobs, both in the reformed sectors and in others benefiting from the change. For example, deregulation of the airline industry in the United States led to initial job losses, but total employment increased by close to 80% from 1985 to 1996. The length of the transition period depends to a large degree on the overall policy framework, and in particular on labour-market policies which can facilitate adjustment. The potential benefits are both broad and dynamic as the impact of reform in one sector spills over into others.

Moreover, the costs of not reforming will grow in the globalised economy. The influence of regulation on increasingly competitive markets is considerable. Most regulatory structures in OECD countries have evolved with a focus on domestic markets, not the global one in which producers of goods and services now compete. These structures have to be adapted to the current economic environment.

Governments continue to have a fundamental role to play to pursue public policies of health, safety, environmental protection, consumer protection and redistribution. Public expectations of regulation in these areas have tended to increase as economies develop. Social progress depends on achieving and maintaining a balance between economic growth and social and political stability. Sound governance, including effective and transparent regulatory structures where necessary, is crucial.

In 1995, OECD Ministers asked the Organisation to assess the results of regulatory reform efforts to date and to recommend policy actions for further progress. And indeed, the OECD can make a valuable contribution to an issue in which all member governments have a significant stake. The pace and depth of reform among OECD countries vary considerably and, certainly, reform is easier said than done. Regulations can create vested interests with powerful, focused political constituencies that are resistant to change. Consistent political leadership and informed public debate are necessary to overcome these interests.

Through analyses and comparisons of their experiences to date, and peer review processes which are a feature of OECD work, the Organisation can assist its member governments by making the reform process more transparent, and by furnishing to the governments who wish it the information they require to explain both the importance and implications of a sustained process of regulatory reform.

The first stage of that work was completed with the presentation of a major report on regulatory reform to ministers on 26–27 May. In the report, the OECD lays out an integrated picture of the results, processes and priorities of regulatory reform. There is a persuasive body of evidence showing that moving ahead concretely on regulatory reform is in the best interest of OECD countries, and that downside risks can be credibly managed. At the core of the report is a series of policy recommendations intended to establish an agenda for action, to be backed up by a programme of monitoring and surveillance by the OECD. In this way, the OECD can help its member governments – and others – adapt their domestic regulatory frameworks to the challenges of globalisation, to prepare their economies to prosper in a global market and to develop more efficient tools to achieve important public-policy goals.

Regulatory Reform: Time for Action

Scott H. Jacobs

A growing body of experience shows that well-planned and properly implemented regulatory reform that stimulates competition in domestic and international markets can raise productivity, lower prices and expand the range of goods and services available to consumers. Yet reform does not mean complete laissez-faire: regulations will continue to be important tools for setting the rules of the game by which markets function, and for improving safety, protecting the environment, and upholding social values such as equity. Here, governments are finding new means, both regulatory and other, of providing sound social protections while allowing markets to work more efficiently.[1]

Superstock

In a world that rewards flexibility, rapidity and responsiveness, government regulation can seem increasingly out of step, even irrelevant at times in the face of ever-swifter economic, technological and social change. As a consequence, long-standing national regulatory institutions and regimes are becoming obsolete, and even harmful to national prosperity and government effectiveness. Regulations that block competition also depress capital and labour productivity, raise prices, restrict consumer choice, stifle the development and diffusion of new technologies, and slow adjustment to changing market conditions. Evidence suggests that large gaps in sectoral productivity between some OECD countries can be blamed partly on differences in regulation.[2] More productive and flexible economies are necessary, not only to stimulate output and job creation but also to serve aging OECD populations. As populations age, there are proportionately fewer workers to support a growing number of retirees; productivity thus has to increase if living standards are to be maintained.[3]

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Other regulations preserve the past at the cost of the future by discouraging entrepreneurs from starting new businesses. Barriers to entry for small and medium-sized enterprises (SMEs) are a source of particular concern, since SMEs are important generators of jobs, innovators and flexible suppliers to larger firms.

As tariffs and other border measures are dismantled, national regulations are often left as the biggest impediments to an open, competitive market economy and the free flow of goods, services and technologies that benefit consumers and bring domestic firms up to international standards of performance. Maintaining an open world trading and investment system requires broad changes in regulatory style and content to promote global economic integration, avoid trade disputes and improve trust and mutual confidence across borders. And an inefficient framework of rules erodes not only the competitiveness and adaptability of regulated industries but also those of non-regulated firms that pay more for goods and services.

Reform is not only a question of liberalising markets. It also involves a quest for better gov-

1. ***Report to Ministers on Regulatory Reform***, *OECD Publications, Paris, 1997.*

2. *See pp. 19–22.*

3. *Lans Bovenberg and Anja van den Linden, 'Pension Policies and the Aging Society',* ***The OECD Observer****, No. 205, April/May 1997.*

Regulatory Reform: Time for Action

ernment. Government intervention is often called for to safeguard economic and social-policy objectives in, for example, consumer and environmental protection, health and safety, and equity, but voters in many countries feel that governments are losing credibility and effectiveness in the face of inexorable change. In some countries, pervasive government controls leave opportunities for corruption. Regulators in all policy areas today must learn to react more quickly, assess more completely the impacts of their actions and intervene only where essential, apply rules more transparently and predictably, and wield a wider range of flexible and cost-effective policy tools, such as market-based instruments and voluntary agreements.

But regulatory reform is not an end in itself. Regulation is an instrument of policy, and reform must be based on a debate about policy goals, economic and social priorities, and the roles of governments and markets in delivering to taxpayers a changing mix of goods and services (including social protections) that together maximise the quality of life. The benefits of reform must be weighed against costs and risks. Reform that is badly designed or clumsily implemented, without taking policy linkages, transition costs, and institutional incentives and capacities into account, can worsen economic performance and undermine social objectives.

Differing Priorities

From limited beginnings two decades ago, regulatory reform has spread rapidly across the OECD, though progress has been uneven across countries and sectors. Priorities in reforming regulation differ among countries. Some, such as New Zealand, the United Kingdom, and to some extent members of the European Single Market have launched far-reaching structural changes in important sectors that were traditionally highly regulated, such as transport and public utilities, by removing restrictions on competition, often beginning with privatisation, and building new efficiency-promoting regulatory regimes.

Other countries, such as Australia, Japan and Mexico, have also set broad-based reviews in motion across the entire administration to apply market principles to decades of accumulated economic and social regulations and to formalities such as government licenses and paperwork. These reviews are aimed at reducing regulation and other government controls to the minimum necessary to reach policy objectives.

Others yet, including Canada, the Netherlands, Sweden and the United States, are changing institutions and decision-making processes inside governments through the use of central supervisory bodies, regulatory-impact analysis, public consultation and improved law-drafting. These reforms are aimed at improving the capacity of government to produce higher-quality regulation in all policy areas and, over the longer term, to change the culture of administration away from old habits of control.

Effective reform is thus a varying mix of regulation, deregulation and re-regulation, supported as necessary by institutional reform. Failures of regulatory reform, such as the credit crises stemming from financial-sector reform in some countries,[4] the slow and disappointing emergence of competition in utility sectors in several, and the lack of progress in many of them in removing unnecessary and outdated regulations can have several causes. They are often rooted in a failure to implement balanced reform packages that simultaneously promote efficient markets, address links with other important policy concerns,

BACKGROUND

Defining Regulation and Regulatory Reform

The diverse set of instruments by which governments set requirements on enterprises and individuals include laws, formal and informal orders and subordinate rules issued by all strata of government, and rules issued by non-governmental or self-regulatory bodies to whom governments have delegated regulatory powers. Regulations fall into three categories.

- *Economic regulations intervene directly in market decisions such as pricing, competition, market entry or exit. Reform aims either at reducing barriers to competition and innovation, often through deregulation and use of efficiency-promoting regulatory techniques, or at improving the regulatory framework for market functioning.*
- *Social regulations protect non-economic values, such as health, safety, the environment and social cohesion. The economic effects of social regulations may be secondary concerns or even unexpected, but can be substantial. Reform aims to verify that regulation is necessary and justified, and to design regulatory and non-regulatory instruments that are clearer, simpler and more effective at lower cost.*
- *Process regulations are paperwork and administrative formalities – so-called 'red tape' – through which governments collect information and intervene in individual economic decisions. They can have substantial impacts on private-sector performance. Reform aims at streamlining and simplifying those that are necessary, and eliminating those no longer required.*

'Regulatory reform' refers to changes that improve regulatory quality, that is, enhance the performance or cost-effectiveness of regulations and related government formalities. Reform can mean revision of a single regulation, the scrapping and rebuilding of an entire regulatory regime and its institutions, or improvement of processes for making regulations and managing reform. Deregulation is an element of regulatory reform; it refers to complete or partial elimination of regulation in a sector to improve economic performance.

4. See pp. 28–31.

5. See pp. 19–22.

*6. Sam Paltridge, 'Upwardly Mobile Telephony', **The OECD Observer**, No. 196, October/November 1995; Sam Paltridge, 'How Competition Helps the Internet', **The OECD Observer**, No. 201, August/September 1996; Sam Paltridge and Dimitri Ypsilanti, 'A Bright Outlook for Communications', **The OECD Observer**, No. 205, April/May 1997.*

Small and medium-sized companies – a vital source of innovation and employment – are disproportionately hit by red tape.

and develop political and administrative capacities for implementing and sustaining reform.

The Benefits of Reform

Experiences of the countries that have made the most progress show convincingly that winners from reform have far outweighed the losers, and that there is considerable scope for additional benefits from reform. Elimination of regulatory barriers to competition has compelled firms to become more efficient and boosted the productivity of entire industries, among them airline and road transport, electricity generation and telecommunications. Improved efficiency has meant sharply lower prices for consumers and user businesses for these services. Indeed, the effects of market liberalisation in individual sectors can be so powerful that it boosts national output as a whole.[5] As productivity improves, real wages also increase as a more efficient workforce is rewarded by higher earnings.

Reforming social and 'process' regulations (box, left) to meet public-policy objectives at lower cost is becoming the focus of efforts to raise productivity and stimulate business activity. These kinds of regulations are estimated to cost US businesses $500 billion a year (about 10% of GDP). Government-imposed administrative burdens alone are estimated to cost European businesses an annual 540 billion ECUs (3–4% of GDP), or about twice as much as the total wealth produced by the entire European farming sector. In Canada, it costs small firms 8% of their revenue to comply with government paperwork; larger firms spend 2%. Reductions in these burdens and barriers can free scarce human and financial resources for more productive activities and invigorate a new spirit of entrepreneurship.

Regulatory reform has also stimulated the creation and diffusion of new products and services, resulting in increased convenience and choice for households and businesses. In telecommunications, for instance, mobile telephones and Internet access appeared much more quickly in competitive environments than in countries with telecommunication monopolies.[6] Introduction of competition helped increase the number of subscribers to cellular phones in OECD countries from 700,000 in 1985 to 71 million by 1995. In competitive markets, the emergence of new

Where state intervention is still considered desirable – in health care, for example – reform should make sure that regulation is effective and transparent.

financial services such as innovative mortgages has enabled more people to become home-owners.

As the world economy is integrated through trade and investment, moreover, the advantages of more efficient and innovative economies are shared by foreign producers of goods and services, as well as investors, thus allowing fuller use of economies of scale and innovative combinations of technologies. Such considerations provided the impetus behind the recent WTO Agreement on Basic Telecommunications, which is expected enormously to expand output and benefit consumers in all participating states. The European Single Market programme had, by 1993, increased EU income by 1.5%. There is therefore a shared interest in reform that should give further momentum to programmes of this sort in individual countries.

Reforms that improve government capacity to produce high-quality regulation, choose priorities more carefully and apply a broader range of policy instruments have helped satisfy social considerations, such as health, safety and environmental protection. Economic incentives as a complement to regulation, for example, can be powerful. In Sweden, a tax on sulphur content of fuel oils resulted in a reduction in sulphur content of fuel oils by almost 40% beyond the stipulated requirements.[7] In the United States, the use of more efficient emissions-trading permitted industry and regulators to agree on tougher emissions standards compared to command-and-control regulation, and still reduce costs by billions of dollars. Sometimes regulators waste considerable resources and permit unnecessary hazards by regulating tiny risks while leaving important ones untouched. A recent study in the United States, for example, found that if regulations were re-targeted at situations where lives could be saved at lowest cost, some 60,000 deaths could be avoided each year without increasing regulatory costs.[8]

Weighing the Costs

The benefits of reform have to be weighed against the costs. Transitional costs and effects on policy objectives merit careful consideration. They can include business disruptions and failures (particularly where companies have been heavily protected for many years), job losses in specific sectors (again, usually where governments have shielded them from competition), and possible impacts on safety, public services and environmental quality.

In some cases, the pain of reform must simply be borne, since the pain of not changing will be even worse, though deferred. Here, reform is a political choice that balances costs (often short-term and concentrated) with benefits (often longer-term and generalised). In many cases, though, governments can take steps to reduce the magnitude and duration of costs. The crucial element is design of a co-ordinated package that cuts across policy areas and instruments. The careful and transparent mapping-out of policy linkages and planning of the transition is essential, particularly where reform will have far-reaching structural effects. Such clarity will quicken the transition to truly competitive markets, and help avoid costly mistakes that may take years to correct.

Public misgivings about potential adverse effects of reform on safety, health and consumer protection must be addressed. Innovative and expanding markets can produce new risks to which governments cannot respond quickly enough. Increased road accidents in some countries were blamed on fiercer competition between new haulage firms after reform. Concerns have been voiced about the safety of air transport in competitive markets. And in the United Kingdom aggressive selling of some financial services to the detriment of consumers followed liberalisation.

Evidence from countries where reform has taken place shows nonetheless that strong com-

7. Jean-Philippe Barde and Stephen Smith, 'Do Economic Instruments Help the Environment?', ***The OECD Observer****, No. 204, February/March 1997.*

8. Tammy Tends and John Graham, 'The Opportunity Costs of Haphazard Social Investments in Life-saving', in Robert Hahn (ed.), Risks, Costs, and Lives Saved: Getting Better Results from Regulation, *Oxford University Press, New York and London, 1996.*

9. Christopher Wagner, 'Safe Products and Global Trade', ***The OECD Observer****, No. 202, October/November 1996.*

10. ***The OECD Jobs Study: Facts, Analysis, Strategies****, OECD Publications, Paris, 1994;* ***The OECD Jobs Study: Evidence and Explanations****, OECD Publications, Paris, 1994.*

Regulatory reform has brought wider consumer choice in its wake.

Serge Attal

petition is not inconsistent with a good safety record, as long it is backed up with effective health-and-safety measures. After the deregulation of airlines in the United States, in fact, fatalities per million passenger miles dropped by 75% (from 1974–76 to 1993–95). The safety record of road freight transport also improved in the United Kingdom after reform. Of course, regulators should be prepared to move quickly in response to rapid product developments, which may require that governments strengthen regulatory bodies in parallel with market liberalisation.

Consumer protection is another important concern. Consumers faced with more choices may require more information and confidence-building measures. Mutual-recognition agreements between countries can help address worries that entry of foreign products and services may lead to reduced standards of safety or consumer protection.[9]

The effect of market liberalisation on jobs is a central consideration. Heightened competition may initially result in job losses in individual sectors as businesses are forced to become more efficient. Although reform increases demand for labour in other firms and sectors, displacement can be costly for affected workers and society as a whole. Here, regulatory reform should be accompanied by active labour-market measures. The *OECD Jobs Study* set out a broad programme of action intended to enhance the ability of the labour market to adjust, as well as to increase the capacity of the economy to create knowledge and to innovate.[10]

Competition in vital services such as telecommunications, energy and public transport might conflict with equity objectives by undermining 'universal service'. The reform of financial services in Australia, for example, was accompanied by new fees and charges on basic services, with disproportionate impacts on people with low incomes, not least the elderly. Market forces can also reduce the range and scope of services available in low-density areas, if, say, rural post offices begin to close, as happened in Finland.

Compensating measures can mitigate unacceptable distributional consequences while preserving the benefits of more dynamic and efficient markets. Most pro-competition reforms in public utilities have included measures to guarantee access to public services. All governments that have liberalised telecommunications markets, for instance, have maintained the policy principle of universal service and are developing a range of new programmes, such as transparent subsidies, to deliver and fund it. In some cases, competition in itself has also significantly benefited universal service by reducing prices and promoting diffusion of new technologies that are more readily available to consumers.

■ ■

Regulatory reform takes place in complex political, social, economic and administrative environments. The benefits can be maximised and the risks better managed through a process of careful and transparent planning and policy co-ordination that is informed by the experiences of other countries. A pragmatic view of reform, based on potential benefits and costs, is important. Different countries will legitimately choose to pursue different regulatory policies – the challenge is to ensure that regulation is used as efficiently, effectively, and transparently as possible in pursuit of the public interest. Reform, well co-ordinated and planned, is not an ideological act, nor simply a concession to stronger markets that accelerates painful structural change. Instead, it is a means of managing necessary change so as to ease disruption and develop new opportunities for economic and social progress. ■

OECD Bibliography

Report to Ministers on Regulatory Reform, 1997
Lans Bovenberg and Anja van den Linden, 'Pension Policies and the Aging Society', **The OECD Observer**, No. 205, April/May 1997
Sam Paltridge and Dimitri Ypsilanti, 'A Bright Outlook for Communications', **The OECD Observer**, No. 205, April/May 1997
Evaluating Economic Instruments for Environmental Policy, 1997
Jean-Philippe Barde and Stephen Smith, 'Do Economic Instruments Help the Environment?', **The OECD Observer**, No. 204, February/March 1997
OECD Economic Surveys: New Zealand, 1996
Paul E. Atkinson, 'New Zealand's Radical Reforms', **The OECD Observer**, No. 205, April/May 1997
Christopher Wagner, 'Safe Products and Global Trade', **The OECD Observer**, No. 202, October/November 1996
Sam Paltridge, 'How Competition Helps the Internet', **The OECD Observer**, No. 201, August/September 1996
Sam Paltridge, 'Upwardly Mobile Telephony', **The OECD Observer**, No.196, October/November 1995
The OECD Jobs Study: Facts, Analysis, Strategies, 1994
The OECD Jobs Study: Evidence and Explanations, 1994.

How Regulatory Change Affects the Economy

Nicholas Vanston

The costs of regulatory reform – not least job losses and the disappearance of familiar institutions, in both the public and private sectors – are visible and immediate. The benefits – expanding markets, increased entrepreneurial innovation, economic growth, higher standards of living, cheaper goods and services – can take some time to appear and are sometimes difficult to quantify. The OECD has attempted to measure the effects on the economy as a whole from deregulation in individual sectors.[1]

Most of us have mixed feelings about official rules and regulations. We object to the intrusions they make on our freedom, but we recognise that freedom also depends on the existence of rules. We resent the flood of new regulations that our tireless legislators pump out every year, but we fear the consequences of abolishing some of those we have learned to live with. We know that reform or abolition of many of the economic regulations – on what goods may be produced, how and by whom, and sometimes where or when we may purchase them, and at what price – has often resulted in lower prices or bigger choice, but we often read that such reform has led to bankruptcies, wage cuts and job losses. The potential benefits of reform seem difficult to measure. And the potential costs appear high for the people directly concerned.

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As part of its contribution to the OECD's project on regulatory reform, the Economics Department was asked to construct a sort of balance-sheet of the macro-economic impact of reforms to economic regulations. Any attempt to measure the benefits and costs of reform has to begin with its impacts on individual sectors. Ideally, it should also be able to say whether reform in one sector has subsequent effects on performance in others, and in which direction: is the net effect of several simultaneous reform programmes more or less than the sum of its parts?

Analytic Methods

Few reliable analytical tools exist to estimate the macro-economic effects of micro-economic change. Perhaps the best known is that which uses so-called 'computable general-equilibrium modelling'. That involves constructing a complex mathematical model of an economy, with a detailed set of equations describing production and consumption, and calibrating the model by using data for a particular year. The model is then 'solved' to see what would be the result of reducing (or increasing) particular distortions affecting the economy in question.

The advantage of this approach, indeed, is that it allows the analyst to examine the impact on all important aspects of the economy arising from changes in an individual sector. The disadvantage is that it gives little information as to how long it would take the economy to adjust to change, nor how it would behave as it adjusted. Moreover, unless they are unmanageably complex, general-equilibrium models have to be purpose-built to answer particular questions. This involves a certain amount of arbitrary simplification, and hence an uncertain margin of error in the results (a model with sectoral detail would be very complex). It was decided at an early stage that the general-equilibrium approach would have to be ruled out.

The approach adopted instead was a five-stage one. First, we selected a group of countries that had a varied experience of regulatory reform, good data on variables of interest to us (especially data on sectoral productivity) and reliable macro-econometric models. The countries selected were (in descending order of GDP) the United States, Japan, Germany, France and the United Kingdom. Then we chose five sectors,

1. *Sveinbjörn Blöndal and Dirk Pilat, 'The Economic Effects of Regulatory Reform',* ***OECD Economic Studies****, No. 28, OECD Publications, Paris, forthcoming 1997.*

2. *Dirk Pilat, 'Competition, Productivity and Efficiency',* ***OECD Economic Studies****, No. 27, OECD Publications, Paris, forthcoming 1997.*

3. *For example, C. Winston, 'Economic Deregulation: Days of Reckoning for Microeconomists',* Journal of Economic Literature, *Vol. 31, September 1993, and Jens Høj, Toshiyasu Kato and Dirk Pilat, 'Deregulation and Privatisation in the Private Sector',* ***OECD Economic Studies****, No. 25, OECD Publications, Paris, 1996.*

4. *Industry Commission,* The Growth and Revenue Implications of Hilmer and Related Reforms: Final Report, *AGPS, Canberra, 1995.*

common to all five countries, where again the record of regulatory reform was varied, and where the sectors were either economically important (with a large contribution to GDP or employment), or where the programmes of regulatory reform have been particularly well documented, or both. The sectors were electricity, telecommunications, road transport, airlines and distribution.

Third, we estimated the likely impact of plausible regulatory reform on employment, wages, productivity and profits in each of the sectors in each of the countries. We were much helped by research we had already done to compare productivity in the same sector in different OECD countries,[2] and by analyses by other economists of the effects of previous reforms in some of these sectors,[3] and by estimates of the likely effects of further reforms in some sectors.[4] When we had such estimates, we used them. From the work already published, we knew broadly what sizes of effects to expect for the countries and sectors where there were no national studies. From our own research, we knew how big productivity differentials are in practice between countries, and thus by how much the gaps might be reduced. We also knew that poor productivity is often associated with lacklustre competition, and that many economic regulations stifle competition, sometimes deliberately.

We did not assume that all of the gap between productivity in the 'best' and 'worst' countries for a given sector were ascribable entirely to bad regulations and could therefore be eliminated by appropriate reforms. There is a host of reasons behind productivity differentials (differences in population densities, land prices and difficult-to-measure differences in the quality of labour, for example). By 'eliminating' only some of the gaps and estimating the impact on demand for the output of these sectors as a result of lower costs (of labour, capital and, in some cases, material inputs), we could estimate sectoral changes in productivity, employment, wages and profits that turned out to be comparable to those recorded in the real world after programmes of regulatory reform. So we are reasonably confident that the piecemeal sectoral effects that we estimated at this stage are indeed plausible estimates of what could be expected if these sectors were to be reformed in some countries to the same degree as they already have been in others.

Freddy Cats

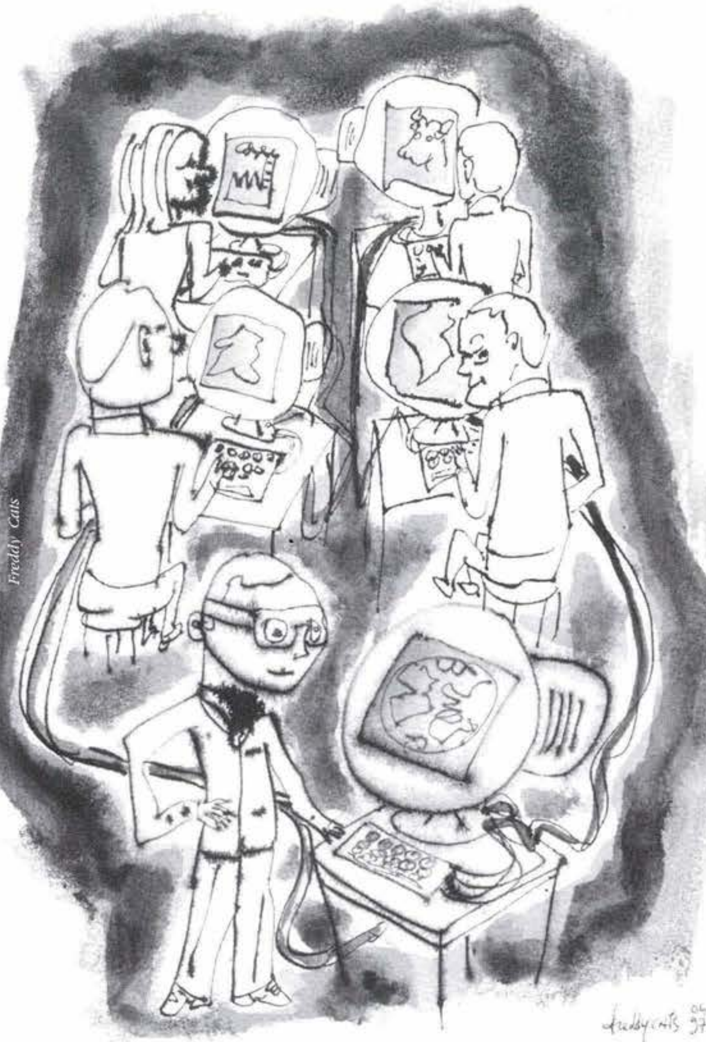
At this stage, allowance was made for the 'innovation effect'. Regulatory reform (of, for example, telecommunications) has in the past usually been accompanied by the creation of new

How Regulatory Change Affects the Economy

firms supplying new products to meet new demands. The expansion of the telecommuncations market has compensated for the initial labour shake-out, and in some countries it has been argued that employment has actually risen in the sector. The innovation effect is, of course, difficult to model, as it depends on the entrepreneurial environment and the extent to which remaining regulations encourage or discourage it.[5] But we were convinced that a more accurate picture of the effects of reform can be obtained by making allowance for innovation, however imperfectly, than by ignoring it altogether. Thus, in appropriate cases, we assumed that sectoral employment would fall by less, and that sectoral output would rise by more, than would have been expected on the basis of pre-reform estimates of demand elasticities.

By now, we had a series of estimates, either calculated by us or taken from national studies, of the first-round effects of regulatory reform on productivity, employment, wages and profits in the selected sectors and countries. The fourth step in the exercise was to 'add them up', for each country, by weighting them by the contribution of each sector to GDP or employment. At this stage we also examined the indirect effects of changes in the output prices or input requirements of one sector on all others.

But these calculations are purely static. They do not take into account that, in the real world, changes in labour productivity, employment and profits trigger off dynamic reactions which set the economy moving towards a new equilibrium.



In the short term, while people are changing jobs as old ones are being eliminated and new ones created, higher unemployment temporarily results. This is unsustainable, though, and both employment and real wages adjust to move the labour market to a new equilibrium. Employment returns to broadly its previous volume, with output and real wages higher than before. The speed at which this happens will obviously depend on how good the labour market is at reacting to shocks. Compared with an economy that is able to adapt quickly to changing circumstances, an inflexible one could display higher unemployment for a longer period.

To explore these dynamic effects, a specially built version of the OECD's 'Interlink' model was used. In this fifth step, the initial shocks to productivity, wages, profits and employment were fed into the model over a simulated ten-year period, to mimic the impact of regulatory-reform programmes being carried out over that length of time.

The main results confirmed our expectations and strengthened our confidence in the validity of the approach. We found that wide-ranging programmes of regulatory reform can have a major impact on GDP in some countries, with no adverse effects in the longer term. Employment and unemployment return approximately to their previous positions in all countries. Inflation rates fall steeply at first, then flatten before picking up towards the end of the ten-year period, as the impact of reform on prices wears off. Real GDP rises by as much as 6 percentage points above baseline in the case of Japan, by 4½–5 percentage points in France and Germany, by 3½ percentage points for the United Kingdom, and by less than a percentage point for the United States, broadly reflecting the actual scope for reform in the five countries.

Growth and Employment

It is often argued that regulatory reforms, especially of economic regulations, will lead to a rise in the long-term growth rate of the economy, faster growth of employment and permanently lower unemployment. These outcomes are possible, and indeed mechanisms exist that could bring them about – in theory. But our analysis does not assume that such mechanisms exist. Indeed, the evidence for a link between long-term growth rates and the prevalence of regulation in particular is weak. The economies of Japan and Europe which, relatively, are highly regulated grew faster than the United States for most of the period after the Second World War, for example, and there is considerable debate as to the extent to which regulations or their absence have helped or hindered growth in some Asian countries. (The reasons for the speeding-up or slowing-down of national growth rates remain obscure to some extent.)

5. *See also pp. 19–22.*

6. *Sam Paltridge, 'How Competition Helps the Internet',* ***The OECD Observer****, No. 201, August/September 1996;* ***Telecommunication Infrastructure: The Benefits of Competition****, OECD Publications, Paris, 1995; Sam Paltridge, 'Upwardly Mobile Telephony',* ***The OECD Observer****, No. 196, October/November 1995.*

7. ***The OECD Jobs Study: Facts, Analysis, Strategies****, OECD Publications, Paris, 1994;* ***The OECD Jobs Study: Evidence and Explanations****, OECD Publications, Paris, 1994;* ***The OECD Jobs Study: Taxation, Employment and Unemployment****, OECD Publications, Paris, 1995;* ***The OECD Jobs Study: Investment, Productivity and Employment****, OECD Publications, Paris, 1995;* ***The OECD Jobs Strategy: Technology, Productivity and Job Creation****, OECD Publications, Paris, 1996;* ***The OECD Jobs Strategy: Enhancing the Effectiveness of Active Labour Market Policies****, OECD Publications, Paris, 1996;* ***The OECD Jobs Strategy: Pushing Ahead with the Strategy****, OECD Publications, Paris, 1996.*

Nor is the picture clear when it comes to the effects on employment and unemployment. Experience shows that, in general, real wages fully adjust to changes in labour productivity. As long as they do so, there is no particular reason that employers should want to employ more workers. Our main analysis assumes that employees succeed in appropriating for themselves all the benefits from higher productivity in the form of higher real wages, as has always been the case in the longer term. Hence employment in our simulations reverts to normal after an initial shake-out: it does not increase in net terms as a result of the reforms.

Arguably, though, a wide-ranging programme of regulatory reform might also affect labour markets in such a way as to increase employment and reduce unemployment in a permanent way. After a shake-out, the remaining employees may well not press for higher wages to completely 'compensate' for their higher productivity. The displaced employees, moreover, are likely to find new jobs that either pay less for the same productivity, or pay the same as before, but for higher productivity. Deregulation of telecommunications, for example, has spawned a host of new enterprises producing high value-added equipment to supply new demands,[6] and some displaced employees from the former public monopolies may take jobs in those firms. Moreover, if the productivity gains are narrowly concentrated in a few sectors, with higher wages there, there might not be spill-over effects into other sectors. But to the extent that reform lowers prices of goods and services, there must be at least some increase in real wages for that reason alone: cheaper goods mean that real wages are higher throughout the economy even if nominal wages remain the same.

To explore these issues, we also ran a simulation in which an arbitrary three-quarters of the rise in labour productivity was allowed to find its way into higher real wages. As expected, we found that there would be permanent beneficial effects on employment, and lower unemployment. For continental Europe, for example, unemployment rates were lowered by one percentage point from their current positions of around 10%. This result strongly suggests that if regulatory reform of product markets were to be combined with reforms that made labour markets more flexible, everybody would be a good deal better off: real wages would be higher and unemployment would be lower. Furthermore, public-sector finances would be healthier, as expenditure on income support would fall, and tax receipts would rise.

■ ■

Our work and that of others, as well as historical experience, all show that credible, transparent and carefully designed programmes of regulatory reform lead to measurably higher living standards, as well as to benefits which are not easily quantifiable but which are nevertheless real. The new-found ability to shop in the evenings and at weekends in some OECD countries is one example, as is the availability of a range of different radio and television programmes and mobile telephony.

There is little doubt that in the initial stages (for example, the privatisation of a previously state-owned and inefficient electricity industry) some people will lose their jobs. But if the privatised industry is forced to become competitive, prices will fall, demand will increase, and new jobs will appear. Cheaper electricity will also encourage higher output in sectors which use electricity in large quantities, creating new jobs there, too. Still, this development will take time, and meanwhile some of the displaced employees will still be searching for a new job. Should regulatory reforms be postponed for that reason?

The costs of reform are similar in kind to the normal types of adjustment costs to which any open economy is always subject. Changes in tastes, in technology and in foreign competition all require the economy to adjust. Jobs disappear in some sectors and are created in others. In most sectors, this process has been happening gradually through the period since the Second World War. When industries are regulated, though particularly when they are regulated unnecessarily or in ways that insulate them from competition, the process of adjustment is hindered and slowed down. When reforms are made, adjustments that could have been spread over several years in the past are concentrated into a short period as the log jam is cleared. Postponing reforms thus postpones the benefits and magnifies the eventual costs.

A large proportion of the costs is incurred by displaced employees, some of whom may have to search for a job for prolonged periods, particularly if they are older and less highly skilled. A range of studies show, too, that the new jobs are likely to pay substantially less than the previous ones, especially at first. Thus, even if society benefits in net terms, and to a considerable extent, some individuals pay a heavy price. *The OECD Jobs Study*[7] demonstrated that the burden of adjustment can be mitigated (though not eliminated) by measures which increase the ability of the labour market to adjust – for example, by training people who lose their jobs in new skills and encouraging their mobility. ■

OECD Bibliography

Sveinbjörn Blöndal and Dirk Pilat, 'The Economic Effects of Regulatory Reform', **OECD Economic Studies**, No. 28, forthcoming 1997

Dirk Pilat, 'Competition, Productivity and Efficiency', **OECD Economic Studies**, No. 27, forthcoming 1997

The OECD Jobs Strategy: Pushing Ahead with the Strategy, 1996

The OECD Jobs Strategy: Enhancing the Effectiveness of Active Labour Market Policies, 1996

The OECD Jobs Strategy: Technology, Productivity and Job Creation, 1996

Jens Høj, Toshiyasu Kato and Dirk Pilat, 'Deregulation and Privatisation in the Private Sector, **OECD Economic Studies**, No. 25, 1996

Dirk Pilat, 'From Competition to Growth', **The OECD Observer**, No. 202, October/November 1996

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

The OECD Jobs Study: Investment, Productivity and Employment, 1995

The OECD Jobs Study: Taxation, Employment and Unemployment, 1995

Telecommunication Infrastructure: The Benefits of Competition, 1995

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

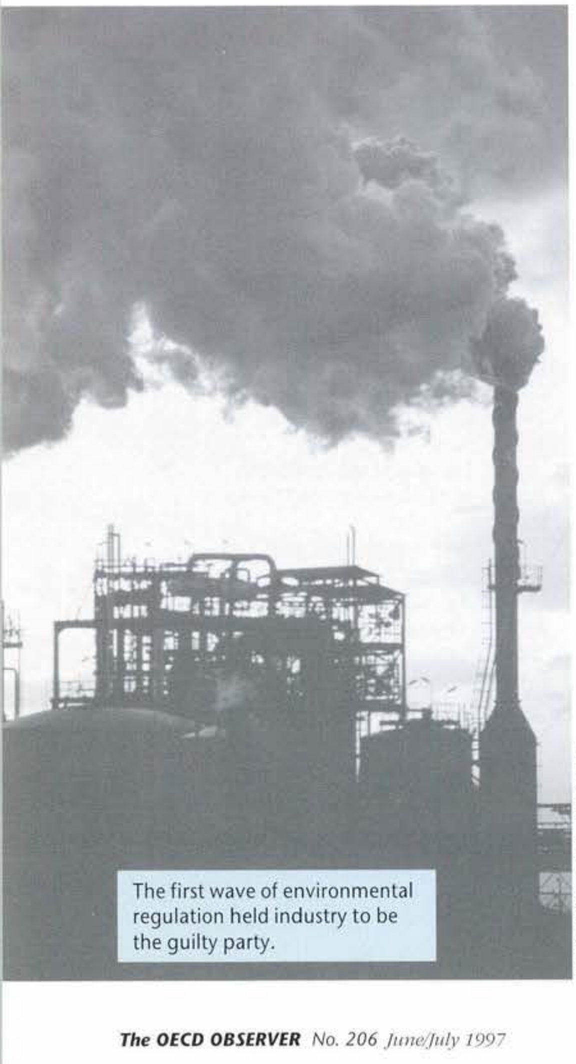
The OECD Jobs Study: Evidence and Explanations, 1994

The OECD Jobs Study: Facts, Analysis, Strategies, 1994.

Environmental Regulation:

Bill L. Long

For three decades 'command-and-control' regulation has formed the bedrock of government strategies to protect and improve the environment in the OECD countries. Critics contend that regulation is an anachronistic and inefficient 'blunt instrument'. But environmental regulation has evolved rapidly since the mid-1960s to reach a state of considerable sophistication, particularly when used in combination with other policy tools.



Pambour/Campagne, Campagne

The first wave of environmental regulation held industry to be the guilty party.

The formulation of environmental policy faces some substantial obstacles. The 'science' of assessing environmental risk is often inconclusive and thus open to debate. The 'economics' of protection is likewise controversial: the costs and benefits, to individuals, firms and society, both now and in the future, are not easily established. And managing the environment requires the assigning of economic values to resources that are common property (urban air, groundwater, stratospheric ozone, marine fisheries) and which, traditionally, have existed beyond the disciplines of the market-place.

Nonetheless, regulation was a natural tool for policy-makers when oil spills, pesticide contamination and wildlife deaths, 'killer' smogs, the poisoning of rivers and lakes and similar alarms first attracted government attention in the early 1960s. Attacking pollution and the degradation of natural resources was perceived, moreover, in legalistic terms, as a 'crime and punishment' undertaking – rather than as a balancing of national economic and environmental policy objectives.

This approach gave rise to extensive legislation in the later 1960s and early '70s which prescribed standards, penalties for non-compliance, and administrative procedures. It was backed by the establishment of new regulatory agencies in national, regional and local government.

Regulation has remained the tool of choice for governments mainly because, when properly enforced, it offers a high degree of assurance that the objective will be achieved. But critics have long complained that regulation is often a 'quick fix' by bureaucrats who can claim that they have addressed the problem by having a law passed. Regulatory instruments have also been attacked because their economic costs are often hidden.

In the early years, environmental laws and implementing regulations and directives were relatively easy to enact in the OECD countries which were environment-conscious. But this feature has disappeared over the years, in the face of contentious and time-consuming parliamentary debates over proposed legislation, and the expanding use of the courts by opponents of regulation.

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Why Reform?

In three decades environmental policy in OECD countries has undergone two major waves

The Third Generation

of change. In the 1970s, the first generation of environmental regulations had focused on remediation, on removing risks to human health and improving degraded air, water and land resources. Industry was perceived as the villain; most environmental laws, and the regulatory procedures that flowed from them, were aimed at curbing pollution and wastes from industrial installations. By the end of the decade, industry was becoming increasingly vocal about the administrative burdens and economic costs they were having to absorb from the flood of environmental regulations emerging, often in an unco-ordinated manner, from independent air, water, land and waste-management divisions of the same agencies. And the regulators were beginning to agree.

In the mid-1980s, environmental regulation entered its second generation, with many OECD countries beginning reform programmes aimed at rationalising and improving regulatory machinery and procedures. One of the goals (and it is still a valid one) was to compress and streamline regulations in order to reduce the administrative burden and other costs for industry. Another was to design a 'next generation' of regulations, with several aims: to manage pollutants that existing legislation simply transferred from one medium to another (requiring a new 'multimedia' approach); to influence industry to move away from the 'end-of-pipe' capture of pollutant emissions in favour of reduction at source by preventative, manufacturing processes; and to cope with widely dispersed ('non-point') sources of pollution (such as agricultural run-off and the effects of transport systems).

Environmental regulators now began to display strong interest in market-based strategies and tools, principally charges (for water and waste treatment), deposit-refund systems (for containers and batteries), and environmental taxes (on fertilisers and SO_2 emissions, for example). Their goals were to improve both the economic efficiency and environmental effectiveness of the policy tools, and to promote technological innovation. The OECD had, in fact, begun to recommend a decade earlier that governments should rely more on the market in managing the environment – an approach now regularly endorsed by environment ministers.

In the second half of the 1980s concern grew over global-scale threats, specifically stratospheric ozone depletion and climate change. At the same time, environmental policy-makers were being challenged more aggressively by economic interests in government and by industry about the implications for trade, competitiveness, investment and employment of domestic regulation. These considerations pointed to the desirability of regional and international co-ordination, where, again, the OECD led the way.

Through the 1990s, efforts by OECD governments to improve the quality of environmental regulations have been intensifying, partly because of continuing pressure from industry for regulatory 'relief' in a period of tightening international competition. The policy-makers now have to demonstrate – to industry, to their counterparts in other ministries and to the public at large – that their chosen instruments are cost-effective.

The pressure for change is also being driven by recognition that the problems to be tackled in the future are likely to be much more difficult than those of the past. The costs of cleaning air and water continue to rise. The international economic (and political) impacts of environmental protection are likely to become bigger in the age of globalisation. Developing countries are concerned about real or perceived economic consequences for them of eco-taxes, eco-labels on traded products, and the policies to deal with climate change proposed by OECD countries. These problems are compounded by the rapid pace of change of regulation over three decades, which has outpaced the ability of most OECD governments to remove outdated and cumbersome regulations from the books, and to introduce coherent codification of standards and implementing procedures.

New Directions

Now, as the '90s come to a close, the regulation has reached a distinctive, and dynamic, third generation. Reform is moving down two tracks. The first is a more intensive and comprehensive approach to upgrading the quality of existing regulations. The second involves a search for the best mixes of policy tools, linking command-and-control instruments with economic instruments and voluntary approaches.

Experience suggests that there are few common solutions to environmental problems. The 'correctness' of a policy tool depends heavily on national cultures, public attitudes, legislative and administrative structures, and other characteristics that can vary markedly from country to country and region to region. For example, two OECD countries can apply almost the same eco-tax to bring down fertiliser use and get radically different rates of reduction. Policy-makers thus prefer to have an arsenal of all three kinds of tool at their disposal – command-and-control regulations, economic instruments and voluntary approaches – supported by better insights into the particular strengths and weaknesses of each; the implications of using them alone, and (increasingly) in combination; and expanded information on what seems to work best in particular situations.

Industry, too, enjoys an enhanced reputation as a force for environmental improvement, with increasing public acceptance of the message that it is possible to be both 'clean' and profitable. Processes and products have been rethought and, more and more, solutions appear which benefit both the environment and product sales.

This new situation has opened up a range of new opportunities for policy-makers. It is now

Environmental Regulation: The Third Generation

possible for governments, with broad public support, to enter into voluntary agreements with industry, under which industry is willing to commit itself to go 'beyond regulation' in exchange for a relaxation of some of the administrative and compliance costs of regulations (data-collection, reporting). This is also making it possible for the regulators to shift their attention away from the leaders in 'industrial greenness' (invariably the larger firms), and to concentrate more on measures that stimulate environmental performance by medium- and small-sized firms.

Only two of the responses to a survey undertaken by the OECD indicated that deregulation is a principal goal of reform. Instead, the majority of reporting countries indicated that their focus is on re-regulating: to improve the quality and cost-effectiveness of both existing and new regulations; and to develop other mechanisms that can be used with command-and-control measures. Domestic regulation indeed, is being affected by requirements to comply with international rules and agreements through participation in regional agreements and institutions such as the EU and NAFTA, which often require the harmonisation of a wide range of policy instruments.

Current efforts to improve regulatory quality clearly reflect widespread awareness of their limitations. Prescriptive regulations have often proved to be inflexible, resulting in actions that defy common sense, achieving tiny returns for high costs. First- (and even second-) generation environmental regulations were also usually based on government specification of the particular technologies, or industrial designs, to achieve the ends desired. That dampened technological innovation, which is vital in lowering the costs of regulation, and also in achieving environmental benefits beyond compliance ceilings.

Present-day policy-making can thus be described as finding 'horses for courses': employing regulatory approaches as the most efficient way to address some problems, using taxes and disclosure systems in other cases, and turning more and more to a mix of reinforcing policy instruments to deal with complex, third-generation environmental difficulties.

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Principles for Environmental Management

Many OECD countries are updating their broad principles and objectives for environmental policymaking as a context for pursuing regulatory reform strategies. In March 1995, President Clinton issued a report which sets out a series of 'principles' for the selection and use of environmental policy tools, including command-and-control regulations.[1] These are quite consistent with recent statements of environmental policy goals of other OECD countries:

- *Protecting public health and the environment are important national goals, and individuals, businesses and government must take responsibility for their actions*
- *Regulation must be designed to achieve environmental goals in a manner that minimises costs to individuals, businesses and other tiers of government*
- *Environmental regulation must be performance-based, providing maximum flexibility in the means of achieving the desired goals, but requiring accountability for results*
- *Preventing pollution is preferable to controlling it or cleaning it up*
- *Market incentives should be used to achieve environmental goals, whenever appropriate and possible*
- *Environmental regulation should be based on science and economics, be subject to expert and public scrutiny, and be responsive to the culture and values of society*
- *Government regulations must be understandable to those affected by them*
- *Decision-making should be collaborative, not adversarial, and decision-makers must inform and involve those who must live with the consequences*
- *Central, regional/state, and local governments, and indigenous people, must work as partners to achieve common environmental goals, with the lead taken below central government when possible and appropriate.*

1.'Reinventing Environmental Regulation', *National Performance Review*, 16 March 1995.

What Costs?

The economic cost of environmental regulations is a controversial subject, not least because it is difficult to establish convincingly. It is probably true that most of the cost of protection being borne by firms, consumers and taxpayers is the result of government-prescribed regulatory requirements, either directly or indirectly. OECD studies indicate that, over the past decade, member countries have been investing between 1.5 and 2.5% of GNP on eco-management.[1] US data show that spending on pollution abatement and control (by industry and federal, state and local government) was \$121.8 billion in 1994. As a share of GDP, this expenditure has been around 1.75% since the mid-1970s.[2] In its response to the OECD survey, the United Kingdom indicated that its 'production industries' spent \$2.36 billion in 1995 to meet such requirements.

The control of widely dispersed sources of pollution – such as agricultural run-off – is one of the goals of the second generation of regulation.

Assigning costs to specific proposals for new regulations remains more of an art than a science, particularly when the investments must be projected well into the future. But, compared to benefits, calculating costs seems almost straightforward. And progress is now being made in improving the methodologies for estimating benefits, with a convergence of opinion on the strengths, weaknesses and potential of alternative approaches. There are nonetheless sharp differences of opinion among economists, regulators and the regulated industries on how to place a value on cleaner air and water, and on improved health effects from environmental protection. How, too, can one calculate the losses incurred in not regulating to control pollution? A further complication is judging the time-frame for making such calculations. How does one compare costs and benefits when the environmental returns on investment are received only in the medium and longer term – and by 'society'. A good example is the difficulty of cost-benefit calculations for proposals to reduce the use of fossil fuels today to make less likely the potential for climate change decades ahead.

Critics have contended that regulation damages the competitive position of domestic industry, encourages businesses to relocate in countries where standards are lower (thus creating 'pollution havens') contributes to unemployment in countries with high standards, and damages productivity. But a recent OECD study indicated that there is no convincing evidence that environmental regulation alone has been a significant source of job loss. The net impact of environmental policy on employment in OECD countries to date appears to have been beneficial, although small.[3]

The growth of the 'environment industry' (the sector producing environmental-related goods and services – such as equipment for waste treatment and air-pollution control) is likely to be quite substantial, possibly 5% a year in the OECD countries over the next five to ten years. And with it employment will increase. A recent survey in Australia indicated that one-half of the enterprises which consider themselves 'environmental' had expanded employment by more than

1. ***Environmental Performance in OECD Countries: Progress in the 1990s***, *OECD Publications, Paris, 1996.*

2. *Christine R. Vogan, 'Pollution Abatement and Control Expenditures, 1972–94',* Survey of Current Business, *US Department of Commerce, Washington, DC, September 1996.*

3. ***Environmental Policies and Employment***, *OECD Publications, Paris, 1997.*

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Improving the Quality and Efficiency of Environmental Regulations

The 1996 survey by the OECD of the reform of environmental regulation in member countries revealed a wide range of measures being pursued to improve regulatory quality and efficiency:

- *systematic review of existing legislation and rules with the goal of eliminating outdated and conflicting regulations (the European Commission has reported proposals that would repeal 180 legislative Acts)*
- *consolidation of regulations and procedures to simplify their application, particularly for the issuance of pollution release or land-use permits (aimed, for example, at 'one-stop shopping' for permit-seekers)*
- *elimination for regulated industries of the paperwork involved in reporting on their compliance measures and results (in 1995 the US Environmental Protection Agency eliminated an estimated 10 million hours of paperwork for industry, 10% of the total, and is aiming for a similar reduction this year; electronic reporting is seen as offering the promise of further breakthroughs)*
- *vigorous compliance monitoring, and reporting of compliance performance by the regulator country, since non-compliance by polluters has a corrosive effect on regulatory regimes and public attitudes toward government regulation*
- *introduction of incentives for strict compliance, and also for industry to move beyond compliance, through, for instance, government-sponsored information and technical assistance for small businesses, equipment grants and loans, and reduced inspections in return for good compliance*
- *systematic economic assessments of new regulatory proposals, to establish more precisely their costs to society, including impacts on jobs, business competitiveness and trade[1]*
- *movement away from technology-based regulations to those based on 'performance' goals or quantitative targets, leaving it to the regulated community to find the least costly pathway to the goals (one goal is to provide incentives for technology innovation)*
- *an intensive search for non-regulatory alternatives, or complements, to regulation.*

1. Strict application of cost-benefit analysis for environmental decision-making remains an issue in many capitals. The difficulty lies in balancing economic costs which are often more easily measured and which must be absorbed in the short term against environmental benefits which are harder to quantify, accrue to 'society' as a whole, and are acquired over the long term.

Environmental Regulation: The Third Generation


Fourmy/RÉA

Horses for courses? A globalising environmental policy by the end of the century is likely to use a mix of regulation, eco-taxes, voluntary agreements and economic instruments.

20% since 1988 and expect faster growth in the future – although this growth emerges from a small base: direct and indirect environmental employment varies between 1 and 3% of total employment in OECD countries.

The relationship between environmental protection and competitiveness has attracted particular attention over the past few years. In a study of the United States, Adam Jaffe and his colleagues concluded that:

> There are several reasons why the relative stringency of US environmental regulation to date has not been found to have adverse effects on competitiveness. First, for all but the most heavily polluting industries, the cost of complying with federal environmental regulations is a small fraction of total costs, sufficiently small (in most instances) to be swamped by international differentials in labour and managerial costs, capital costs, swings in exchange rates and so on. Second, although U.S. environmental regulations are arguably the most stringent in the world, the differentials between US standards and those of our major industrialized trading partners are not very great, especially for air and water pollution control. Third, U.S. firms (as well as other multinationals) appear inclined to build modern, state-of-the-art facilities abroad, irrespective of the stringency of environmental standards in the host countries. Thus, even a significant difference in environmental standards between, say, the United States and a developing country will mean little to firms not willing to take advantage of lax standards.[4]

No one is arguing that cost differentials stemming from international variations in regulations are non-existent. Most of the experts conclude, rather, that they are enough of a threat to industrial competitiveness to justify substantial cut-backs in domestic environmental regulations.

■ ■

As globalisation intensifies, the implications of environmental regulation for economic growth (as well as the impact of increased investment, trade and competitiveness on the environment itself) are likely to become more consequential and contentious, both nationally and internationally. The complex relationships and impacts therefore require close surveillance and analysis, with governments ready to come forward with flexible policies to address points of friction and potential conflict. The OECD, by virtue of its experience and capabiltities for addressing issues at the interface of economic and environmental policy, should be well placed to help its member countries handle these difficulties. ■

4. *Adam B. Jaffe, Steven R. Peterson, Paul R. Portney, and Robert N. Stavins, 'Environmental Regulations and Competitiveness of U.S. Manufacturing: What Does the Evidence Tell Us?',* The Journal of Economic Literature, *Vol. 33, March 1995.*

OECD Bibliography

Environmental Regulatory Reform in OECD Countries, forthcoming 1997

Evaluating Economic Instruments for Environmental Policy, 1997

Jean-Philippe Barde and Stephen Smith, 'Do Economic Instruments Help the Environment?', **The OECD Observer**, No. 204, February/March 1997

Environmental Policies and Employment, 1997

Jean-Philippe Barde and Michel Potier, 'A 'Green' Impact on Jobs?, **The OECD Observer**, No. 198, February/March 1996

Environmental Performance in OECD Countries: Progress in the 1990s, 1996

Integrating Environment and Economy: Progress in the 1990s, 1996

Michel Potier, 'Integrating Environment and Economy', **The OECD Observer**, No. 198, February/March 1996

Implementation Strategies for Environmental Taxes, 1996

Jean-Philippe Barde and Jeffrey Owens, 'The Evolution of Eco-taxes' **The OECD Observer**, No. 198, February/March 1996

Environmental Taxes in OECD Countries, 1995.

Why Do Countries Perform Differently?

Kazuyuki Motohashi and Risaburo Nezu

It was generally believed that, with the globalisation of business and deepening interdependence of the OECD countries, their economic performance would align. But recent statistics of basic economic trends reveal sharp national differences. Attempts are now underway in the OECD to understand more precisely the impact of information technology, regulatory reform and corporate governance on economic performance.

At the beginning of the 1990s growth rates in Australia, Canada, the United Kingdom and the United States were substantially lower than those in France, Germany, Italy and Japan (Figure 1). In the last three years the position has been reversed.[1] This pattern is true of employment patterns as well.[2] No doubt, tight fiscal and monetary policies in Europe imposed by the Maastricht criteria, exchange-rate misalignment and labour-market rigidities in continental Europe are all responsible to some degree. But there may be other causes.

The good performance of Australia, Canada, the United Kingdom and the United States seems to coincide with their active use of information technology (IT), particularly since 1992 (Figure 2), and the recent surge in investment in IT in these countries suggests that their workplaces are now harnessing more advanced IT equipment. The number of networked personal computers per population is indeed generally lower in France and Italy than in the United Kingdom and the United States, and startlingly so in Japan.[3] The Japanese government argues that the United States is enjoying a 'virtuous cycle', where investment in IT produces increasing competitiveness and growth; in Japan, by contrast, inadequate use of IT causes weak growth, which in turn discourages investment in IT. They are therefore hoping that an increase in the use of IT use will bring the Japanese economy out of prolonged recession.[4] It may be the rigidity of the labour market in Japan that has prevented firms from benefiting from IT as much as their US competitors, which have improved productivity by 'downsizing'. These characteristics may also explain in part why the virtuous cycle of IT investment has not occurred in Japan.

But a number of empirical studies show that IT is not a panacea. For it to be used effectively, the organisation of firms has to change, not least through the decentralisation of responsibility and the embrace of a less hierarchical structure.[5] IT enables the instantaneous sharing of information across different tiers of an organisation and eliminates or reduces the 'middle-man' role of intermediate management. It can therefore dramatically speed up managerial decisions, compelling the firms to move away from the time-consuming building of consensus towards speedy, top-down judgements on strategic questions, which is vital for businesses trying to survive in global markets.

Many operational decisions nonetheless have to be delegated to floor managers for timely adjustment to ever-changing technologies and market conditions. At the same time, continuous improvement in their skills is necessary to cope with increasing responsibilities. A study in Sweden shows that flexible firms – characterised by a commitment to developing human capital and by a decentralised management structure – are both 20–60% more productive and less prone to lose staff (their turnover of workers is around 20% lower than more rigidly organised companies).[6] An OECD analysis of Japan shows, by contrast, that the impact of IT on productivity is less clear, although it confirms that, in general, firms using IT are more readily capable

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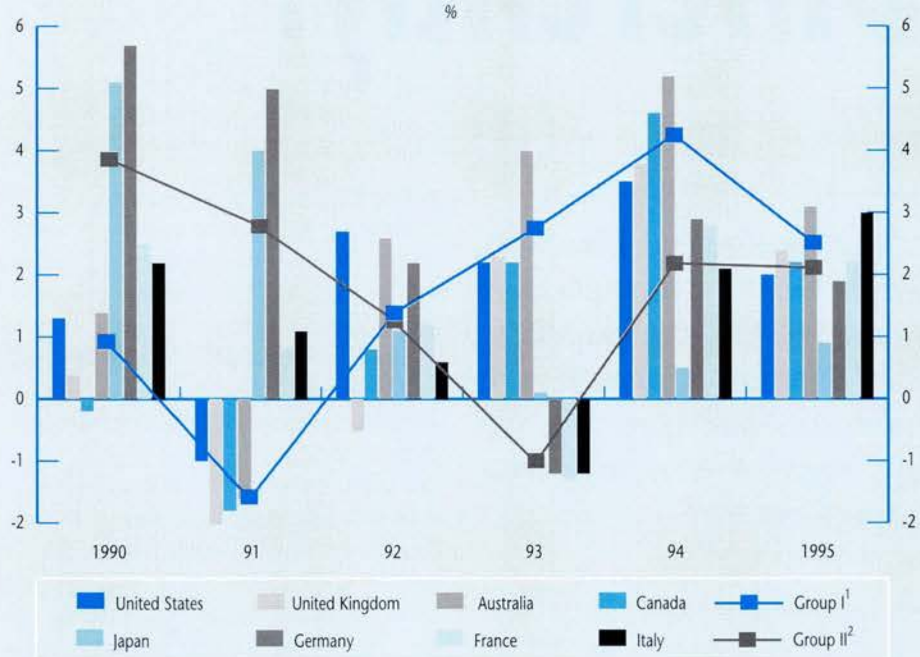
1. *The* ***OECD Economic Outlook****, No. 60 (OECD Publications, Paris, 1996) projects that the average GDP growth rate of the Australian, Canadian, British and American economies will remain higher than those of the French, German, Italian and Japanese until 1998.*
2. *From 1992 to 1995, the unemployment rate fell in Australia, Canada, the United Kingdom and the United States by 1.4–2.2%; in the other four countries it rose by 0.9–3.6%.*
3. *The number of PCs per 100 white-collar workers in 1994 was 104 in the United States, 74 in the United Kingdom, 76 in Germany, 62 in France, 57 in Italy and 24 in Japan (****Information Technology Outlook 1997****, OECD Publications, Paris, 1997); Sam Paltridge and Dimitri Ypsilanti, 'A Bright Outlook for Communications',* ***The OECD Observer****, No. 205, April/May 1997; see also pp. 41–44.*
4. Program for Regaining the Dynamism of Industries by Making Use of Electronic Information Technology, *MITI, Tokyo, 1995.*
5. *Graham Vickery and Gregory Wurzburg, 'Flexible Firms, Skills and Employment',* ***The OECD Observer****, No. 202, October/November 1996.*
6. Towards Flexible Organizations, *NUTEK, Stockholm, 1996.*

Why Do Countries Perform Differently?

Figure 1
Growth Rate of Real GDP
%



1. Australia, Canada, United Kingdom, United States.
2. France, Germany, Italy, Japan.
Source: OECD

of changing their business procedures, and have a higher proportion of skilled workers.[7]

The high correlation between IT and the expansion of the service sector (Figure 3) is yet more evidence of its importance as a major driving factor of growth. Innovations in services are becoming progressively more important as determinants of national competitiveness,[8] and they often revolve around IT, not least software development, information processing, new financial products and logistics management in the distribution industry.

Competitiveness through Reform

The ability of an economy to generate new businesses, particularly in services, depends heavily on its regulatory environment. The reform of regulation which shielded service sectors from global competition was a vital step in building a competitive industrial foundation in the first group of countries and creating attractive locations for companies. During the 1980s, both the United Kingdom and United States carried out sweeping programmes of deregulation and privatisation in such sectors as finance, airlines, railways and road freight, telecommunications, energy and distribution. Australia, Canada and New Zealand also took bold steps to streamline government.[9] The second group, by contrast, has been slow in reacting to the problems facing regulated service sectors. Airlines and telecommunications are still state monopolies (or were privatised only recently) in France and Germany. Entry to the retail market is still heavily regulated, or opening hours restricted, in France, Germany, Italy and Japan.

Regulatory reform, painful at first, is now paying off. The deregulation of telecommunications, for example, has had the immediate effect of opening-up opportunities for new entrants, with competition inducing cuts in prices and innovation creating new demand and jobs. As a result, there is now a substantial disparity in prices between the countries which have instigated reform and those which have not. The cost of, say, a long-distance telephone call is higher in Paris, in Düsseldorf and in Tokyo than in New York, by 23%, 31% and 69% respectively. By the same corollary, electricity and petrol are some 20–40% more expensive in Germany and Japan than in the United Kingdom and the United States, where more competitive market conditions prevail.[10]

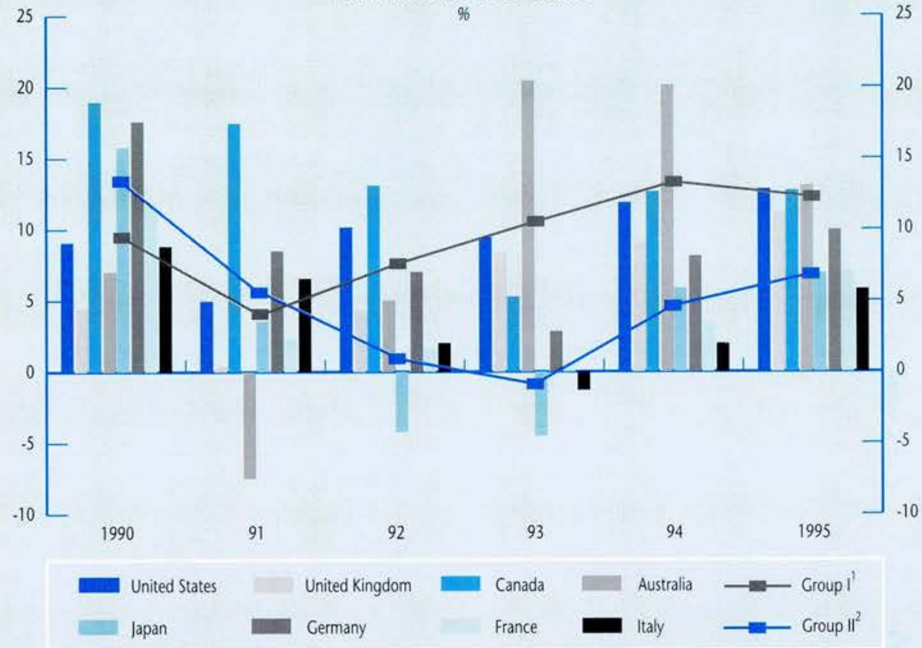
Expensive intermediary services also push up costs and diminish the price-competitiveness of products, driving companies to invest abroad where business can be done at less cost. About 30% of the investment made by Japanese manufacturing companies in 1995 was outside Japan,[11] adding to Japanese worries about the 'hollowing-out' of the economy. The number of foreign

The widespread use of information technology, by allowing the sharing of knowledge across an organisation and by reducing middle management, can contribute to the success of firms competing in the global market.

companies whose stocks were traded on the Tokyo Stock Exchange went down from 126 to 69 (compared to 261 in New York and 518 in London) over the last four years, as they attempted to avoid its restrictive listing regulations and taxes imposed on stock trading. The German government is similarly concerned about the erosion of the country's mighty industrial base in manufacturing, as German multinationals decide to invest in other parts of Europe, North America and Asia.

Regulatory reform to allow the creation of a capital market more responsive to the requirements of small start-up companies, such as NASDAQ[12] in the United States, is only beginning in France, Germany and Japan, where the government has yet to remove or relax a number of regulations and standards. Yet access to this kind of capital is vital for high-tech innovation by fledgling companies with limited financial resources. Indeed, venture capital tends to play a much less active role in continental Europe,[13] where the European Union is now trying to create a European equivalent to NASDAQ. Japan is in the process of reviewing its regulations which have prevented retirement funds and insurance companies from making investments in venture capital.

Figure 2
Growth Rate of the IT Market
%



1. Australia, Canada, United Kingdom, United States.
2. France, Germany, Italy, Japan.
Source: OECD, IDC

Scottish Enterprise

The Importance of Corporate Governance

The ability of firms to exploit both IT and the new opportunities created by regulatory reform depends very much on the institutional framework in which their activities take place. The role and power of the stockholders and managers are at the heart of corporate-governance systems, although, of course, employees, customers, suppliers, banks and local communities do have differing degrees of influence on corporate decisions. Although no two countries have the same system, it is generally agreed that there are two distinct models, the British/North American and Continental European ones, with Japan having more in common with the second. The sharp difference in economic performance between the two groups seems to suggest that the corporate governance system strongly bears on economic performance.

After the turn of the decade, the characteristics of the Japanese system – long-term think-

7. *Kazuyuki Motohashi, 'Use of Information Networks, Organizational Changes and Productivity: Firm Level Evidences in Japan', in* ***Information Technology Outlook 1997****,* op cit.

8. *Andrew Wyckoff, 'The Growing Strength of Services',* ***The OECD Observer****, No. 200, June/July 1996.*

9. *Paul E. Atkinson, 'New Zealand's Radical Reforms',* ***The OECD Observer****, No. 205, April/May 1997.*

10. *In 1988–90 the UK electricity market was split up into generation, transmission and distribution sections, and competition was introduced in generation and distribution. The US market is in a similar situation, in contrast to virtually monopolistic market conditions in many other countries.*

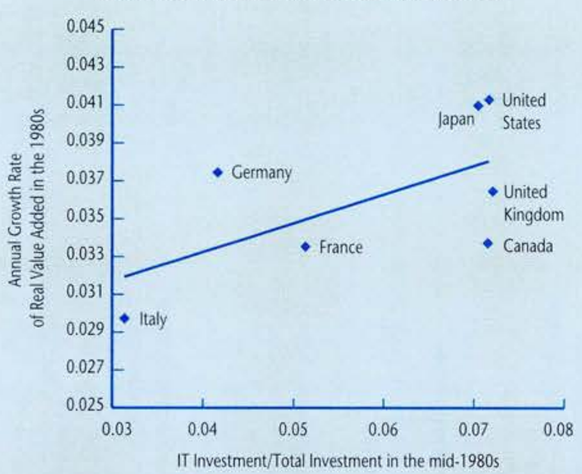
11. Tankan, *Bank of Japan, Tokyo, August 1996.*

12. *National Association of Securities Dealers Automated Quotation.*

13. Venture Capital and Innovation, *OECD, Paris, 1996, available free of charge from the Science, Technology and Communications Division of the Directorate for Science, Technology and Industry.*

Why Do Countries Perform Differently?

Figure 3
IT Intensity and the Economic Growth of Service Sectors



Source: OECD

ing, consensus-based decisions, life-long commitments to employees, cohesive relations with banks and clients – began to backfire against Japanese companies. They now fear that their long-term commitments prevent them taking urgently required actions to streamline and rationalise their operations. Consensus makes quick decisions impossible, and the absence of scrutiny by stockholders creates a complacent atmosphere and slows down necessary adjustment. Japanese firms are thus beginning to search for new ways to govern themselves. Many have recently announced that they would adopt return on equity as a yardstick to measure performance, rather than market share, as they now do. In Germany, the three powerful 'universal' banks are losing their tight control over industry, allowing the stockholders to play a more active role in company supervision.

On the other hand, the British/North American model is focused on providing value for stockholders in the short term. Corporate managers are under close scrutiny by stockholders, pension funds in particular, to ensure the most efficient use of their resources. The threat of takeover helps maintain the pressure to show good bottom-line results and keep stock prices high. Although this approach is often criticised for being short-sighted, the regained competitiveness of the US and UK economies seems to demonstrate that this system functions as least as well as any other.[14]

'Downsizing' is a prominent feature of the current US economic landscape. IT enables firms to concentrate on their core activities by eliminating and 'outsourcing' indirect and non-core business, and to benefit from synergy with the activities contracted out to external suppliers. Legal and accounting services, for example, are now available on-line. Interaction with suppliers can also be strengthened by the ample flow of information on the networks without the risk of becoming locked in a fixed relationship with particular suppliers. Indeed, the British/North American system of corporate governance permits companies there to tackle downsizing more successfully than their competitors in Japan and continental Europe, which are bound by their entangled business relations with a wide range of stakeholders.

■ ■

The factor that seems to make the British/North American approach, which a decade ago was considered to be full of drawbacks ('short-termism', higher transaction costs, and so on) now appear so effective, is the shift of leading sectors in OECD economies from 'smoke-stack' industries toward information- and knowledge-based ones.[15] The success of Japan and Germany during the 1970s and '80s was attributed to strong manufacturing sectors. Investment in such sectors takes long periods to mature: 20 years (more or less) in steel, 15 years in petro-chemicals, ten in automobile manufacturing and five in electronics. To reduce the risks associated with such huge and long-term investment, companies in these sectors required assurance from their customers that their products would continue to be bought over a number of years, and from banks to offer a helping hand in the event of a major failure – characteristics which made the Japanese and German governance systems more suitable.

Now that the information and service sectors are forming an increasingly large part of the OECD economies, shorter product life-cycles and more rapid technology obsolescence in these sectors call for quicker profits and a swifter response to the market. Every 18 months, a new memory-chip doubles its capacity. Netscape's Internet browser took only a year to reach a market of ten million users. IT is suddenly throwing firms into a world of massive opportunity – and threatens to drive them out of it just as quickly. ■

14. Jørgen Elmeskov, 'Germany: The Structure of Corporate Governance', ***The OECD Observer****, No. 196, October/November 1995; Peter Jarrett, 'The United States – Corporate Governance: The Market as Monitor',* ***The OECD Observer****, No. 203, December 1996/January 1997; Randall S. Jones and Kotaro Tsuru, 'Japan – Corporate Governance: A System in Evolution',* ***The OECD Observer****, No. 204, February/March 1997.*

15. Candice Stevens, 'The Knowledge-driven Economy', ***The OECD Observer****, No. 200, June/July 1996.*

OECD Bibliography

Information Technology Outlook 1997, 1997
Communication Outlook, 1997
Sam Paltridge and Dimitri Ypsilanti, 'A Bright Outlook for Communucations', **The OECD Observer**, No. 205, April/May 1997
OECD Economic Surveys: New Zealand, 1996
Paul E. Atkinson, 'New Zealand's Radical Reforms', **The OECD Observer**, No. 205, April/May 1997
OECD Economic Surveys: Japan, 1996
Randall S. Jones and Kotaro Tsuru, 'Japan – Corporate Governance: A System in Evolution', **The OECD Observer**, No. 204, February/March 1997
OECD Economic Surveys: The United States, 1996
Peter Jarrett, 'The United States – Corporate Governance: The Market as Monitor', **The OECD Observer**, No. 203, December 1996/January 1997
OECD Economic Outlook, No. 60, 1996
Regulatory Reform and Innovation, 1996
Science, Technology and Industry Outlook, 1996
The OECD Jobs Strategy: Technology, Productivity and Job Creation, 1996
Graham Vickery and Gregory Wurzburg, 'Flexible Firms, Skills and Employment', **The OECD Observer**, No. 202, October/November 1996
Candice Stevens, 'The Knowledge-driven Economy', **The OECD Observer**, No. 200, June/July 1996
Andrew Wyckoff, 'The Growing Strength of Services', **The OECD Observer**, No. 200, June/July 1996
OECD Economic Surveys: Germany, 1996
Jørgen Elmeskov, 'Germany: The Structure of Corporate Governance', **The OECD Observer**, No. 196, October/November 1995.

Regulatory Reform in the Agro-food Sector

Eirikur Einarsson and Wayne Jones

Regulatory reform in the agro-food sector is a two-edged sword. Reform of traditional agricultural support policies is reducing economic regulation. But emerging public concerns, not least in environmental protection and food safety, are creating pressures for new regulatory measures.[1]

The agro-food sector in the OECD area is characterised by a high degree of state support and protection, with wide variations in its volume and composition both among countries and across commodities. The OECD countries are committed to the reform of agricultural policy, and some progress has been made in recent years in reducing support, improving market orientation and liberalising trade. This trend is continuing, although government intervention is still pervasive (Figure 1). Economic regulations (price administration, supply controls and border measures among others) form an integral part of policies that support and protect the agro-food sector. Deregulation is therefore an essential part of the reform process.

The forms of assistance to the agricultural sector have gradually become more numerous and complex. Governments traditionally protected the sector through market-price support (MPS) by means of border measures (tariffs and quotas) – most often in response to low prices in world markets – and by guaranteeing minimum prices for farmers. This kind of support has been widely applied, not least because (initially) it was effective in protecting producers, neutral in its direct effects upon national budgets and does not require much central administration. Agricultural support policies usually mean higher prices for producers than would exist in the market and consequently higher prices to consumers. This implicit tax on consumers has been declining over time but varies considerably across OECD countries (Figure 2).

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Regulations imposed by agricultural policies often inhibit the ability of the agro-food sector to exploit opportunities created by evolving consumer demands and new technologies. Price support may be tied to narrow rules on product specifications, and regulations intended to maintain quality tend to limit products to a few common grades. Both types of regulations can inhibit market responsiveness; indeed, representatives for the industry often argue that this 'one-size-fits-all' approach ties their hands. In many OECD countries, for example, dairy producers were slow in responding to the shift in demand towards low-fat dairy products in part because support prices were based on the fat content of milk.

Improving Economic Efficiency

To maintain an MPS system that brings with it high domestic prices, considerable intervention is required – not least the fixing of prices and restriction of supply, which can substantially affect the efficiency of the agro-food sector as a whole. Other forms of support to farmers, such as direct payments de-linked from production, are held to be more efficient in making transfers. The proportion of direct payments in total transfers to farmers has been increasing gradually in OECD countries, notwithstanding their administrative cost.

Structural adjustment, developments in international and domestic markets, new technologies have so altered the agro-food industry that governments are rethinking traditional approaches to agricultural policy. Budgetary pressures have also forced them to seek new, less expensive, methods of intervention and to introduce cost-recovery programmes, where the beneficiaries pay for services rendered. There is still a role for regulation and economic instruments such as direct payments – but other, more market-oriented approaches ought to make the farming industry more self-reliant and achieve policy objectives with less distortion.

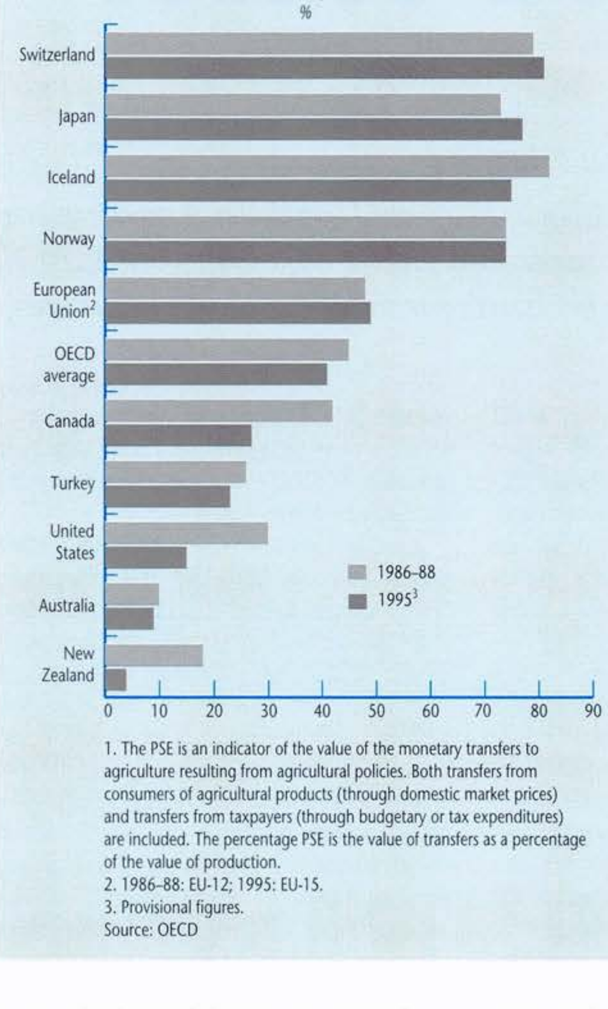
Liberalising Trade

The Uruguay Round Agreement on Agriculture (URAA) was an important step forward in strengthening multilateral disciplines for trade in agricultural products. The main achievement was the replacement of non-tariff trade barriers (NTBs) with ordinary customs duties, increasing transparency immensely.[2] Commitments to lower

1. ***Regulatory Reform and the Agro-Food Sector***, *OECD Publications, Paris, 1997.*
2. *Carmel Cahill, 'OECD Agriculture after Uruguay',* ***The OECD Observer****, No. 196, October/November 1995.*

Regulatory Reform in the Agro-food Sector

Figure 1
Producer Subsidy Equivalents (PSE)[1] in the OECD Countries, 1986–88 and 1995

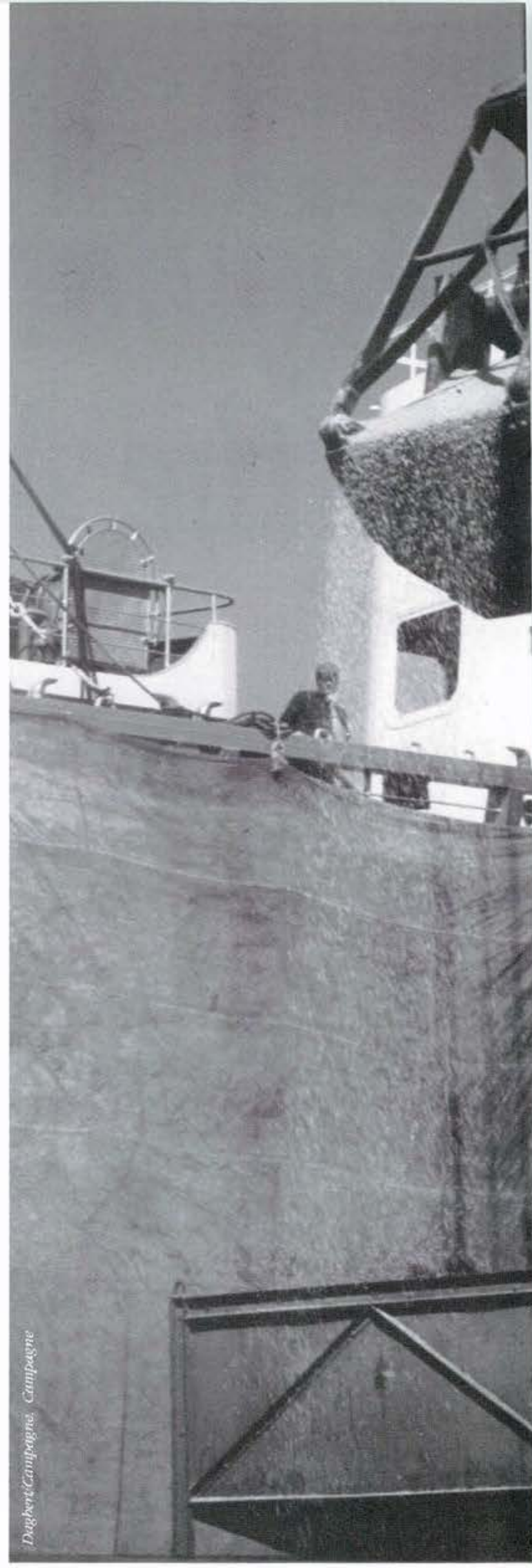


1. The PSE is an indicator of the value of the monetary transfers to agriculture resulting from agricultural policies. Both transfers from consumers of agricultural products (through domestic market prices) and transfers from taxpayers (through budgetary or tax expenditures) are included. The percentage PSE is the value of transfers as a percentage of the value of production.
2. 1986–88: EU-12; 1995: EU-15.
3. Provisional figures.
Source: OECD

export subsidies and domestic support will reduce distortions. Tariff rate quotas (TRQs) ensure that market access obtained before the Round is maintained and in some cases increased. Other trade-related issues affecting agriculture, such as sanitary and phytosanitary regulations and technical barriers to trade, as well as the dispute-settlement procedure itself, are addressed in specific Agreements under the auspices of the World Trade Organization (WTO).

Export subsidies (restitution payments) for processed products before the Uruguay Round were often based on the difference in price of agricultural raw material on the world market and those available domestically to the food-processing industry. When these export subsidies were reduced, exporting companies found themselves at a disadvantage compared with their competitors in less distorted agricultural markets. Predictably, there were then demands for compensation and/or exemptions from tariffs. In Norway and Switzerland, where prices of agricultural commodities are very high, the food industry is now allowed to import raw material for further processing at zero or low tariffs on condition that the finished product be re-exported.

A large number of methods have been used to allocate import licences under TRQs. There is still some uncertainty about which mechanisms are allowed under the WTO; and there is no agreement on their distortionary and discriminatory impacts. Under some allocation mechanisms, there is a danger that the benefits of cheaper imports may be captured by those with import licences rather than by consumers or taxpayers. In some cases single entities – including producer and processor organisations – have been assigned the import licence. This move could reduce the competitive pressure exerted by foreign products and result in higher prices. For reasons of equity and administrative ease, some governments auction import licences (Iceland, Korea, Norway and Switzerland, for example), although traditional exporters such as New Zealand and Australia suggest this process may introduce a



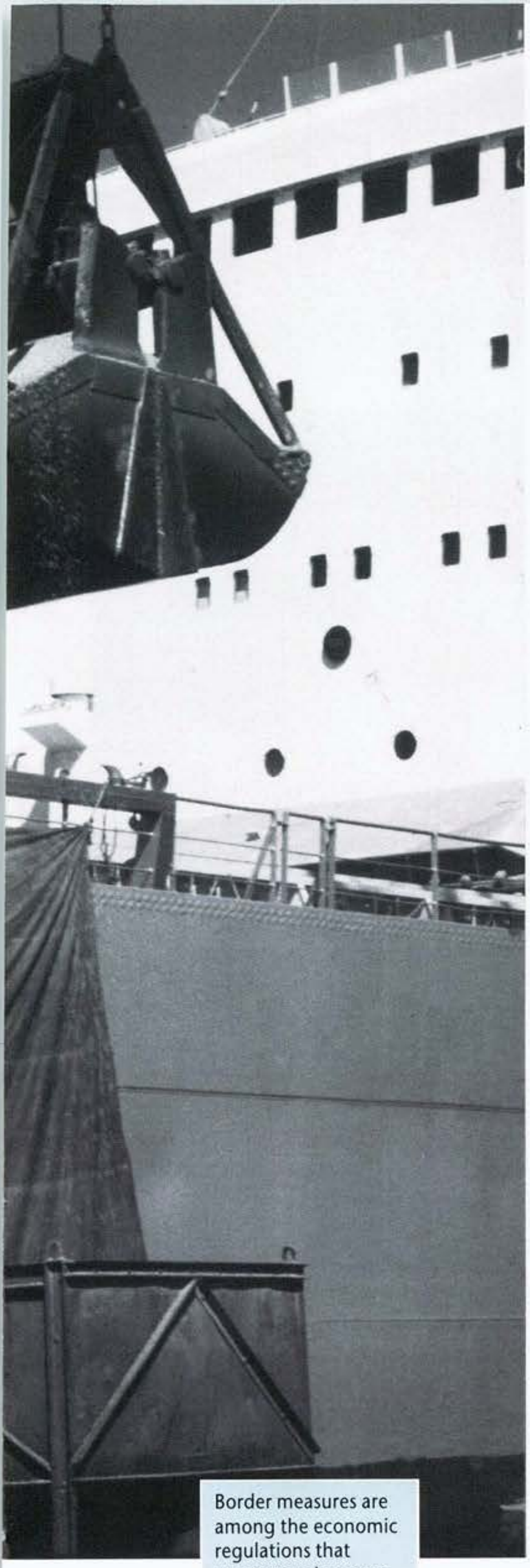
'tax' on imports over and above the tariff rates stipulated by the quota.

Ensuring Effective Competition

The intent (or effect) of agricultural policies is often to limit competition so as to increase returns or reduce risk to primary producers. As a result, there are many partial exemptions and special rules from competition laws for the agro-

3. See pp. 14–18.

*4. Wilfrid Legg and Luis Portugal, 'How Agriculture Benefits the Environment', **The OECD Observer**, No. 205, April/May 1997.*



Border measures are among the economic regulations that support and protect the agro-food sector.

food sector, mainly affecting production agriculture (price-support schemes, supply management) and in some cases primary processing (farmer co-operatives, marketing boards). But such restrictions on competition can have an impact on other parts of the food chain by affecting the quality, cost and availability of inputs, insulating inefficient operations from market forces, restricting innovation and hindering the development of value-added.

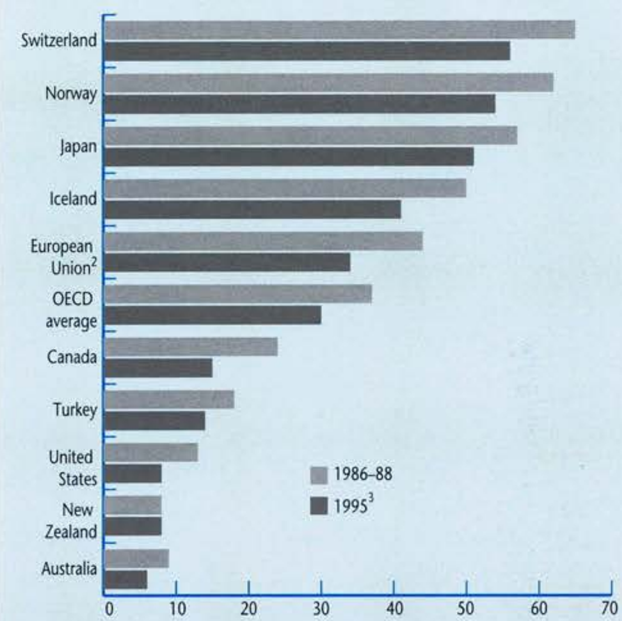
A number of OECD countries have addressed these concerns. Recent rulings by the French Competition Council, for example, clarified the application of EU legislation, which forbids price-fixing, controls on production that are intended to influence prices, and restrictions on new entrants to the market. Indeed, the Council imposed sanctions on some firms which were controlling supply and affecting prices of cheese and veal. And in the United Kingdom the Milk Marketing Board system, which was the sole buyer of milk from producers and the sole seller of milk for processing, was abolished in 1994. With its demise, a number of companies were bidding for milk for the first time in 60 years, resulting in higher prices to farmers.

In some cases, government intervention in the agro-food sector was originally a response to a perceived lack of competition (where a large number of small farmers had to negotiate with a highly concentrated processing sector, for example). When such agricultural policies are removed or reformed, complementary measures may be required to maintain effective competition. In Sweden, for example, producer co-operatives dominated primary processing and were obtaining control of markets downstream. Many markets outside the co-operative sphere were dominated by one or two major firms and there was concern that downstream processors, wholesalers and retailers might capture the benefits of reform. A new Competition Act in 1993 extended coverage to the agro-food sector, although special rules remain. A 1996 report recommended additional measures to increase competition in the food industry.

Figure 2

Consumer Subsidy Equivalents (CSE)[1] in the OECD Countries, 1986–88 and 1995

%



1. The CSE is an indicator of the value of monetary transfers to consumers resulting from agricultural policies. Normally, these transfers are negative and the CSE can be thought of as the implicit tax imposed on consumers by agricultural policies. The percentage CSE is the value of transfers as a percentage of the value of consumption (valued at producer prices).
2. 1986–88: EU-12; 1995: EU-15.
3. Provisional figures.
Source: OECD

Environmental Pressure

Environmental concerns are on the rise with, for example, demands to reduce the use of harmful chemicals and to maintain resource sustainability. As with nutrition, biotechnology, animal rights and other areas where governments are being pressured to intervene, the issue is less one of deregulation and more one of how best to ensure that regulations are effective and efficient with a minimum of adverse secondary effects.[3]

Where agricultural and environmental policies meet,[4] the general thrust has been to pay farmers for the provision of environmental benefits or to alleviate damage, although environment-

Regulatory Reform in the Agro-food Sector

Where the environment is concerned, the issue is less one of deregulation than re-regulation, to ensure that rules are efficient and have a minimum of secondary effects.

al regulations are having an increasing impact on farming. But the benefits of such measures have been offset at least partially by continued high support linked to agricultural production. Further reform of support policies would contribute to improving environmental quality.

A major difficulty in implementing regulations has been how to address diversity. Regulations tend to be rigid and generate economic distortions by neglecting differences across farms in the costs of reducing environmental harm. One way of tackling the 'negative externalities' caused by farming is by imposing economic penalties or requiring farmers to assume the costs of an activity that damages the environment (by applying the OECD 'Polluter-Pays' Principle). But much more work is necessary before harmful external effects can be identified, attributed and measured, and their costs assigned appropriately.

There is a growing number of regulations on land use and management in OECD countries. These regulations can require temporary or permanent changes in how land is used, as in land-diversion programmes (by afforestation, for example), modifications in farm-management practices, not least the disposal of animal wastes, and specific feeding and grazing practices or livestock densities. In some countries, farmers receive financial incentives to keep agricultural land out of production.[5] Often, short-term land diversion schemes are primarily intended to control the supply of a particular commodity, and in such cases environmental benefits may be temporary.

In other cases, regulations have been developed where conflicting land-use pressures arise, generally in densely populated regions. Protecting farmland from urban encroachment (maintaining traditional landscapes, natural habitats, bio-diversity, soil and water resources) is a common policy goal across OECD countries. In response, zoning and physical planning legislation has been widely adopted to curtail urban sprawl by designating rural areas as agricultural and sometimes by imposing regulations which severely restrict non-agricultural development.

Improving Food Safety

As consumers become increasingly aware about the safety and quality of food products, concern about increased regulation and stricter enforcement in the agro-food sector has grown.

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

Can these cows be trusted? There is no agreement on food-safety standards, despite recent outbreaks of food-borne diseases such as BSE, *E. coli*, salmonella and listeria.

Sylvia Thompson

Recent outbreaks of food-borne diseases (BSE, *E. coli*, salmonella, listeria) have intensified these pressures. There is disagreement about what degree of safety should be pursued, which regulatory instruments ought to be used and who should bear the cost. There are also concerns about administrative and compliance burdens for industry, particularly for smaller firms.

Government intervention in food supply has been substantial, especially in designing and monitoring/enforcing minimum standards of safety, quality assurance and labelling. The role of the state in this area is being re-examined. Increasingly, a distinction is made between the regulations that provide a public 'good' (not least health and safety) and those conferring private benefits (quality assurance, for example), which are in most cases better left to industry – which has superior knowledge of market requirements and consumer preferences. In Canada, for example, the food industry has been given more discretion to grade products according to the demands of both international and domestic consumers. Governments have to ensure that the definition of responsibilities within the regulatory framework is clear to all and continuously updated.

Food-safety standards restrict the freedom of suppliers to differing degrees. As a general principle, suppliers should be as free as possible to choose the manner in which they meet a specified regulatory requirement. They will then be able to minimise the costs of compliance by choosing the most efficient method of doing so. This will promote innovation in compliance technology. Interestingly, the trend in recent years has been for public regulation to follow *de facto* standards laid down by private regulation.

A prime example is the requirement for HACCP-based (Hazard Analysis and Critical Control Points) systems in food-safety regulations. HACCP was originally developed as a voluntary, process-oriented management tool to help achieve performance goals for safe food. As a recent example, the US Department of Agriculture has required all meat-processing plants to develop a HACCP plan. Although this stipulation obviously imposes costs on the meat industry, cost-benefit analysis indicated that the resulting reduction in food-borne disease would yield considerable public-health and economic benefits. Perhaps equally important, consumer confidence is maintained and the threat of further 'health scares' minimised.

The Sanitary and Phytosanitary (SPS) agreement of the Uruguay Round advocates harmonisation or mutual recognition of SPS rules, and it is clear that efforts by governments to make their food-safety regulations science-based have increased since the Agreement came into force. One concern is that food safety regulations can be a moving target. The standards tend to increase with incomes; higher demands are reflected in changes to national food regulations. Such changes make harmonisation across countries difficult. Mutual recognition might prove to be more suitable (and less costly) for aligning food-safety regulations internationally. Such alignment should coincide with increased domestic effort to co-ordinate standards and procedures.

■ ■

Regulatory reform is an important means for furthering the goals of agricultural policy reform. The OECD countries are changing economic regulations that hinder economic efficiency, distort trade or restrict competition. For many emerging public concerns, such as food safety and environmental protection, there are new pressures for government regulation. Policy-makers have to address these issues in ways compatible with the objectives of reform and consistent with regulatory 'best practices'. ■

OECD Bibliography

Regulatory Reform and the Agro-food Sector, 1997

Wilfrid Legg and Luis Portugal, 'How Agriculture Benefits the Environment', **The OECD Observer**, No. 205, April/May 1997

The Environmental Effects of Agricultural Land Diversion Schemes, 1997

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

Competition Policy and the Agro-food Sector, 1996

Factors Conditioning the Transfer Efficiency of Agricultural Support, 1996

Reforming Dairy Policy, 1996

Policies Affecting Farmland Mobility, 1996

The Uruguay Round: A Preliminary Evaluation of the Impacts of the Agreement on Agriculture in the OECD Countries, 1995

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

Adjustment in OECD Agriculture: Issues and Policy Responses, 1995.

A Changed Landscape for Financial Services

Stephen L. Harris and Charles A. Pigott

Not much less than two decades ago regulatory limitations on financial services, as well as impediments to international trade in them, were widespread in the OECD countries. Since then, most of these obstacles have been removed in a far-reaching process that has transformed the world's financial markets.

The fundamental objective of government regulation and supervision of the financial-services industry is to maintain the integrity and stability of the financial system and to protect depositors and investors. The regulation deployed to this end requires safety-net mechanisms such as lender-of-last-resort facilities for banks and some form of insurance for depositors. It also includes standards for sound financial behaviour by individual institutions, among them: minimum amounts of capital and liquid financial assets institutions must have as a buffer against unanticipated events; requirements for effective risk-management systems and oversight by managers and directors; prohibitions on lending by management to itself or closely related entities ('self-dealing'), on insider trading, and on other transactions where there is a conflict of interest; and requirements that individual institutions disclose key information on their performance to the market. Regulations also maintain the integrity of trading systems and ensure that financial institutions carry out their fiduciary responsibilities to stockholders, depositors and others by behaving prudently.

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Up until the late 1960s, regulators relied heavily on direct controls, to varying degrees in the OECD countries, but usually in the form of limits on interest rates and on the activities financial institutions were allowed to pursue. The ability to offer deposits, underwrite securities or develop new financial instruments and to engage in various types of financial business were limited, with, for example, banks alone being able to offer deposits against which cheques could be drawn, and insurance business generally restricted to institutions separately licensed and regulated for that purpose. In some cases, regulatory policies were also used to promote other social goals, such as subsidised interest rates and special access to credit by particular sectors (for housing and government debt, for example). As a consequence of all these measures, many types of financial institutions were exposed only to limited competition.

Over time, market forces, combined with the exploitation of regulatory loopholes by financial institutions, progressively weakened the effectiveness of the restrictions and eroded the distinctions between various institutions, particularly among banks, investment dealers, mutual funds and insurance companies. With these developments, regulatory policy came to rely more and more on competition and market-based decision-making to achieve its objectives.

This process was substantially reinforced by the globalisation of financial markets. Globalisation had its beginnings in London in the 1960s but soon ricocheted back to national markets and gave rise to a self-sustaining process of competitive liberalisation across the industrialised democracies during the following three decades. The authorities responsible for financial regulation wanted to ensure that the financial hubs in their countries would not become backwaters because of a failure to respond to international competitive pressures. Globalisation has been the impetus for several very important international agreements to liberalise international trade in financial services: the European Single Market, the General Agreement on Trade in Services, the North American Free Trade Agreement and particularly the OECD Codes of Liberalisation of Capital Movements.

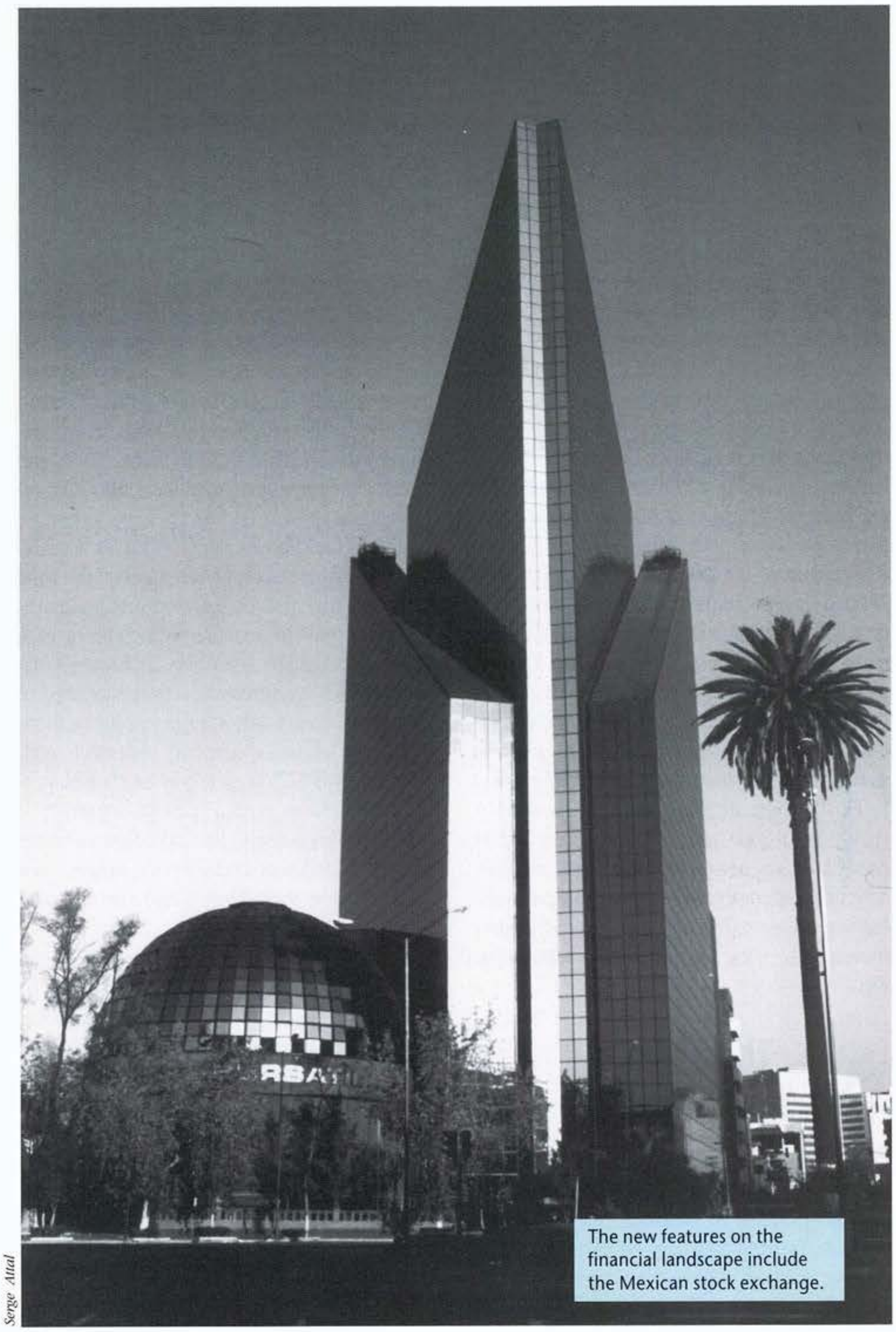
No nation-state had a grand plan to restructure its financial services industries. Indeed, these changes were often what policy analysts characterise as 'incremental'– muddling through. Some OECD countries, such as Canada, Australia, the United Kingdom, the United States and France, and more recently New Zealand, nonetheless set about reform more comprehensively than others. Financial deregulation, because of its rapidly changing landscape, is obviously affected by policy in other domestic sectors – particularly macro-economic stabilisation – but the comprehensiveness of national reforms has generally been a function of how the financial world as a whole has changed.

Nonetheless, the past quarter-century has seen thorough-going liberalisation in the financial services in virtually all OECD countries. There have been very similar policy initiatives in the English-speaking countries and Japan, which had specialised and functionally separate institutions comprising their financial structures, particularly when compared to those in Germany and much of the rest of continental Europe, for example, where the 'universal bank' offered a complete portfolio of financial services – one-stop shopping. But among OECD countries there has been a good deal of convergence – through regulatory competition – as each nation-state wanted to ensure that its indigenous industry and markets would remain viable.

Several important events provided momentum to the process of liberalisation and internationalisation. First, the development of the Eurodollar market, focused in London, combined the effects of former Eastern-bloc countries moving their US dollar balances out of the United States to western Europe (beginning in the late 1960s) with those of 'Regulation Q' in the United States, which put a ceiling on the rates that US banks could pay on deposits, whereas the Eurodollar market was not subject to constraints on interest rates. Second, the industrial activities of multinational corporations increased demand for international banking services. Third, in the 1970s there was a good deal of macro-economic instability in the industrial economies, precipitated in part by the breakdown of the Bretton Woods exchange-rate regime and by the two oil-price shocks.

In addition, a number of countries took administrative action, mostly from a defensive position, to liberalise elements of their financial-services industries, ranging from the deregulation of bank-lending and/or deposit rates, the elimination of regulated stock-exchange commissions and the restructuring of government-bond and private-equity markets to the abolition of restrictions on the intermingling of the activities of different types of financial institutions.

As a result of these reforms, the state, once an overt intruder in the decision-making of the financial industry, has largely ceded its role to market mechanisms, which are now virtually the sole determinant of interest rates, credit allocation, financial instruments and services. Distinctions between financial and market intermediaries have been eroded and competition enhanced.



Serge Attal

The new features on the financial landscape include the Mexican stock exchange.

But there are still a number of important obstacles. Many countries have quantitative restrictions on the portfolio composition of both pension funds and insurance companies. That limits portfolio choices and reduces the ability of the institutions involved, and those who place funds with them, to achieve the highest available return for a given degree of risk. Some restrictions on the international holdings of pension and insurance funds may be justifiable on the basis of the 'prudent person' principal that requires portfolio managers to maintain adequate safety and liquidity in their holdings. But existing restrictions often go well beyond such considerations. Some countries, moreover, when imposing constraints on the composition of portfolios, limit holdings not only of foreign assets but also impose a minimum requirement for holdings of government debt – thus providing the government with an assured source of funds.

A Changed Landscape for Financial Services

In some countries, especially Japan and Korea, there remain effective restrictions on financial activities that arise from structural considerations, such as the discretionary power of regulators and other officials to intrude into business decisions of institutions, or from accepted business practices such as accounting and reporting conventions or from the degree of transparency or opacity in the regulatory apparatus. These barriers are coming down. In November 1996, the Japanese government announced its intention to introduce a series of structural reforms designed to revive the Japanese financial market and thereby Tokyo's importance as a world financial centre after the 'hollowing-out' of that market over the past several years. And in many respects the situation in Korea currently mirrors that which existed in Japan before the liberalisation of its financial market began. Korea is also studying ways of reducing state intrusiveness.

Finally, there are also a number of barriers to cross-border trade in investment funds and to portfolio-management services. These rigidities arise from differences in business practices, withholding taxes on dividends and interest paid to overseas investors, and differences in tax treatment of earnings.

The Benefits of Deregulation

The OECD economies have benefited considerably from financial deregulation, mainly in three ways. First, deregulation has raised productivity in the financial-services sector itself, leading to lower costs and reduced prices. For example, the volume of transactions and amount of total assets per employee has increased nearly three-fold since the early 1980s in banking alone; and spreads between buying and selling prices in the euro-currency and other major wholesale financial markets have dropped considerably.

Second, the users of financial services are enjoying considerable improvements in the quality, variety and accessibility of new financial services. Consumers now have access to accounts that pay interest rates closer to those prevailing in the market, have a wider range of maturities, and provide more flexibility for withdrawals. Household access to mortgage credit has expanded substantially in Japan, the United Kingdom and several other European countries. The development of markets for 'financial derivatives', such as options and the ability to convert loans into marketable securities ('securitisation') fostered by deregulation, has considerably increased the ability of firms to manage risks and to tailor their transactions to their individual requirements.

Third, the allocation of resources has improved, not only among various sectors of the economy but also by limiting disruptions to spending from fluctuations in income or cash flow. For example, there are far fewer of the disruptions to construction activity that used to arise when market interest rates rose above those that banks (the main suppliers of funds to construction) were allowed to pay on their deposits. Evidence also indicates that the sensitivity of household spending to transitory fluctuations in income has fallen in a number of countries, such as the United States, Japan and Canada, with financial deregulation.[1]

Among the most important gains in resource-allocation from deregulation stem from the dramatic improvement in the international mobility of capital arising (in large part) from reductions in official controls. By facilitating the channelling of funds to countries where capital is relatively scarce, but where returns to investment are comparatively high, this growth in mobility has helped to improve the global allocation of resources and increase the growth rates of emerging market economies. The OECD countries have also benefited from access to higher returns on savings than would be available from domestic outlets – a gain that becomes potentially all the more important as OECD populations age. Indeed, some estimates suggest that the gains from international capital mobility may be as high as 1% of GDP or more annually for OECD countries.[2]

The overall economic gains derived from these benefits are difficult to quantify precisely but almost certainly have been quite substantial. Virtually all segments of the economy – consumers, businesses, governments – have shared in them, although not always to the same degree.

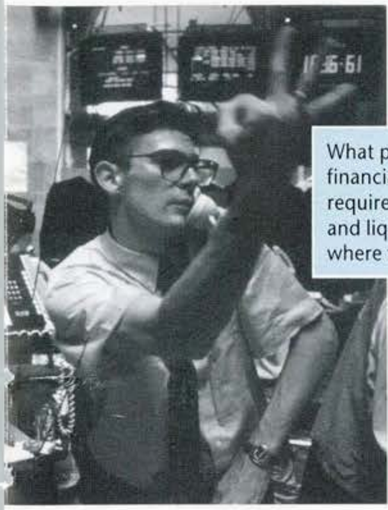
Problems – and Lessons Learned

In spite of these benefits, a number of developments associated with financial deregulation have raised concerns that it encourages imprudent financial behaviour and makes financial markets more volatile: marked credit booms, excessive debt accumulations and severe fluctuations in real estate and stock markets that occurred in some countries, chiefly Japan, the United Kingdom, Sweden, Norway and Finland after deregulation in the 1980s; extended swings in the foreign-exchange value of major currencies (not least the rise and fall of the dollar during the 1980s); widespread financial problems in banking sectors, such as those in the Nordic countries and Japan during the past decade; and the balance-of-payments crises of Mexico, Turkey and a number of non-member countries in the mid-1990s.

Yet there is little evidence that it was deregulation itself that has made the financial system less stable. In particular, there has been no lasting increase in the daily or monthly variability of domestic stock or bond prices; and although exchange rates did become more variable after they became free to float in the early 1970s, there seems to have been no further increase in their volatility since then. Moreover, extended swings in asset prices and other apparent instabilities in financial markets, although undoubtedly costly and troublesome to economic performance, can be traced to macro-economic policies. For

1. *Adrian Blundell-Wignall, Frank Browne and Steven Cavaglia, 'Financial Liberalisation and Consumption Behaviour',* Working Paper, *No. 81, March 1991, available free of charge from the OECD Economics Department.*

2. *M. Brennen and B. Solnik, 'International Risk Sharing and Capital Mobility',* Journal of International Money and Finance *Vol. 8, No. 3 (1989); and Harold L. Cole and Maurice Obstfeld, 'Commodity Trade and International Risk Sharing: How Much do International Financial Markets Matter?',* Journal of Monetary Economics, *Vol. 28 (1991).*



What price prudence? Restrictions on financial institutions go beyond the requirement to maintain adequate safety and liquidity in their holdings to the point where the rules impede efficiency.

example, much of the rise in the dollar during the first half of the 1980s resulted from fiscal policies that were relatively expansionary in the United States compared to those in Europe and Japan. Similarly, the external financing problems encountered by several OECD countries, most notably Mexico and Turkey, in recent years can be traced in large part to over-expansionary macro-economic policies, the failure to maintain sufficiently competitive exchange rates and the unsustainable current-account deficits which followed.

Admittedly, financial 'excesses' (in the form of excessive debt accumulation, over-investment in real estate, or imprudent risk-taking by some financial institutions and inadequate governance by some institutions) have occurred during the process of deregulation. In part, these events can be viewed as mistakes made during the transition from a regulated to a deregulated financial system, during which individuals and institutions had to learn to deal with new and initially unfamiliar circumstances. More importantly, there were serious flaws in the implementation of deregulation itself. Too often, it occurred in an inflationary environment or when macro-economic policies were giving too much stimulus to economic growth. These surrounding conditions encouraged individuals and institutions to accumulate too much debt and over-invest in real assets just as restrictions on their access to credit were being relaxed; in some cases, this behaviour was further encouraged by favourable tax treatment of borrowing and of capital gains from the appreciation of those real assets. The rapid expansion of credit encouraged by these conditions was a major factor in the boom-and-bust cycles in the prices of domestic real estate and (in Japan) the stock market that were the source of the subsequent financial problems of the banks.

But some of those financial excesses can also be traced to the legacy of past regulation as well as to the failure of supervisory authorities to keep adequate pace with the changes in markets and financial institutions induced by deregulation. For example, the positions of banks in many countries had been weakened by overstaffing, too many branches, and other inefficiencies fostered by past regulation. The problems of US savings and loan banks (S&Ls), for instance, arose first from regulatory restrictions on their deposit interest rates combined with limits on their ability to diversify out of mortgages. The subsequent crisis arose after near-insolvent S&Ls 'gambled for redemption' by taking on excessive risks – encouraged by the fact that losses in the event of failure would be paid out of deposit insurance – that supervisory authorities proved unable adequately to monitor or restrain.

The problems that have arisen show that financial deregulation, as with any major transition, inevitably involves costs and risks. The problems that have arisen during deregulation underscore the importance of complementary reforms in other policies to ensure that the incentives for prudent financial behaviour are sustained as deregulation proceeds. Maintenance of a stable macro-economic environment, structural reforms to reduce distortions to financial incentives, and adaptations to supervisory policies that strengthen market discipline and incentives for prudent management of financial institutions are all essential if financial stability is to be maintained during deregulation, and to ensure that its full benefits are realised.

■ ■

The reform process in the OECD is now well advanced. Indeed, it has so transformed the domestic and international financial environment that, to any practical purpose, deregulation is now irreversible. The benefits, in terms of lower costs of financial services, more variety and flexibility, and improvements in resource allocation, have been clear and they are continuing to be felt. Moreover, the gains that have already been harvested suggest that it is in the interest of countries where deregulation is not so far along to pursue further reforms and that, elsewhere, remaining restrictions on the activities of financial institutions, particularly on their ability to hold foreign securities, should be eliminated except for those clearly necessary for prudential purposes. And although flaws in the implementation of deregulation have raised the costs and reduced the gains that have been expected, financial reform itself does not make financial markets any less stable.

Deregulation does not make effective supervision of financial institutions by government redundant. The authorities have to ensure that institutions have the incentives and capabilities to manage the risks they can now take on in a deregulated environment, and that they deal with the expanded opportunities from deregulation in a sound and prudent fashion. But no supervisory regime can eliminate their failures. Indeed, if there has been a recurring theme in regulatory reform over time and countries, it has been the failure of the supervisory officials to recognise portfolio excesses. The responsibilities of the regulators must always take account of the economic and financial circumstances of the moment of change, including the international environment, and the potential ability of liberalisation to magnify problems should be recognised very much earlier than has been the case to date. That requires the development of standards for sound business practice, monitored by strong corporate governance provisions, auditing and reporting to regulators. Over two hundred years ago, Adam Smith warned of the dangers of colluding producer interests. The warning stands: caution flags should be raised by the regulatory authorities when financial-market participants begin to assemble on the same village green. ■

OECD Bibliography

Financial Market Trends, No. 67, forthcoming 1997

'The OECD Economic Outlook – Highlights', **The OECD Observer**, No. 198, February/March 1996

OECD Economic Outlook, No. 58, 1995

Karsten Biltoft and Hans J. Blommestein, **The New Financial Landscape: Forces Shaping the Revolution in Banking, Risk Management and Capital Markets**, 1995

Assessing Structural Reform: Lessons for the Future, 1994

Banks under Stress, 1992

Jan Schuijer, 'Banks under Stress', **The OECD Observer**, No. 173, December 1991/January 1992.

The Machinery of Regulatory Reform

Rex Deighton-Smith

Regulatory reform is evolving rapidly. As experience accumulates, so does understanding of the problems and how they might best be solved. As a result, reform now embraces a much wider range of instruments, processes and institutions than in the early days of simple deregulation strategies. The focus is now on 'regulatory management' as an integral part of the permanent business of government. It aims at enabling governments to use regulatory powers more carefully and effectively within globalising and liberalising markets, to react more quickly and to wield a wider range of tools that protect public-policy objectives at lowest cost.

Regulatory reform is evolving in three general stages in OECD countries, although with much variation from country to country. The 'deregulation' strategies which began to emerge in the late 1970s and early '80s were first prompted by economic slowdown and business complaints about rising regulatory burdens. Simultaneously, it was becoming clear that regulations restricting competition and consumer prices had enormous costs with respect to efficiency and innovation. These perceptions unleashed a wave of deregulation, initially in the United States, the United Kingdom and Canada, which focused on industries such as transport, telecommunications, media and energy and which continues today in a widening range of countries.

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Removal of 'economic' regulations (those that set prices, block entry, establish quotas) has brought major benefits. But general deregulation is neither feasible nor desirable in many rapidly growing areas of 'social regulation' (that is, regulation which aims to achieve goals like health, safety or environmental standards). Here a different strategy is required to control regulatory costs without compromising voters' wishes for improved standards of protection. New, more sophisticated regulation can also help promote competitive outcomes in some recently privatised industries, especially as a transitional strategy while new markets develop.

The next step in the evolution of this thinking is focused on producing better regulation – achieving the chosen objectives at minimum cost. It involves both the systematic review and reform of existing regulation and the improvement of policy processes and capacities for creating new regulation of high quality. Regulatory reform is more forward-looking, but it is still targeted at individual regulations and fails to meet the deeper problems which arise from the nature of regulatory systems themselves, such as regulatory inflation,[1] complexity, lack of coherence, unanticipated interaction between rules and transparency and accountability.

The response has been 'regulatory management',[2] which addresses the capacity of governments to implement and sustain general reform, to direct the longer-term evolution of the national regulatory system, and to strengthen links with other areas of governance. Increasing prominence is being given to the issue of total regulatory costs in the United States and the United Kingdom. In Australia, specific targets for cost reduction have been adopted. In Canada a 'Federal Regulatory Plan' notifies the public well in advance of forthcoming regulatory initiatives, and therefore assists consultation, co-ordination and consistency between areas of regulation.

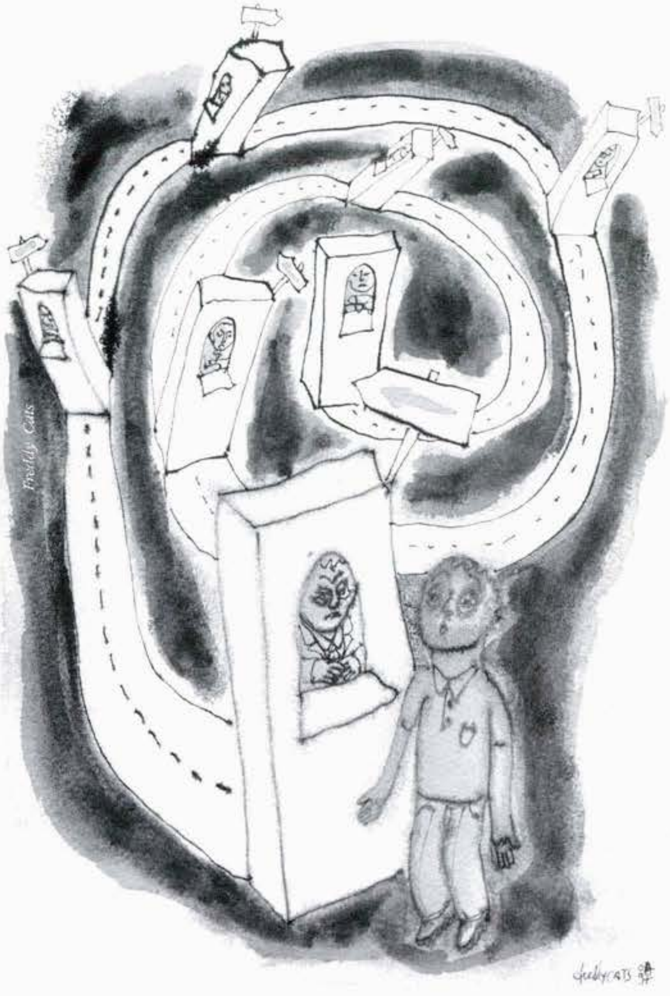
In these and other ways, regulatory management is developing in a few countries into a routine element of the central-management funct-

1. That is, rapidly rising aggregate regulatory costs. See John F. Morrall III, 'Controlling Regulatory Costs: The Use of Regulatory Budgeting', PUMA Occasional Paper, OECD, Paris, 1992; available free of charge from the OECD Public Management Service.

2. The concept of a three-stage evolution of regulatory reform, culminating in 'regulatory management', was first discussed in Scott Jacobs, 'The Future of Regulatory Reform', paper prepared for 'From Red Tape to Results: International Perspectives on Regulatory Reform', conference presented by the New South Wales government, in collaboration with the Commonwealth Industry Commission and the New Zealand Chamber of Commerce; available free of charge from the OECD Public Management Service.

3. Further information on the use of alternatives to regulation is available in Hans Huigen, 'Co-operative Approaches to Regulation', PUMA Occasional Paper, OECD, Paris, forthcoming 1997; available free of charge from the OECD Public Management Service.

*4. Scott Jacobs and Juhani Korhonen, 'Opening-up Regulation', **The OECD Observer**, No. 195, August/September 1995.*



ions of government. This movement parallels the development of central budgeting agencies, now universal in industrial countries, in the early part of this century: both initiatives aim at establishing broad perspectives and improved administrative responses to political direction.

Best Practices

The general design of reform programmes is far more important than any individual policy actions. A poorly designed system will never achieve the results desired of it, no matter how rigorously it is carried out. A well-crafted system has three basic elements. First, sustained political commitment, since resistance from potential losers from change is likely to be vigorous; second, explicit standards for regulatory quality and principles of regulatory decision-making using Regulatory Impact Analysis (RIA), the systematic weighing of alternatives[3] and broad consultation processes to allow the desirability of regulatory decisions to be assessed and provide the discipline of visibility; third, central management capacities. Expertise in regulatory reform and management must be gathered in a body or bodies with specific policy responsibility, and developed and extended over time.

An important determinant of regulatory quality is the systematic use of RIA for all regulatory proposals. RIA must be based on a cost/benefit approach to decision-making, identifying and assessing all the foreseeable effects of regulatory proposals to determine whether there is a net benefit. RIA should also be applied to feasible alternative policies to determine whether net benefits are maximised by the regulatory proposal under consideration.

Effective RIA requires consultation with the interest-groups and individuals likely to be affected. Targeted consultation at an early stage provides a cost-effective means of data collection and helps ensure all relevant impacts are identified. Wider consultation later in the process will provide maximum transparency and accountability, reducing the possibility of undue influence ('capture') by specific interest groups.[4] Consultation thus serves the double purpose of providing technical input and of promoting democratic values of openness and accountability.

Regulations are likely to become progressively less effective and appropriate over time as changes occur in technology, tastes and so on. A programme of regular review and updating is thus essential to maintain the effectiveness of existing regulation. Such an approach should be based on the same RIA disciplines as new regulation and targeted particularly towards the most costly regulations. Automatic repeal programmes should be considered, whether 'guillotines', which simply abolish all regulation over a certain age, phased repeals, or 'sunsetting', which sets limits on the lifespan of new regulation at the time it is made. In addition, programmes that seek to use information technology and co-ordination opportunities between government agencies, both for information and approvals, are likely to be important. A critical view of information requirements will help reduce red tape and government formalities.

What Results?

The results of regulatory reform are intrinsically difficult to measure. Many of the important benefits are hidden, since they consist of mistakes avoided. Others, such as an enhancement in the quality of democracy, cannot be quantified. One clear improvement is that officials are increasingly willing to question whether 'traditional' regulation is the best solution to perceived problems and to consider the use of alternatives such as performance or process-based regulations, tradable permits or tax or subsidy arrangements.[5] The extent of this change of attitude is suggested by the use in 18 OECD countries of Regulatory Impact Analysis as a guide to regulatory decision-making. Of these 18, 14 have also established central management capacities through dedicated groups within the bureaucracy to advocate, monitor and co-ordinate regulatory reform and to provide crucial training and support.

Most of the goals laid down by politicians are, nonetheless, expressed in terms of the quantity and cost of regulation. It is clear that, despite all the reform programmes, the quantity of regulation, whether measured in pages of new rules or their raw numbers or by the resources allocated to regulatory agencies, has steadily increased over the 1980s and '90s. Nonetheless, in many industries, such as aviation, road transport, telecommunications and energy, purely economic regulations have been eliminated or

5. See pp. 14–18.

The Machinery of Regulatory Reform

Freddy Cats

radically reduced and productivity has made quantum leaps. Labour productivity in the US airline industry, for instance, more than doubled after deregulation. Repeal programmes have dramatically reduced outdated regulations in countries including Australia, Canada and Sweden. Evidence from Australia and the United States also suggests that reform programmes may have slowed the rate of growth of new regulation by 20–35%.

Data on costs are even more elusive. Only one country, the United States, can provide figures. They suggest that, for a decade or more, total regulatory costs probably fell but that more recently they have begun to rise again as savings from further economic deregulation dwindle and costs of social regulation (in health, safety, housing, the environment, and so on) continue to rise. Improved regulatory systems probably do mean that the quality of regulation – that is, the benefits delivered for each dollar of costs – is almost certainly much higher. There is also clear evidence that RIA and reviews of existing regulation have reduced costs below what would otherwise have been the case: in the United States, for example, the Office of Management and Budget estimated that its RIA programme had reduced the compliance costs of new regulations by around \$100 billion over a 10-year period. And in Queensland, Australia, reforms to existing regulation were estimated to be saving businesses A\$370 million per annum.

Independent estimates of the impact on government efficiency are virtually impossible to find, although most officials involved with reform are certain that, on average, the cost-effectiveness of regulation has improved substantially. The movement away from economic towards social regulation tends to support this view, given the major economic gains that have been associated with economic deregulation. So, too, does the increased use of more flexible, performance-oriented standards, which allow business to choose the most efficient means of achieving outcomes.

Management capacities have thus clearly improved, with the adoption of explicit policies for reform, the appointment of specific groups and the establishment of quality standards for regulation through guidelines and legislative requirements. Co-ordination between government departments on regulatory issues is also being stepped up.

Improvements in the openness and accountability of democratic institutions might be expected to be still harder to document, but it is clear that more countries are involving a wider range of groups in consultation on policy-formulation than ever before. That consultation, too, is occurring earlier and is more intensive and more transparent. The ability of individuals and dispersed interest-groups to influence policy has definitely increased, although the possibility of undue influence by large, organised groups remains an issue that must be monitored carefully.

■ ■

Further work is required to identify new and more effective approaches to management and reform. Formalities in taxation, permits and licences are a near-universal concern, licences in particular because they can impede the establishment of new firms. Information technology may provide innovative solutions to these problems, enabling dissemination of information more rapidly and at lower cost. Better co-ordination between agencies should also reduce information gathering requirements.

International regulatory co-operation is likewise growing in importance as trade flows increase and regulatory authority is spread through different institutions. Effective new processes for improved co-ordination are urgently required, as is clarification of the role of national parliaments in the globalising regulatory world. Implementation and compliance issues will also become more prominent as the volume of regulation continues to increase while enforcement resources remain limited. New approaches will have to be developed, emphasising issues such as effective targeting of enforcement resources, better designed sanctions regimes and provision of positive incentives for compliance. ■

OECD Bibliography

- **Regulatory Impact Analysis: Best Practices in OECD Countries**, forthcoming 1997
- **Asking the Public: Consultation in Regulatory Decisions**, 1995
- **Governance in Transition: Public Management Reforms in OECD Countries**, 1995
- Scott Jacobs and Juhani Korhonen, 'Opening-up Regulation', **The OECD Observer**, No. 195, August/September 1995
- **Regulatory Co-operation for an Interdependent World**, 1994.

The Opening of Mexican Agriculture

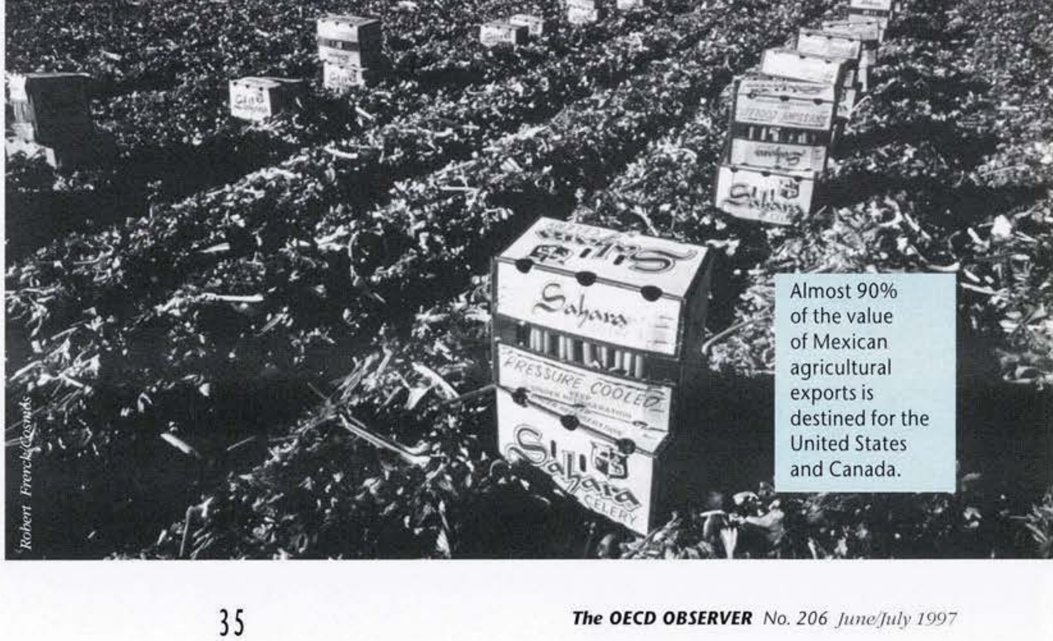
Gérard Bonnis and Wilfrid Legg

Far-reaching reforms of agricultural policies in Mexico have accompanied the steady opening of the economy to international markets since the mid-1980s, in sharp contrast to a long period in which economic policy was based on import substitution. The agro-food sector now benefits from more reliance on market signals, and a partially liberalised trading regime, although there are still severe structural problems that impede the search for improved efficiency.[1]

Mexico's geographical position favours the production of an enormous variety of agricultural commodities, ranging from maize, wheat and apples to avocados, coffee and mangoes. Moreover, Mexico's agricultural GDP is among the five largest in the OECD area, in terms both of employment and output, and Mexico is a major contributor to agricultural trade. Fruits and vegetables are major cash crops, and their potential for export development remains large. The productivity of agricultural labour has increased over the last decade: GDP from agriculture has increased although employment, at about a quarter, has remained largely unchanged.

Nonetheless, the poor provision of basic infrastructure, the limited development of marketing channels and the poor co-ordination between research, training and extension services are still major impediments to the economic diversification of rural areas, hampering the ability of many farmers to respond efficiently to market signals. Although there appears to be wide disparities in agricultural incomes across regions and sectors, the lack of good and consistent information on producer prices and incomes is an impediment to policy-makers.

Mexican agriculture, moreover, is faced with major structural problems. A large number of farms are small (two hectares or below), producing food only for their own consumption. By contrast, a small number of large-scale, commercial farm holdings (more than 50 hectares) account for a large proportion of agricultural output. The problem is not new. After the Mexican Revolution in 1917 the aim of land re-distri-



Almost 90% of the value of Mexican agricultural exports is destined for the United States and Canada.

1. ***Review of Agricultural Polices in Mexico***, *OECD Publications, Paris, forthcoming 1997.*

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One of the aims of the land-tenure reform of 1992 was to bring small-scale holdings together in more viable units by allowing famers easier access to credit.

bution was to create more equality in land property, through reducing the proportion of large-scale land holdings (*latifundios*). The number of farm holdings reached 3.8 million in 1991, mainly as a result of population growth and land re-distribution.

The *ejido*[2] system created by the re-distribution of land had poorly defined property rights and imposed restrictions on mobility and on farmers' ability to enter contractual arrangements. In 1992, therefore, the reform of land tenure established a new legal framework for property rights, allowing *ejido* farmers to sell, rent or mortgage their plots of land, with the aim of giving the farmers incentives to improve their productivity and thus encourage investment in agriculture and forestry. By also allowing farmers better access to credit, the land reform should contribute to the consolidation of small plots into viable farms. Provisions on the maximum size of agricultural use in private properties remain unchanged for individuals (there is a maximum of 100 hectares for irrigated land), although corporations can now farm up to 25 times the limits for individuals, which could improve efficiency through inducing more investment.[3]

Recent Developments

The opening-up of the economy to international competition, in particular by joining the North American Free Trade Agreement (NAFTA), has been one of the most important economic events in Mexico in recent years. The NAFTA is the first regional integration agreement to be signed between advanced industrial nations and a developing nation in which agriculture was included.[4] Traditionally, agriculture has been highly protected in international trade, although now all agricultural and agro-food trade between the United States, Canada and Mexico will be duty-free by 2008. The NAFTA is particularly important for Mexican agriculture: nearly 90% of the value of Mexican agricultural exports is destined for its North American neighbours, and over 75% of its agricultural imports originates there. Trade has hugely expanded not only with Mexico's NAFTA partners but also with other countries in Latin America, especially Chile, with which regional trade agreements have been signed. Through its commitments to open trade in NAFTA, Mexico has taken important steps in the direction of market orientation.

Underpinned by the moves to liberalise trade, Mexican agricultural policy is progressively replacing price-support policies for grains, beans and oilseeds by direct payments to farmers through the programme known as 'Procampo'. The move toward a system of direct payments decoupled from the production of specific commodities will reduce distortions in production and trade, and will benefit farms who previously produced too little to take advantage of the system of market-price support. An important feature of 'Procampo' is that it is intended to be implemented over a fixed period, which will help farmers in their planning decisions. Moreover, the development of property rights through a property register for the entitlement to Procampo payments will provide an incentive for farmers to farm in a more environmentally sustainable way, which could reduce the 'slash and burn' practices that were prevalent in the past in some parts of Mexico.

A major new development, building on these reforms, the 'Alliance for Agriculture' (*Alianza para el campo*), announced at the end of 1995, defined the government's main objectives in agricultural policy for 1995–2000. It consists of a set of specific programmes aimed primarily at improving farmers' skills and stimulating technological development, with a view to increasing the productivity and competitiveness of Mexican farms. One of the central features of the Alliance for Agriculture is decentralisation: there will now be far more participation of producers and state governments in deciding the kind of research that should be carried out and measures to support the purchase of farm equipment. It is estimated that the global budget of the Alliance was about 1.9 billion pesos

2. The ejido *is a form of land tenure where the beneficiaries as a group, but not as individuals, have the right to use the land.*

3. See also Javier Bonilla and Gérard Viatte, 'Radical Reform in Mexican Agriculture', ***The OECD Observer****, No. 191, December 1994/January 1995.*

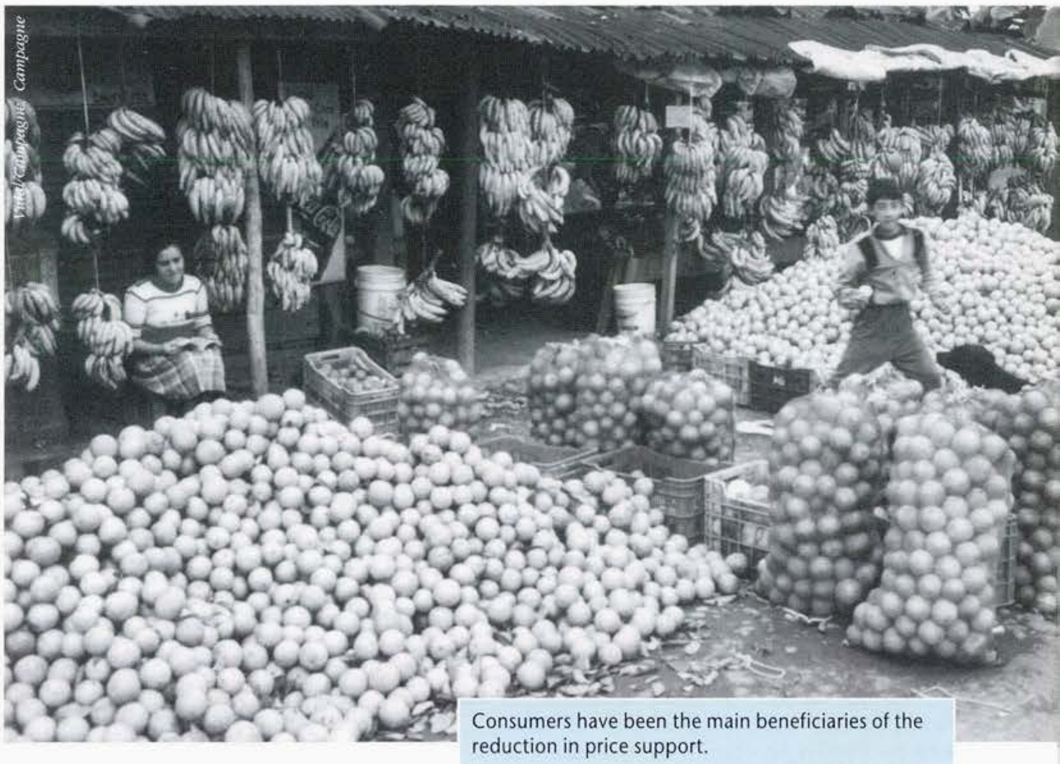
4. ***Trade Liberalisation Policies in Mexico****, OECD Publications, Paris, 1996.*

5. The dollar equivalents given in this article take account of fluctuations in the exchange rate.

6. The Producer Subsidy Equivalent (PSE) is an indicator of the value of the monetary transfers to agriculture resulting from agricultural policies. Both transfers from consumers of agricultural products (through domestic market prices) and transfers from taxpayers (through budgetary or tax expenditures) are included. The percentage PSE is the value of transfers as a percentage of the value of production.

7. The Consumer Subsidy Equivalent (CSE) is an indicator of the value of monetary transfers to consumers resulting from agricultural policies. Normally, these transfers are negative and the CSE can be thought of as the implicit tax imposed on consumers by agricultural policies. The percentage CSE is the value of transfers as a percentage of the value of consumption (valued at producer prices).

8. For reference, the guaranteed price paid to producers of maize in 1996 was 1,250 pesos ($164) per tonne, and the average productivity is 2.2 tonnes per hectare.



Consumers have been the main beneficiaries of the reduction in price support.

($250 million[5]) in 1996, of which around one-third was paid by state governments.

A programme called 'Produce' is the main element within the Alliance for Agriculture and accounts for about half of its total budget. The principal objectives are to improve the production base of farms and to promote the introduction of technology. Under 'Produce', payments are granted directly to farmers once and for all for the purchase of capital goods, and for the provision of technical support by private foundations.

Farmers can benefit from several payments at the same time, although there is a maximum payment limit for each sub-programme. 'Produce' includes five sub-programmes: fertilisation and irrigation, prairies, rural equipment, mechanisation, and farm studies and projects. Additional programmes are associated with the production of specific commodities (milk and rubber, for example); others are more general, and are intended to benefit agriculture as a whole (animal and plant health, rural training and extension, rural employment, women in rural development, marketing and promotion). The aim of all of them is to improve productivity, and the Mexican government hopes that they will contribute to increasing production towards products in which Mexico is competitive in international markets, especially in fruit and vegetables.

How much have agricultural policies cost in recent years? Since 1983, total support to Mexican agriculture, as measured by the OECD's 'percentage PSE',[6] has been low compared with the OECD average. Mexico's PSE has halved in the 1990s, and in 1996 it was 13%, compared with 36% for the OECD as a whole. Its recent evolution shows the increasing importance of direct payments to farmers. Market-price support (which has been the main source of support for maize, sugar, milk and pigmeat) fell from 55% of the PSE in 1979 to 30% in 1988, followed by an increase to 77% in 1991, and a subsequent decrease to 37% in 1996. From 1994, the effects of the shift from market-price support to direct payments, following the introduction of 'Procampo' and the liberalisation of trade, became evident. The share of direct payments in the total PSE increased from 2% in 1993 to 40% in 1996. But the other important factors determining the evolution of support are the exchange rate and world prices: in 1995, high world prices for cereals and the sharp devaluation of the peso virtually eliminated the price gap between Mexico and the rest of the world.

In the past, given the low incomes in Mexico and the resulting high proportion of people's incomes that had to be devoted to food, a whole plethora of consumer subsidies were in place. They have now been rationalised, to target poor and vulnerable groups, which should improve their cost-effectiveness. Moreover, the shift from market-price support has been of major benefit to consumers. Until 1994, the OECD's percentage CSE[7] was negative (except in 1982–89), representing an implicit tax on consumption, but in 1995 and in 1996, consumption was subsidised. Over the period under review, the percentage CSE has been generally below the OECD average: in 1996 Mexican consumers were subsidised (equivalent to 2% of the value of agricultural output), whereas OECD consumers as a whole paid a 23% implicit tax.

Implementing 'Procampo'

The first 'Procampo' payments were made in 1994, when eligible farmers (those who produced grains, beans and oilseeds before 1993) could allocate land to any crop. In 1995, payments were restricted to farmers growing one of nine eligible crops (maize, beans, wheat, sorghum, rice, soyabeans, safflower, cotton and barley). As of 1996, eligible farmers receive payment for land devoted to any crop, livestock or forestry activity, or placed in an approved environmental programme, but they are not allowed to use the land for any other purpose.

Payments are given on a per hectare basis for each crop season and are fixed at the same rate across the country. Procampo is helping farmers to adjust progressively from guaranteed-price schemes for commodities to direct payments to given areas. In 1994, guaranteed prices were decreased by 20% for maize, and by 24% for beans while 'Procampo' payment rates were increased by 20%. In 1995, as a result of high inflation brought about by the devaluation of the peso at the end of 1994, guaranteed prices for maize and beans were increased in nominal terms, as were 'Procampo' payments. In 1996, it was announced that 'Procampo' payments will be fixed in real terms until the end of the duration of the programme (15 years). For the spring/summer crop season in 1996, payments were established at 484 pesos ($64) per hectare.[8]

Payments under 'Procampo' benefited around 3 million farmers on more than 13 million hectares, with a total budgetary cost of around 4.9 billion pesos ($1.4 billion) in 1994 and 5.9 billion pesos ($0.9 billion) in 1995. It is estimated that spending under 'Procampo' reached about 6.8 billion pesos ($0.9 billion) in 1996. In 1995, the land eligible for these payments was cultivated mainly with maize (more than 60%), beans (around 13%), sorghum (11%), and wheat (less than 7%). Most of this land (80%) was in rainfed areas. Nearly 90% of the producers who benefited cultivated less than five hectares, although they received only about half of the total payments. Subsistence farmers – owner-operators of plots (*predios*) of less than two hectares and producing maize and beans with low yields – accounted for about 65% of eligible producers, and received about a quarter of total payments. Producers have started to transfer their rights to these payments (*cesión de derechos*) to banks, state governments or other institutions (such as farm input retailers, private marketing companies and state-owned agencies) which can then be used as collateral. It is estimated that in 1996 such transfers accounted for around 14% of 'Procampo' payments.

■ ■

Mexico has made much progress in adopting market-oriented domestic and trade policies, in line with the directions for agricultural policy reform agreed by OECD ministers a decade ago. Yet there are still major structural problems to be addressed in agriculture in many rural areas if the efficiency of agricultural production, farm incomes and the diversification of employment opportunities are to be improved. It is essential that the progress already made in reforming agricultural policy should be consolidated, within the framework of overall economic development, and as part of a coherent policy approach. ■

OECD BIBLIOGRAPHY

Review of Agricultural Policies in Mexico, forthcoming 1997

Agricultural Policies in OECD Countries: Monitoring and Evaluation 1997, 1997

OECD Economic Surveys: Mexico, 1996

Trade Liberalisation Policies in Mexico, 1996

Javier Bonilla and Gérard Viatte, 'Radical Reform in Mexican Agriculture', **The OECD Observer,** No. 191, December 1994/January 1995.

Can China Self-sufficiency

Ferdinand Kuba

One of the questions raised by analysts of developments in the Chinese economy is whether China, which has about 22% of the world population but only 7% of its agricultural area, will be able to continue feeding its growing population essentially from domestic resources.[1]

Changes in the balance of supply and demand in China for main agricultural and food commodities, and for grains in particular, could have a strong impact on the world markets for these products. What China's future grain requirements might be has been hotly debated recently; the projections diverge markedly, ranging from forecasts of net exports to suppositions of huge import requirements, big enough to trigger strong price increases and market disorders, eventually even 'starving the world'.

A number of factors will affect demand, among them population growth, urbanisation and consumption patterns. The present rate of population growth – over 1% annually – is set to decline between 2000 and 2010, by which time the population is expected to reach a total of about 1.4 billion. A higher proportion of these people will live in urban areas than do today, with a higher share of livestock products in their diets.

But the main effect will come from an unprecedented surge in real incomes, driven by vigorous economic growth, averaging about 10% over the past ten years. The result has been a strong increase in demand for livestock products, meat in particular, which in turn has required an expanding amount of feed grain. Since economic growth and per capita incomes are expected to continue their rapid expansion, demand for feed grains will very probably also continue to grow and should account for most of the future growth in China's total grain requirements.

The evolution of supply patterns will be largely determined by the pace of technological changes and trends in land management and use and possible environmental degradation. But the principal impact is to be expected from investment in the agro-food sector and incentives provided to farmers through market-oriented agricultural policies.

One of the policies China has adopted most recently in pursuit of its traditional goal of self-sufficiency in grain is the so-called 'rice-bag policy'. It provides provincial governors with responsibility for and control over grain production and supplies in their province with the objective of achieving the highest possible regional self-sufficiency in grains. This policy was designed in response to the concern of the central government about continued losses of agricultural area to other uses, such as roads, construction sites, and so on, and with the intention of

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1. ***Agricultural Policies in China***, *OECD Publications, Paris, forthcoming 1997.*

Achieve in Food?

sustaining growth of agricultural production and food supplies, maintaining food prices at acceptable figures, sharing with local administrations the financial burden for agricultural investments and transfering the main responsibility for maintaining adequate supplies to provincial government.

Although this policy brings the benefit of decentralisation, it involves more state control, an over-emphasis on grain production and tends to lead away from the pursuit of comparative advantage and allocative efficiency. For example, in provinces which could produce a surplus, little effort is being made to expand grain production beyond what is necessary to meet local demand; by contrast, provinces with no comparative advantage for grain production tend to over-invest in it so as to improve their self-sufficiency. In 1995, indeed, very little of the increased grain production was achieved in provinces with a comparative advantage. As a general rule, the rice-bag policy tends to subsidise grain producers in deficit areas where they enjoy budgetary transfers and privileges while taxing growers in surplus areas who lose market opportunities.

The Importance of Investment

The volume of investment into the agro-food sector will continue to play a central role in China's ability to sustain the growth of agricultural production, in particular for large-scale infrastructural works such as water-resource development and irrigation. Almost half of China's cultivated land is irrigated and the current five-year plan (to the year 2000) calls for further large investments in irrigation and drainage.

A special investment programme is devoted to the creation of so-called 'grain bases' which involve a concentration of investments in infrastructure (including irrigation), modern technology and short-term production credits in regions with a high potential for grain production. This programme was started in 1983; by 1995, 663 such 'bases' had been established, with yields about 20% higher than the country average. But the state cannot provide all the funds required by the agricultural sector and will therefore have to make it more attractive for private investments, not least from the farmers themselves who are currently hesitant to invest in their own business because of unclear property rights and inefficient land-tenure and management systems and because such investments are unattractive because of their long-term nature and high risk-factor: quick and higher returns can be achieved in other economic activities.

The introduction of the private ownership of land and the creation of a market for land could help to eliminate the inefficiencies in the present system; at present this is not an option being considered by the Chinese leadership. Improvements in land-tenure and -management can nonetheless be achieved even under the constraints of collective ownership. The Chinese government has tried to address this issue by introducing transferable land-use rights of up to 30 years. The aim is to facilitate the re-allocation of farm land and encourage the consolidation of farms and, especially, to overcome farmers' reservations about investing in their farms and thus achieving higher productivity. So far these policies have met only with limited success: farmers are reluctant to sell their rights in the absence of an adequate social-security system because these land-use rights provide them with a source of some secure income.

Bradshaw/Saba-REA

The surge in real incomes has brought about a substantial increase in demand for animal products, meat in particular, pushing up demand for feed grain.

Under the present five-year plan the Chinese government has set a grain production target of 490–500 million tonnes for the year 2000. This goal does not seem over-ambitious: 467 million tonnes were harvested in 1995, and 480 million tonnes in 1996. But in the future much will also depend on policies and price incentives given to farmers. Over the past three to four years grain prices have continued to increase and are now

Can China Achieve Self-sufficiency in Food?

Large investments in irrigation are planned to sustain the growth in agriculture production.

T.A. Davis/Saba-REA

close to or even exceeding world market figures. But the two-track pricing system abolished in 1993, whereby farmers have to deliver a certain amount of their grain to the government at below-market prices, was reintroduced in 1994 in order to control food-price increases for the urban population. So that prices should be more closely oriented to the market, the government intends gradually to narrow the present gap between the state-procurement price and prices on the free market by raising procurement prices gradually to those obtaining in the market.

If current policy orientations are maintained and a grain-production figure of about 500 million tonnes is reached, China's import requirements by the year 2000 are unlikely much to exceed 20 million tonnes on average – which is the quantity imported in the 1995/96 season, when China reversed its former position of a small net grain exporter and became one of the world's most important importers. In the medium to longer term, such import requirements could range between 20–40 million tonnes, which is 5–8% of domestic production (with some annual variations resulting from harvest fluctuations). Imports in this range could easily be covered by the world market without causing any disruptions.

But can China's present over-emphasis on grain production be economically justified? The country's resource endowment – scarce agricultural land and abundant cheap labour – would suggest, rather, a shift away from land-intensive agricultural production such as grain towards labour-intensive food products with higher value-added such as fruit, vegetables and livestock products. These products could also be exported to earn the foreign currency required to import bulk products such as grain feedstuffs and perhaps even unprocessed meats. China has already developed a strong position as exporter of processed food with higher value-added, achieving a positive agro-food trade balance of $3.8 billion in 1995. It would seem to be in China's interest to develop this capacity further. A part of the agricultural land currently sown with grain could be devoted to more labour-intensive crops such as fruit and vegetables which can be further processed and exported – to Asian markets in particular. That would generate additional employment and income in rural areas and townships.

■ ■

Opting for policies that are more directed by comparative advantage and market signals and opportunities would mean reconsidering China's traditional, even historic, policy of self-sufficiency in grain. Here the experience of some other East Asian countries is encouraging.

Such a policy orientation would also permit the Chinese authorities to adopt low-support policies, with grain prices governed essentially by the world market. This change could lead to economic benefits: it would mean lower prices for consumers than under a policy of high support, which is derived mainly from protective tariffs, and it would allow for an optimisation of resource allocation. Furthermore, such market-oriented and liberal policies would also facilitate China's further integration into the world economy. ■

OECD Bibliography

Agricultural Policies in China, forthcoming 1997

China in the 21st Century: Long-term Global Implications, 1996

Agricultural Policies, Markets and Trade in Transition Economies – Monitoring and Evaluation, 1996

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

Agricultural Policies, Markets and Trade in the Central and East European Countries (CEECs), the New Independent States (NIS) and China: Monitoring and Outlook 1993, 1993

Claude Aubert, 'Agricultural Reform in China', **The OECD Observer**, No. 183, August/September 1993.

The Growth of Network Computing

Andrew Wyckoff

The first stage of computing used mainframe technology. The second involved the widespread use of personal computers. The third has not meant a radical shift in computer design but rather changes in how the existing computing infrastructure is interconnected.[1]

The development of the Internet has made it possible to connect computers of different designs and operating systems at a relatively low price, largely using the existing information and communications infrastructure. And although the Internet attracts most of the attention, equally important advances have been made in the use of internal computing networks such as local area networks (LANs) and wide area networks (WANs) and the use of Internet applications on these internal networks, called 'intranets', that make use of the 'client-server' architecture that is the essence of network computing. It is estimated that roughly half of all the servers on the WorldWide Web are for intranets and that the amount of traffic on these private intranets exceeds that on the public Internet.[2] As the shift to network computing is diffused, the information-technology (IT) industry, government policies and the economy as a whole are affected.[3]

The most immediate impact of network computing is on the IT industry itself. Its development has continued to fuel the demand for IT products, the annual growth rate of which between 1987 and 1995 was – at 10% – double the rate of growth of GDP. By 1995, world-wide revenues of IT producers exceeded $500 billion. Network computing has also caused a restructuring of the IT market. The share of multi-user systems, such as mainframes and minicomputers, in the hardware market has fallen by half, from 54% of all hardware purchases in 1987 to 28% in 1995; and personal computers and work stations have increased by half, growing from 41 to 63% (Figure 1, p. 42).

The most active part of this market has been for computers that provide support to network users (e-mail, shared databases and Web sites, for example), better known as servers. Server hardware ranges from PCs to mainframes, and all portions of the market are experiencing fast growth. In the increasingly powerful mid-range segment of workstations ('superservers'), indeed, growth in fiscal year 1994/95 exceeded 100%, and here the development of symmetric multiprocessing (SMP) servers promises to deliver even more power at a lower price (box, p. 42).

As the network of computers has expanded, 'network economics' has come into play: as more people join a network, its utility increases, attracting new members to the network. This leads to the exponential growth that has come to characterise the Internet and has led to the demand for personal computers that will allow people to connect. As people buy PCs, it has led in turn to a surge in demand for microprocessors – that market has grown by over 30% in each of the last three years – and packaged software which now accounts for about a fifth of the total IT market.

PC penetration and links to computing networks are most advanced at work, although the rate differs significantly across countries. Of the world-wide installed base of 4.8 million LAN servers in 1994, the United States accounted for 55%, western Europe 32%, and the rest of the world 13%. Differences in LAN implementation can be explained by two factors: the rates of PC diffusion and connectivity. In terms of number of corporate PCs per 100 white-collar workers, leading countries such as Norway, Switzerland and the United States had more than 100, major western European countries 60–80, and Japan only 24. In general, the United States enjoys more widespread PC penetration; although as demand rises in Japan and Europe, the gap is expected to narrow (Figure 2, p. 43).

There is every indication that this shift towards network computing by businesses will only accelerate in the future. One phenomenon that might fuel this switch is the 'Year 2000' problem where, because of memory constraints, old software referred to the date using the last two digits of the year. Thus 1985 was stored as '85'. The arrival of the millennium means that a vast number of computer programmes cannot differentiate between the year 1900 and the year 2000, forcing a wholesale re-writing of 'legacy' programmes. In many cases, firms were reluctant to update their hardware because it would not sup-

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1. ***Information Technology Outlook 1997***, *OECD Publications, Paris, 1997.*

2. *'Information Infrastructure Convergence and Pricing: The Internet', OECD, Paris, 1996; available free of charge from the Information, Computer and Communications Policy Division of the OECD Directorate for Science, Technology and Industry. This document can be downloaded from the Internet at http://www.oecd.org/dsti/gd_docs/s96_xxe.html.*

3. *See pp. 19–22.*

The Growth of Network Computing

FOCUS

The Advent of SMP Servers

Technological innovations in microprocessor chip technology have improved the performance of enterprise servers and superservers and have driven demand. RISC (reduced instruction set computing) technology, which was introduced in the 1980s and surged in the early '90s, simplifies architectures by reducing the number of instructions, as the name suggests, and thereby improving performance. SMP (symmetric multi-processing), a microprocessor architectural technology which supports multiple processors and thus boosts processing power, is another major innovation. By putting multiple RISC processors (from two to 36, with four to six as typical configurations) on SMP systems, server manufacturers using RISC chips have succeeded in raising power, but RISC SMPs are more expensive and therefore tend to be used for specialised applications.

In the low-end market segment, Intel is attempting to push its way into the server market with SMP systems based on the Pentium Pro, the first CISC (complex instruction set computing) microprocessor with SMP functionality. A CISC SMP server with four processor models currently costs less than \$15,000 or about half the price of a comparably configured RISC server. Although RISC-based servers currently dominate the server market, SMP servers using CISC chips are offering genuine competition. This is particularly true at the lower end of the market, as users upgrading from PC LANs, who once turned automatically to RISC workstations, now have a viable alternative. If the CISC SMP system gains popularity, it will bring inexpensive commodity standards to a market that is currently characterised by proprietary microprocessor architectures.

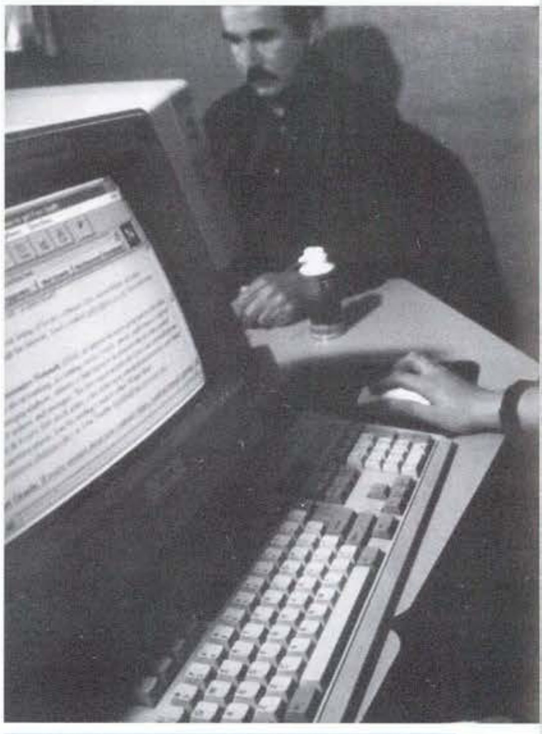
port this legacy software but as the 'Year 2000' problem forces them to update the software it is likely that firms will use the opportunity to migrate their computing requirements away from old, stand-alone mainframes and towards the more module and flexible network computing systems now available.

The extension of network computing to homes is not as advanced as at work, largely because PCs are still rather rare in homes, but this situation is changing. Many homes purchased PCs in the early 1990s and by the mid-1990s, a quarter or more of households in Australia, Canada, Denmark, Germany, the Netherlands, Sweden and the United States had a computer. As with many new technologies, household income is the most important factor in explaining the presence of a computer in the home: for every \$10,000 increase in income, the likelihood of owning a computer increases by 7 percentage points. PC ownership is also directly correlated with type of education, the presence of children and with living in an urban area.

What Impact?

As network economies make it more attractive to buy a PC and get on-line, IT policies in OECD countries have broadened from 'technology push' programmes for developing information technologies to encompass 'demand pull' policies that support IT use and applications. These more comprehensive strategies are often being adopted as part of over-arching information infrastructure initiatives. Programmes developed to improve the delivery of government services may be the clearest example of this shift. Not only do governments represent a large part of total demand, having transferred a number of services such as the disbursement of benefits, job location and filing of taxes to networked environments; they also can help establish a fledging market for these services and the infrastructure they require. The expansion of IT policy into these areas poses challenges that include providing adequate access for all citizens, ensuring privacy and implementing new methods and technology, all of which can be costly in an era of budget stringency. Offsetting these disadvantages is evidence that, in the longer run, government investments in IT result in substantial increases in productivity and reduced labour costs.

The linking of computers together in a network could have a profound impact on the economy as business-to-business and business-to-consumer transactions move off the telephone and out of the store and onto computer networks like the Internet. It is too early to declare the arrival of the cyber-economy, though not to trace some of its outlines.

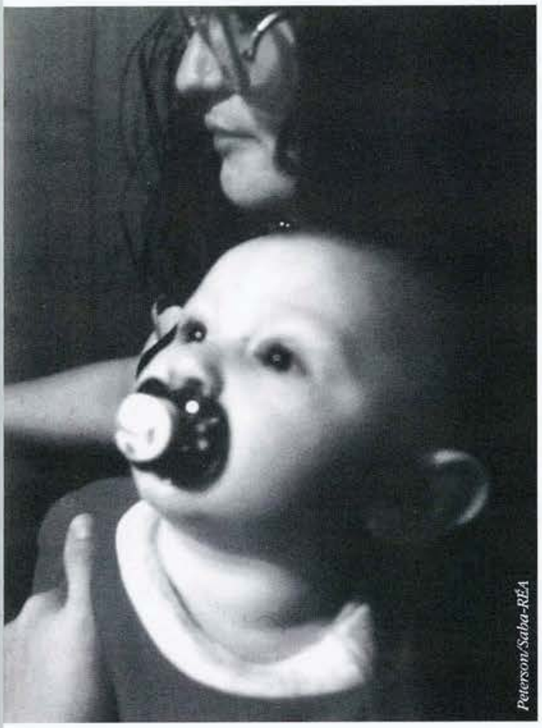


Networks operate in a virtuous circle: the more people join a network, the more useful it becomes – and the more people it attracts.

The Shape of the Cyber-economy?

Three recent innovations in network computing now make the potential of electronic commerce a reality: the widespread diffusion of the Internet and its associated applications like the WorldWide Web, software that can travel over networks and work regardless of hardware and software specifications, and software that can analyse behaviour in a network environment.

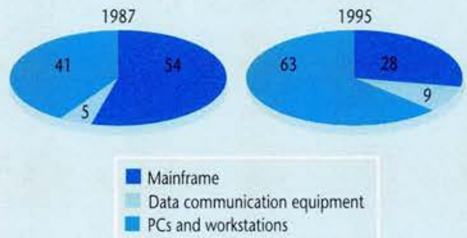
The biggest example of network computing is that network of networks, the Internet. Unfortunately, the Internet's popularity is now the system's own worst enemy as congestion occurs



on some parts of the information highway. In addition to a huge increase in the numbers of users, the nature of Internet use has shifted from e-mail and file transfers to applications such as graphics, video and audio. Although these innovations make the Internet easier and more fun to use, they require substantially more bandwidth, which puts a strain on the system. Multimedia applications account for only a small share of the transactions ('conversations') on some portions of the Internet (0.01%), but they represent a large part of the volume (20% of the bytes). Thus, while Internet hosts are growing in number by 6% a month, the amount of data being processed is growing by nearly twice that amount (11%). Although this demand is offset to some degree by a huge increase in supply – over the last decade 'backbone' speed (that is, the number of bits transmitted per second) has increased at an annual rate of 100% – it is clear that the quality of service on the Internet varies considerably, so that it cannot currently be used for 'high-end' applications that require guaranteed, reliable service. One of these is electronic commerce. Few people will want to locate a business where customers cannot reach them. The causes of, and solutions to, this unpredictability of service lie more in management than in technology. In particular, three problems stand out: inadequate pricing signals for some users, the fragmented nature of the industry, and lack of adequate consumer information.

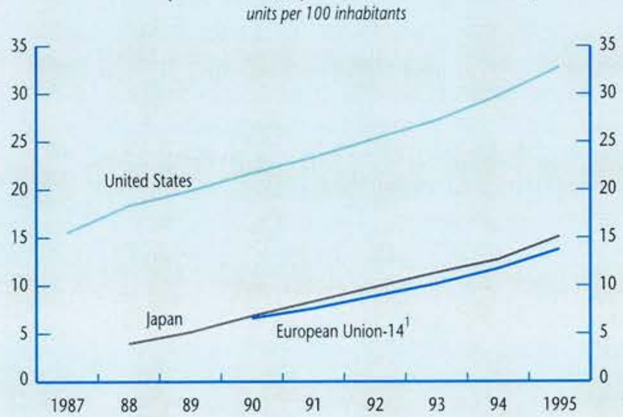
Once the hardware is in place, software applications are required to deliver the product, conduct transactions and provide after-sales service. Performing these tasks across a wide range of computing environments is impossible with old programming languages which were designed for proprietary systems. A new series of technological developments, collectively grouped under the umbrella term 'component software', overcomes these problems and thus may alter the software and hardware markets considerably. Sometimes called 'applets', this software is best known by its various brand names, such as Sun's Java, Microsoft's ActiveX and Apple's OpenDoc. What makes it unique is that these software components can be 'mixed and matched' because they share a set of standard interfaces that allow interoperability. The software can thus be tailored to the specific demands of consumers and be used regardless of the hardware or the operating system. This type of software is thus perfect for a networked computing environment like the Internet. If this new type of software is adopted widely, it could have some dramatic effects, including the lowering of the barriers to software innovation and providing easier access to the market as new distribution channels emerge; it could decrease software switching costs by making access and installation easier; and its interoperability could reduce the importance of existing hardware and operating systems. At the very least, component software is likely to accelerate the trend towards a diversity of network-access devices, broadening the penetration and utility of network computing into everyday life.

Figure 1
Composition of the OECD Hardware Market, 1987–95
%



Source: OECD, IDC

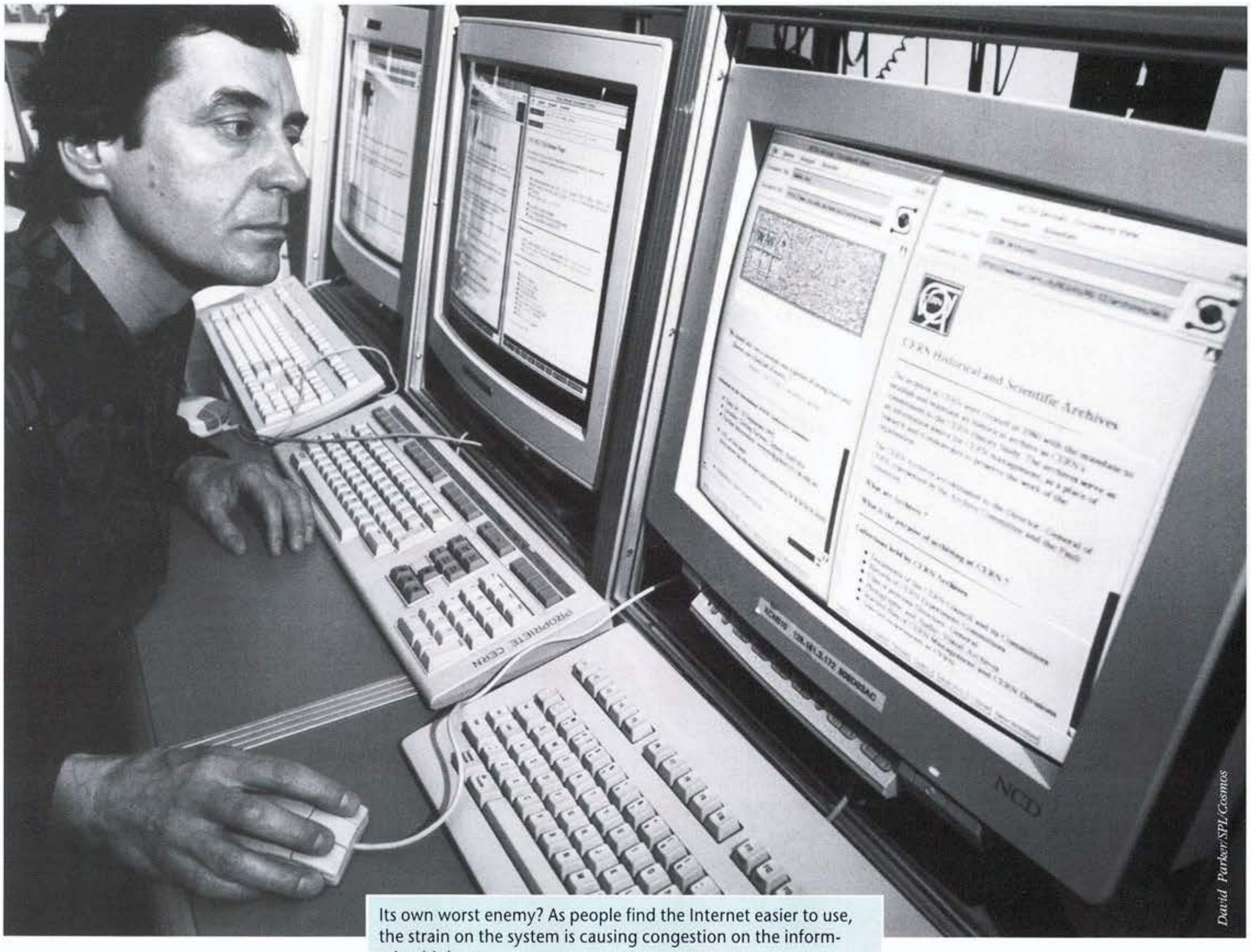
Figure 2
PCs in the European Union, Japan and the United States, 1987–95
units per 100 inhabitants



1. Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, United Kingdom.
Source: OECD, ITU

Data Mining

To exploit the economic potential of network computing fully both for the seller and the buyer, techniques must be developed that accommodate the huge volumes of network activity while at the same time allowing one-to-one interaction. One of these techniques is data mining.



David Parker/SPL/Cosmos

Its own worst enemy? As people find the Internet easier to use, the strain on the system is causing congestion on the information highway.

Data mining is a loose amalgam of techniques designed to help decision-makers draw inferences from stores of data and improve their understanding of customers, products and markets. It differs from conventional data analyses in two ways. First, it seeks to identify new patterns rather than merely evaluating existing ones. Second, its scale dwarfs most conventional analyses. Many statistical procedures were designed for relatively small data sets, in the range of tens of megabytes. Data-mining techniques are typically employed on data bases in excess of a gigabyte – such as the hundreds of gigabytes of electronic point-of-sale data collected by supermarkets.

Data-mining technologies have the potential to transform markets and businesses. In particular, it is likely that they will increase market segmentation by enabling businesses to target very small niches and develop individual customer profiles, essentially providing the capability to market on a one-to-one basis that many see as a distinguishing factor of electronic commerce. The ability to do so raises some potentially serious privacy issues of a new sort. In particular, the capability of combining data sets and processing a vast amount of data makes it possible to infer personal details. For example, by looking at purchasing patterns and demographic data, it is possible to see whether someone has a drug problem or engages in risky behaviour that might affect his or her credit rating. But like most technologies, data mining has many positive aspects as well. It is very effective, for instance, in helping to detect fraud, especially in electronic commerce transactions that may be of small value but in huge volumes. It is already being used for this purpose by credit-card companies, the providers of cellular communications and law-enforcement agencies.

■ ■

Network computing is firmly established and growing quickly as the preferred computing architecture, and it appears that this is only the beginning of the phenomenon. The impact of this change is widespread: it is substantially changing the IT industry itself and reorienting the focus of IT-related government policies. But its biggest impact will be on the broader economy as it provides the enabling infrastructure for electronic commerce. ■

OECD Bibliography

- **Information Technology Outlook 1997**, 1997
- **Communications Outlook 1997**, 1997
- Sam Paltridge and Dimitri Ypsilanti, 'A Bright Outlook for Communications', **The OECD Observer**, No. 205, April/May 1997
- Georges Ferné, 'Compatibility for Data Transmission?', **The OECD Observer**, No. 200, June/July 1996
- Vivian Bayar and Pierre Montagnier, 'The Information Technology Industry', **The OECD Observer**, No. 198, February/March 1996.

Spotlight

Ireland
The Labour Market

Randall S. Jones

Economic activity in Ireland since 1993 has grown by almost a quarter, more than three times the average increase in the rest of Europe. Rapid growth of output has been accompanied by substantial gains in employment, creating more jobs in three years than in the previous thirty. Employment growth in Ireland is thus much higher than in the rest of Europe and North America (Figure 1). In addition, net emigration – a persistent phenomenon in Ireland over the past two centuries – has been reduced, and in 1996 Ireland experienced a net inflow of population. At the same time, the labour-force participation rate has risen as more women have joined the labour force.[1]

This buoyant growth has reduced the unemployment rate from 15.6% in 1993 to 11.3% in 1996, but it remains well above the OECD average (Figure 2). The problem is essentially one of long-term unemployment: almost 60% of the unemployed have been out of a job for more than one year, which is one of the highest rates in the OECD area. The duration of unemployment has a strong effect on the probability of finding work: although two-thirds of the unemployed find a job within a year, someone who has been jobless for more than two years has only a one in four chance of securing employment.

Unemployment is concentrated among people with only a primary or lower-secondary school education. This group, which makes up about half of the labour force, had an unemployment rate of 18% in 1995, compared to only 4% for those with a university education. Consequently, those with only a lower-secondary education or less accounted for two-thirds of the unemployed. Many of the poorly educated are young: in 1995, a third of the unemployed were people under the age of 35 who had failed to complete upper secondary school.

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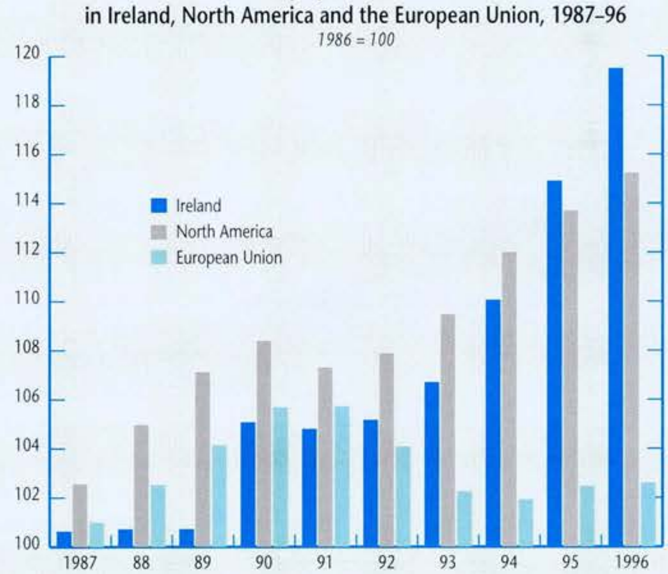
The high rate of unemployment is partly a result of the interaction of the tax and social-welfare systems, which has weakened the work incentives of many individuals, particularly those with low educational qualifications. The government has substantially increased benefits in real terms since 1979, while taxing relatively low incomes at high marginal rates. The lack of co-ordination between tax and welfare policies has reduced the gap between the amount of income support available to the unemployed and net income from work, thus making the transition from unemployment to work less attractive and lessening the incentives for low-paid workers to remain in employment.

Figure 1
Employment Growth
in Ireland, North America and the European Union, 1987–96
1986 = 100



Source: OECD

The Tax and Welfare Systems

Although the share of taxes in employee earnings is slightly below the OECD average, Ireland's tax system is marked by very high marginal rates at low incomes. In 1996, for example, a single person entered the top tax-bracket of 55.8% (including social-security contributions) at an annual income that was 10% below average earnings. In addition, one-sixth of taxpayers, primarily low-paid workers, faced a marginal rate of 47.8%.

These disincentives are compounded by aspects of the social welfare system and its interactions with the tax system. People who are unable to find a job are entitled to receive unemployment assistance, a means-tested payment with no maximum duration. In view of the established link between the duration of unemployment benefits and the average length of joblessness, the indefinite duration of assistance in Ireland is likely to have increased long-term unemployment. In addition to the basic flat-rate benefit, allowances for adult dependants, such as non-working spouses, and for children are provided. Moreover, with the increase in benefits between 1979 and 1994, unemployment assistance for a married couple without children increased by 56% in real terms, although the net

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

Ireland
The Labour Market

income of a worker earning the average manufacturing wage remained constant. Indeed, payments to the unemployed are now considerably higher in Ireland than in the United Kingdom. Consequently, the net replacement rate – unemployment benefits as a share of previous pre-tax earnings – has risen sharply. For example, the net replacement rate for a two-child family earning two-thirds of the average wage increased from 57% in 1979 to 83% in 1991 before then declining marginally.

A recent study of 17 OECD countries confirmed the direct link between the generosity of unemployment benefits and the rate of unemployment,[2] as do estimates of net replacement rates for different segments of the Irish population. For people with replacement rates of less than 50% – about three-fifths of the labour force – the unemployment rate is about 8%. But it rises to more than 25% for the more-than-a-quarter of the labour force with replacement rates above 60% (primarily those with low educational qualifications). The disincentive effect is exacerbated by the withdrawal of other benefits, such as medical cards (which entitle the low paid to free health care) and housing-related subsidies. In addition to its effect on unemployment and participation rates, the interaction of the tax and welfare systems also reduces the incentives of low-paid employees to seek better-paid jobs or to work longer hours.

Figure 2

Unemployment Rates in Ireland and the OECD Area, 1964–96

Source: OECD

Reducing Unemployment

In recent years, the government has improved incentives to work by reducing tax rates and by keeping the rise in unemployment benefits below the increase in average earnings. In addition, it has introduced further active labour-market policies (ALMPs), such as training programmes, job-search counselling, job-brokerage services and subsidised employment, to assist the unemployed. Total spending on these programmes, which now number more than thirty, amounts to 1.8% of GDP, almost double the OECD average, reflecting a large public-employment initiative which provides public services through voluntary and community organisations. There are also numerous programmes providing training, job-search assistance and employment subsidies. The Department of Education, too, has introduced reforms to help schools respond more effectively to the requirements of students from lower socio-economic backgrounds and thereby reduce the number of early school-leavers.

Although there has been some progress, work incentives should be further improved by a more thorough overhaul and integration of the tax and benefit systems. The key is to reduce the high marginal tax rates imposed on low-income workers. The issue of unemployment benefits also has to be addressed. At present, benefits to jobless persons are viewed as long-term income support rather than temporary assistance to workers between jobs. The authorities should consider allowing benefits to decrease over time, a policy which would help reduce the wage expectations of the long-term unemployed. With unemployment benefits in Ireland having increased to near the OECD norm, they should not continue to rise (in real terms) more rapidly than net income in work, as they have during much of the past 15 years and again in 1997. In addition, the unemployed should be required to search for work and to accept any job offers in return for continued receipt of benefits. The experience of some other OECD countries suggests that programmes designed to ensure that unemployed persons are looking for work and to help them search do indeed reduce the extent of unemployment – especially the case when job-placement services are accompanied by effective monitoring of the job-search activity of the unemployed.

In addition, the current system of child benefits, which are larger for unemployed families than for those at work and thus create disincentives, should be addressed. One solution would be to combine the existing benefits into a single, unified payment for all children. Aspects of housing-related benefits have likewise to be reformed to improve incentives. One approach would be to let unemployed persons retain rent and mortgage subsidies for a period of time after beginning work, followed by a phased withdrawal. The link between income and rents for local authority housing should also be weakened.

A rationalisation of the numerous ALMPs would be beneficial, since many of the existing programmes overlap. As a result, different agencies administer schemes aimed at the same groups of people, obscuring the division of responsibility; and the complexity of the system may lead to administrative failure and increase costs. In particular, the separation of benefit administration from job-placement service makes it difficult to enforce eligibility requirements for unemployment benefits. Studies of other OECD countries suggest that the integration of these activities in 'one-stop shops' in Ireland would increase efficiency. More rigorous analysis would help determine which programmes are most effective in order to help the government concentrate its efforts where they will have the most

(continued on p. 54)

2. *Stefano Scarpetta, 'Assessing the Role of Labour Market Policies and Institutional Settings on Unemployment: A Cross-country Study',* ***OECD Economic Studies****, No. 26, OECD Publications, Paris, 1996.*

For the Record

Ministerial Communiqué

The OECD Council at ministerial level met on 26–27 May 1997, under the chairmanship of Jean Arthuis, Minister of Economy and Finance, France, assisted by the vice-chairs from Mexico and the Czech Republic, to discuss the issues of sustainable growth and social cohesion, multilateral trade and investment liberalisation, and the role and evolution of the OECD in a globalising world economy.

Ministers welcomed the accession of Poland and the Republic of Korea to the OECD, and their contribution to the work of the Organisation.

Ministers underlined their conviction that globalisation offers a real opportunity to improve living standards in their own countries and to allow all countries to participate in sustainable world development. Taking advantage of this opportunity, the rapid advance of technology, and the growth of a knowledge-based society, requires individuals, businesses, governments and whole societies to adjust and innovate. The challenge for governments is to pursue policies whereby the benefits of globalisation are fully realised and widely shared by all groups of society.

Much is at stake. There is an historic coincidence of interests for OECD and non-OECD countries in today's globalising world economy. Reflecting this, the OECD's linkages study, *Towards a New Global Age*, outlines a vision for the year 2020 which promises a large increase in prosperity and welfare across the world, and the progressive integration of developing and transition countries into the global economy. But realising it requires governments to seize the opportunities and continue to move forward with trade and investment liberalisation, macro-economic discipline, comprehensive product and factor market reforms, strengthening of financial systems, and implementation of effective environmental policies. They also must respond to, and anticipate the needs and opportunities of, the emerging knowledge-based societies, which are driven by new information and communication technologies. Ministers are determined to implement this ambitious agenda.

Ministers called on the Organisation to use its unique strength to analyse important national and international problems in a multidisciplinary and forward-looking way. The OECD plays an invaluable role in charting the path for how countries – OECD and non-OECD alike – can best take advantage of the opportunities and meet the challenges of globalisation. Ministers noted the important analytical work which has been carried out. They welcomed the successes in implementing OECD decisions, recommendations and agreements, but also recognised that much remains to be done. In this context, they drew the following conclusions.

Promoting Sustainable Growth and Social Cohesion

Ministers agreed that macro-economic policies focused on sound public finances and effective control of inflation, combined with enhanced structural reforms, are essential to achieving improved and sustainable growth and employment outcomes. Both are a necessary component in the fight to eliminate persistent and unacceptably high unemployment that exists in most OECD countries. They agreed on the need for regulatory reform, for the elimination of structural rigidities in product and factor markets and for policies to improve the innovative capacity and competitiveness of enterprises, so that economic activity can flourish more robustly. They also agreed that attention needs to be given to improving the prospects for the most vulnerable in society.

Macro-economic Policy

Ministers noted that economic growth in 1997–98 is projected to average 2½–3% in the OECD area. Growth will be more balanced, and inflation will remain low almost everywhere, but substantial output gaps and high levels of unemployment will remain in some countries. Ministers confirmed their commitment to pursue policies to achieve strong sustainable non-inflationary growth. They recognised that transforming this growth momentum into rising employment will require some differences in the short-run orientation of macro-economic policies to reflect countries' varying cyclical positions while respecting the medium-term objectives of fiscal consolidation. They also noted that the pursuit of sound monetary and fiscal policies, combined with continued co-operation on exchange rates, sound financial systems and structural reforms, can contribute to smoothly functioning international financial markets. Ministers welcomed the efforts of the European Union countries to achieve a successful introduction of the Euro and a well-functioning EMU with a scheduled date of entry into force of 1 January 1999, underpinned by sound macro-economic and structural policies, that would contribute to the stability of the international monetary system.

Ministers agreed that fiscal consolidation will continue to be a priority in most OECD countries to create the conditions for sustained growth. Many OECD countries have budget deficits or debt levels which are still too high, and population aging threatens to push up public spending further. Given high tax burdens, the main effort in cutting deficits will have to fall on expenditures. In addition to the need for rationalisation, Ministers agreed that improving the quality of expenditure requires increased focus on programmes that contribute to economic growth through enhancing human capital and innovation. Continuing reform of public-sector management to increase policy effectiveness and expenditure efficiency will also assist in controlling budgets.

Employment and Implementing the OECD's Jobs Strategy

Eliminating high and persistent unemployment is the major economic policy challenge for most OECD countries. The Jobs Strategy review concluded that for the OECD area as a whole, unemployment has fallen only slightly from its peak in 1994 and that structural unemployment has risen. In a number of countries, it is at unacceptably high levels. Ministers agreed that the bulk of this unemployment remains structural in nature, although there is also cyclical unemployment in some countries.

Ministers noted a major finding of the country review process, that those countries that had moved ahead with the comprehensive implementation of the macro-economic and structural policies recommended in the

Jobs Strategy, including labour- and product-market reforms, had experienced significant improvements in their employment situation. While it is recognised that these policies take time to bear fruit, in other countries reforms were insufficient to bring a fall in structural unemployment in the 1990s. Ministers also acknowledged that the structural changes often required may involve difficult adjustments for some firms, regions, sectors and segments of the work-force. But they agreed that hindrances to competition and technological progress or other sources of structural change would constrain growth and thus run counter to the interests of member countries. At the same time, ministers recognised that the gap between the 'haves' and 'have nots' within some OECD countries may have widened, the latter more often than not being less skilled. Whilst the key preoccupation is to boost employment, there are also some concerns about widening income inequalities or unequal access to opportunities and there is a need to prevent people from drifting into long-term unemployment and social exclusion.

Ministers agreed that a key element in dealing with the problems of marginalisation is putting in place policies which improve access to work, encourage greater employment and raise future earning prospects. The recommendations in the Jobs Strategy represent an effective approach to doing this that can be implemented in different ways. Reforms in tax and benefit systems can improve incentives to find and stay in employment and avoid excessive hiring costs. Workers can be reintegrated into employment by effective active labour-market policies. At the same time, those job-protection measures and restrictions on working time that are excessive and thereby hinder job creation should be eliminated. Ministers stressed the key role that small and medium-sized enterprises play in job creation, as well as the importance of adopting 'best policy practices' for innovation and technology diffusion, for improving people's knowledge base and skills and for ensuring that active participation in society is maintained for at-risk groups. They look forward to reports in these areas, including the work on entrepreneurship and indicators of human capital investment, at their next meeting. Ministers also agreed on the urgent need to implement effective strategies for lifelong learning for all, to strengthen the capacity of individuals to adapt and acquire new skills and competences.

The country-review process has indicated that policies should be implemented consistently over time and need to be tailored to the specific circumstances of each country. While ministers were greatly encouraged by the success of certain countries' experiences in implementing the Jobs Strategy, they agreed that greater reform efforts are necessary in most countries. They called for further action in tackling unemployment and asked the OECD to continue to review progress with the implementation of the Jobs Strategy recommendations. They asked for an update at their next meeting and for a further full review in 1999.

Aging Populations

Ministers discussed the emerging policy challenge of aging populations. For several decades, but especially after 2010, there will be large increases in the proportion of people in older age groups in OECD countries. Furthermore, many people are leading longer lives without disability. Living standards will be put under pressure unless productivity growth picks up significantly during this period and existing trends towards early retirement are changed. Ministers recognised the need to achieve more flexibility in the balance between learning, work, leisure and care over the course of a life span through a shift in policies and attitudes. They voiced support for the concept of 'active aging' which addresses the question of participation in socially useful activities, including participation in the labour force. Changes in pension and health care systems, already under way in some OECD countries, may be required to arrest their escalating costs and ensure their viability. Interaction between labour-force participation, pensions and saving policies should be further analysed. The ministers looked forward to a report on aging populations in 1998. They also stressed the importance of sharing national experiences in the social policy area as proposed in the 'Initiative for a Caring World' and encouraged the OECD's activities in this regard.

Regulatory Reform

Ministers agreed that the attack on structural rigidities in their economies should encompass comprehensive regulatory reform, including higher-quality regulation and deregulation where existing regulation is excessive. Regulatory reform aims at improving economic efficiency and the ability of economies to adapt to change and to become more productive. By enhancing competition, it can create new businesses and jobs, speed the diffusion of new technologies and business methods, enhance trade and investment opportunities, and reduce the scope for trade frictions. Reform can also provide more cost-effective means of attaining important social and environmental goals. Ministers took note of the OECD work which suggests that some countries can expect to see significant increases in real GDP levels from comprehensive reform.

Ministers welcomed the Report on Regulatory Reform and endorsed its principles. They agreed to work to implement its recommendations, which focus on how governments can improve their regulations and regulatory processes. They noted the intention to undertake further work in sectoral and policy areas and requested the OECD to conduct reviews of regulatory-reform efforts in member countries beginning in 1998, based in part on self-assessment, with the goal of contributing to the steady improvement of regulatory practices in member countries. They asked for an update on the project at their 1998 meeting.

Corporate Governance

Corporate governance – the rules and practices through which investors, employees, management and other enterprise stakeholders operate – has important impacts on corporate behaviour and hence a country's overall economic performance. Ministers called on the OECD to continue to study the complex links between policy frameworks, corporate governance practices and economic outcomes and to report on the conclusions as soon as possible.

The Information Society and Electronic Commerce

Information and communication technologies are fundamental driving forces in globalisation. The information society promises economic and social benefits for all our citizens, companies and governments. Ministers endorsed the recommendations of the Global Information Infrastructure/Global Information Society report. They welcomed the OECD cryptography policy guidelines as an important contribution to international co-operation in this area and called on the OECD to review developments and to launch dialogue with non-members as soon as possible. The stakes and challenges ahead are enormous. Ministers noted the great potential of electronic commerce. They asked the OECD to examine carefully its implications for areas such as taxation, commercial transactions, consumer protection, privacy and security, so that these issues can be addressed within a coherent policy framework; Ministers further asked for an update report in 1998.

Bearing in mind the great potential of the Internet, Ministers looked forward to the results of the study being undertaken in the OECD to compare national legislation and policies concerning the Internet, recognising the important advisory role of the private sector, and to identify areas in which international co-operation may be needed. Ministers also strongly condemned the dissemination on the Internet of child pornography and information that promotes child abuse. They urged that this abhorrent and unacceptable misuse of the Internet be addressed immediately, including in the appropriate international organisations.

Pursuing Trade and Investment Liberalisation

Ministers affirmed the central role which international trade and investment play in creating employment, improving economic efficiency, and raising standards of living in all nations. They are therefore committed to work for a strong, rules-based, open and effective multilateral system of trade and investment, capable of responding to the challenges of globalisation and enhancing sustainable development. Actions on a broad front are needed to achieve further liberalisation of measures directly affecting such flows and the reform of domestic policies which can also act as important barriers to market access and presence.

Support for the Multilateral Trading System

Ministers welcomed the outcome of the WTO Singapore Ministerial Conference which advanced and broadened the trade agenda, thereby giving strong impetus to further liberalisation, including through the subsequent success in achieving the information technology agreement and the agreement on basic telecommunications services.

Ministers reaffirmed the important role of the OECD in support of the WTO and the multilateral trading system. They attach utmost importance to maintaining the momentum of trade liberalisation in 1997 and beyond. Ministers continue to place high priority to the full and effective implementation of the Uruguay Round Agreements. Accordingly, they are determined to pursue vigorously the built-in agenda agreed at the end of the Uruguay Round, together with the WTO work programme as agreed at Singapore which includes the new and important work on investment, competition, trade facilitation and transparency in government procurement. They encouraged the WTO to continue its work on the issue of trade and the environment. Ministers noted the contributions that the OECD Committees, within their existing work programmes, might make to the process of information exchange and analysis now underway in the various WTO Committees, while avoiding unwanted duplication with work in other fora. In this context ministers also noted that it has been ten years since the pioneering 1987 OECD Ministerial Principles for Agricultural Policy Reform were agreed, and noted the ongoing process of implementation in member countries.

Ministers pledged to work towards successful conclusion of the current WTO negotiations on financial services with a high level of liberalisation on a full MFN basis by December 1997. They agreed to explore further market-opening initiatives. They also agreed to refrain from actions that would undermine progressive liberalisation; to continue their efforts to ensure that public opinion fully understands the benefits of open, two-way trade, globalisation and further liberalisation; and to resolve disagreements co-operatively and in consistency with the WTO's Dispute Settlement Understanding.

They reaffirmed their commitment to observe internationally recognised core labour standards as well as to reject the use of labour standards for protectionist purposes, as agreed in the Singapore Ministerial Declaration. They agreed that building on OECD work in this area is important to better understand the subject.

Ministers agreed to work to ensure that regional trade agreements are complementary to and consistent with the rules of the WTO system and to integrate developing and transition economies fully into the multilateral trading system, paying particular attention to the least-developed countries. They also support the early accession on commercially viable terms of applicants to the WTO, while preserving the integrity of WTO rules.

They looked forward also to new and deepened analytical work on the benefits of further trade liberalisation and the interaction between trade policy and other policies.

Ministers urged the early ratification of the OECD Shipbuilding Agreement by all participants to establish normal competitive conditions within the international shipbuilding market and to encourage other countries to become parties to the Agreement.

Export Credits

Ministers welcomed the success of negotiations on guidelines for premia setting in officially supported export credits. Efforts will continue to strengthen disciplines in this area. Ministers encouraged Participants to conclude negotiations on export credits for agricultural products as soon as possible and to make a report to their next meeting in 1998.

Harmful Tax Competition

Liberalisation and the advent of global information and communications technologies have exposed tax systems to competitive forces and have increased the risk of competitive bidding between countries for geographically mobile activities. Such behaviour may lead to harmful tax competition which can erode the tax base and distort trade and investment flows. In response to the 1996 Ministerial mandate, the OECD is actively addressing this issue to establish a common approach to this problem. A report will be presented to Ministers in 1998.

Combating Bribery in International Business Transactions

Bribery in international business is another key issue in an increasingly interdependent world economy. Bribery hinders competition, distorts trade and harms consumers, taxpayers and the efficient honest traders who lose contracts, production and profits. It can also undermine public support for government. Ministers endorsed the Revised Recommendation on Combating Bribery in International Business Transactions. In particular, they reaffirmed their commitment to criminalise bribery of foreign public officials in an effective and co-ordinated manner. They noted that an international convention in conformity with the common elements agreed to by members is an appropriate instrument to attain such criminalisation rapidly. They recognised that achieving progress in this field requires not only efforts by individual countries but multilateral co-operation, monitoring and follow-up. They recommended that member countries should submit criminalisation proposals to their legislative bodies by 1 April 1998 and seek their enactment by the end of 1998. Ministers decided, to this end, promptly to open negotiations of a convention to be completed by the end of this year with a view to its entry into force as soon as possible within 1998. Ministers urged the prompt implementation of the 1996 Recommendation on the tax deductibility of such bribes. Ministers stressed the global relevance of bribery in international business transactions and called on non-OECD countries to join forces to fight this phenomenon.

The OECD's Global Role

The globalisation of the world economy is accelerating, with a growing number of countries embracing pluralistic democracy, respect for human rights and the market economy. These are welcome developments for the OECD, which has long advocated the principles behind these positive trends.

Membership Issues

Five countries have joined OECD since 1994 and several other countries have expressed their wish to become members. Ministers welcomed this interest and reaffirmed that the future role and membership of the Organisation need to evolve. They recalled that the Organisation must remain open to states sharing the common values of OECD members, on the basis of mutual interest. It should also be selective while preserving the tradition of high standards for membership. Both of these principles are important in reinforcing the OECD's effectiveness and relevance to its members. Ministers agreed that the accession process of the Slovak Republic should be concluded as soon as this country is ready and able to share the common values and assume all the responsibilities of OECD members.

Co-operation with Non-members

Ministers welcomed the intensification of co-operation between the Russian Federation and the OECD, to be reflected in the establishment of a Liaison Committee. Such co-operation with the Russian Federation should help it establish a fully fledged market economy within a framework of democratic institutions, and to meet and sustain all the conditions for its membership in the OECD, the ultimate goal shared by both parties.

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Ministerial Statement on the Multilateral Agreement on Investment

Ministers are convinced of the importance of international investment and the need for fair, transparent and predictable rules for investors and investments. They welcome the major progress made in developing a comprehensive Multilateral Agreement on Investment (MAI) with high standards for the liberalisation of investment regimes and investment protection and with effective dispute settlement procedures. They recall that the MAI will be a free-standing international treaty open to all OECD countries and the European Community, and to non-OECD countries.

Ministers express their determination:

- to resolve outstanding questions and achieve a high standard of liberalisation and investment protection
- to achieve a satisfactory scope and balance of commitments
- to pursue intensified dialogue with non-member countries, particularly those interested in joining the MAI
- to conclude the Agreement in time for the 1998 Ministerial Meeting.

Ministers also considered the various elements of the Organisation's ongoing dialogue and co-operation with non-member economies. They acknowledge the importance of such activities for the OECD's mission and of deepening dialogue and co-operation with emerging and transition economies on their integration in the world economy. In this respect, they recognise the role of the Organisation in favouring the transition process, through its thematic and country-based programmes. In the context of reform of the OECD, ministers also called for rationalisation of such programmes and structures to ensure that they continue to evolve in an effective manner, and with increasing focus on the core activities of the Organisation, while preserving the capacity for flexible and differentiated co-operation with non-members. Ministers endorsed the actions already taken and urged the Organisation to pursue its efforts to achieve that objective.

Ministers agreed that the OECD's dialogue and co-operation must be a mutually beneficial process which enables OECD and non-OECD countries to share their own policy experiences. Ministers also agreed that the increasingly integrated global economy makes it essential that OECD analysis and monitoring of OECD economies takes proper account of the growing importance of non-member countries.

Co-operation with International Organisations

Concerning OECD's relationships with other international organisations, both global and regional, ministers asked that synergies with these organisations be fully exploited and unwanted duplication eliminated. In this regard, ministers welcomed the effective working relationships that have been established with the WTO and other institutions.

Global Environmental Issues

The integration of economic, social and environmental objectives underpins global sustainable development. Ministers noted that OECD analytical work on these issues helps member countries ensure that environmental considerations are properly taken into account in the elaboration of policies. Its work also assists OECD members in their preparations for international work in this area, including for the Special Session of the United Nations General Assembly in June, and the Framework Convention on Climate Change, in the light of the critical meeting of the Conference of Parties to the Convention scheduled for December in Japan. In this connection, they further acknowledged the need for member countries to advance research and development, and dissemination, of relevant technologies as one way to address global environmental problems. Ministers welcomed the report on green taxes and noted that a report on evaluating the impact of subsidies on the environment will be discussed in 1998. Ministers urged the Organisation to consider how better to integrate the environment in other relevant activities of the Organisation.

Development Issues

Work on development and interdependence has highlighted both the remarkable successes over recent decades of many developing countries in integrating themselves into the mainstream of trade and investment systems, but also the serious difficulties still confronting others. Ministers welcomed the co-ordinated efforts embodied in the OECD's partnership strategy to help those countries that are assuming responsibility and ownership for their programmes and striving to achieve sustainable development and avoid marginalisation, including in Sub-Saharan Africa and South Asia, to build their own capacities for development. Ministers welcomed OECD's continuing review and discussion of the objectives set out in the OECD's partnership strategy which is now shared by many developing countries and international organisations. Achieving these development objectives requires an integrated approach, encompassing the pursuit of sound economic policies, including appropriate trade and investment liberalisation policies; a vigorous private sector; balanced social development; expanded participation; strengthened governance; as well as environmental sustainability and sufficient monitoring capacity. Ministers recognised the need to increase the volume of development assistance and called for the effective mobilisation of financial resources for development from all sources – private and public, internal and external – including the maintenance of substantial levels of official bilateral and multilateral development assistance, as part of a comprehensive and coherent approach to development, in particular towards the poorest countries. Ministers recalled the agreement of the Singapore Ministerial Conference on a plan of action, including provision for taking positive measures, for example duty-free access, on an autonomous basis, aimed at improving overall capacity of the least developed countries to respond to the opportunities offered by the trading system. Ministers considered that the forthcoming WTO/UNCTAD/ITC High Level Meeting in Geneva in October 1997 provides an excellent opportunity to bring forward proposals which seek to give operational content to this plan of action, and they also called on non-member countries to contribute to the success of the High Level Meeting.

Such goals require that the OECD's partnership strategy should continue to be implemented in close collaboration with partner countries and emerging donors, as well as with other multilateral organisations. Ministers welcomed OECD's new guidelines on co-operation aimed at conflict prevention and peace-building, the proposed work for helping to address excessive military expenditures and progress with anti-corruption measures for aid procurement. They asked that OECD members report on these three issues to the 1998 Ministerial Council meeting. They also asked for an update on implementation of the OECD's partnership strategy at their next meeting and for a full review in 1999.

The OECD's Future Role

Ministers strongly support the process of reform set in motion by the Secretary-General and now underway in the Organisation and look forward to the results of the current streamlining and priority-setting exercises in the 1998 programme of work and budget of the Organisation. They believe that a well-focused and effective OECD, working to improve policies in both the national and international context, is an especially potent instrument of global change and reform. A key task is to help governments to lead a better informed public debate on the issues at stake. In this regard, Ministers request the OECD to produce a focused, multidisciplinary report explaining the benefits of trade and investment liberalisation.

It is 50 years since General Marshall's speech at Harvard first launched the period of international economic co-operation which gave birth to the OEEC, the forerunner of the OECD. Ministers believe that while the OECD's mandate as laid out in its Convention remains valid and relevant, the Organisation must and can adapt its operations and work priorities to meet the continuing resource pressures and the changing needs of its members. Ministers expressed their strong support for the Organisation and committed to work collectively towards strengthening its role in the global economy of tomorrow.

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, May 1997.*

Australia

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.8	3.7
Leading Indicator	Mar. 97	0.1	2.7
Consumer Price Index	Q1 97	0.2	1.3
		current period	same period last year
Current Balance	Dec. 96	-1.12	-1.32
Unemployment Rate	Mar. 97	8.8	8.5
Interest Rate	Mar. 97	6.08	7.55

Austria

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 95	0.0	0.3
Leading Indicator	Dec. 96	0.1	5.5
Consumer Price Index	Mar. 97	0.2	1.7
		current period	same period last year
Current Balance	Feb. 97	-0.30	0.47
Unemployment Rate	Feb. 97	4.4	4.4
Interest Rate	Apr. 97	3.42	3.26

Belgium

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.3	1.7
Leading Indicator	Mar. 97	1.6	10.0
Consumer Price Index	Mar. 97	-0.5	1.4
		current period	same period last year
Current Balance	Q4 96	4.10	4.39
Unemployment Rate	Feb. 97	9.5	10.0
Interest Rate	Mar. 97	3.50	3.27

Canada

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.7	2.3
Leading Indicator	Mar. 97	0.1	10.5
Consumer Price Index	Mar. 97	0.2	2.0
		current period	same period last year
Current Balance	Q4 96	-0.52	0.93
Unemployment Rate	Mar. 97	9.3	9.4
Interest Rate	Apr. 97	3.41	5.03

Czech Republic

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	-3.0	4.7
Leading Indicator		..	..
Consumer Price Index	Mar. 97	0.2	6.8
		current period	same period last year
Current Balance	Q4 96	-4.48	-1.89
Unemployment Rate	Mar. 97	3.8	2.9
Interest Rate	Apr. 97	12.27	11.47

Denmark

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.4	3.3
Leading Indicator	Mar. 97	0.0	7.5
Consumer Price Index	Mar. 97	0.0	1.7
		current period	same period last year
Current Balance	Q4 96	-1.14	-1.48
Unemployment Rate	Jan. 97	5.8	6.5
Interest Rate	Apr. 97	3.60	3.70

Finland

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	1.6	5.8
Leading Indicator	Oct. 96	0.8	9.6
Consumer Price Index	Mar. 97	0.4	0.6
		current period	same period last year
Current Balance	Feb. 97	0.14	0.35
Unemployment Rate	Feb. 97	15.0	15.8
Interest Rate	Apr. 97	3.08	3.82

France

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.2	2.0
Leading Indicator	Apr. 97	0.2	2.8
Consumer Price Index	Mar. 97	0.1	1.1
		current period	same period last year
Current Balance	Jan. 97	6.23	5.40
Unemployment Rate	Feb. 97	12.5	12.3
Interest Rate	Apr. 97	3.40	4.00

Germany

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.1	2.2
Leading Indicator	Mar. 97	0.8	7.9
Consumer Price Index	Mar. 97	-0.2	1.5
		current period	same period last year
Current Balance	Feb. 97	-0.87	0.44
Unemployment Rate	Feb. 97	9.6	8.9
Interest Rate	Apr. 97	3.23	3.33

Greece

	period	% change from previous period	% change from previous year
Gross Domestic Product	1995		2.0
Leading Indicator	Mar. 97	0.3	4.6
Consumer Price Index	Mar. 97	2.2	6.0
		current period	same period last year
Current Balance	Dec. 96	0.14	0.17
Unemployment Rate		..	..
Interest Rate	Apr. 97	10.30	13.30

Iceland

	period	% change from previous period	% change from previous year
Gross Domestic Product	1995		1.2
Leading Indicator		..	..
Consumer Price Index	Apr. 97	0.7	2.2
		current period	same period last year
Current Balance	Q4 96	-0.06	-0.02
Unemployment Rate	Mar. 97	3.9	4.3
Interest Rate	Mar. 97	7.20	7.50

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

Ireland	period	% change from previous: period	year
Gross Domestic Product	1995		10.7
Leading Indicator	Mar. 97	1.6	13.8
Consumer Price Index	Apr. 97	0.1	..
		current period	same period last year
Current Balance	Q3 96	1.14	0.57
Unemployment Rate	Feb. 97	11.6	12.5
Interest Rate	Apr. 97	6.25	4.96

Italy	period	% change from previous: period	year
Gross Domestic Product	Q4 96	-0.2	0.1
Leading Indicator	Mar. 97	-1.6	2.8
Consumer Price Index	Mar. 97	0.1	2.2
		current period	same period last year
Current Balance	Dec. 96	1.53	1.83
Unemployment Rate	Jan. 97	12.2	11.9
Interest Rate	Apr. 97	7.13	9.62

Japan	period	% change from previous: period	year
Gross Domestic Product	Q4 96	1.0	3.1
Leading Indicator	Mar. 97	1.0	3.7
Consumer Price Index	Mar. 97	0.1	0.5
		current period	same period last year
Current Balance	Feb. 97	7.03	7.10
Unemployment Rate	Mar. 97	3.2	3.2
Interest Rate	Apr. 97	0.56	0.62

Luxembourg	period	% change from previous: period	year
Gross Domestic Product	1995		3.8
Leading Indicator	Mar. 97	1.8	14.3
Consumer Price Index	Apr. 97	0.0	1.0
		current period	same period last year
Current Balance		..	..
Unemployment Rate	Feb. 97	3.5	3.0
Interest Rate		..	..

Mexico	period	% change from previous: period	year
Gross Domestic Product	Q4 96	1.5	7.5
Leading Indicator	Mar. 97	0.4	2.3
Consumer Price Index	Mar. 97	1.2	24.5
		current period	same period last year
Current Balance	Q4 96	-1.42	-0.09
Unemployment Rate	Mar. 97	4.2	5.9
Interest Rate	Mar. 97	22.32	43.05

Netherlands	period	% change from previous: period	year
Gross Domestic Product	Q4 96	0.5	3.0
Leading Indicator	Mar. 97	0.1	4.1
Consumer Price Index	Mar. 97	0.6	1.9
		current period	same period last year
Current Balance	Q3 96	5.36	4.68
Unemployment Rate	Jan. 97	6.0	6.6
Interest Rate	Apr. 97	3.20	2.94

New Zealand	period	% change from previous: period	year
Gross Domestic Product	Q4 96	0.6	2.1
Leading Indicator		..	..
Consumer Price Index	Q1 97	-0.3	1.8
		current period	same period last year
Current Balance	Q4 96	-0.91	-0.65
Unemployment Rate	Q4 96	5.9	6.1
Interest Rate	Mar. 97	7.58	8.86

Norway	period	% change from previous: period	year
Gross Domestic Product	Q4 96	-0.8	3.5
Leading Indicator	Feb. 97	0.7	5.5
Consumer Price Index	Apr. 97	-0.1	2.6
		current period	same period last year
Current Balance	Q4 96	2.59	0.61
Unemployment Rate	Q3 96	4.8	4.7
Interest Rate	Apr. 97	3.50	4.70

Portugal	period	% change from previous: period	year
Gross Domestic Product	Q2 96	3.2	3.6
Leading Indicator	Jan. 97	0.6	2.2
Consumer Price Index	Mar. 97	0.1	2.5
		current period	same period last year
Current Balance	Q4 96	-0.55	-0.28
Unemployment Rate	Feb. 97	7.3	7.3
Interest Rate	Mar. 97	6.26	7.96

Spain	period	% change from previous: period	year
Gross Domestic Product	Q4 96	0.8	2.6
Leading Indicator	Feb. 97	-0.7	2.7
Consumer Price Index	Mar. 97	0.1	2.2
		current period	same period last year
Current Balance	Feb. 97	0.91	0.01
Unemployment Rate	Feb. 97	21.7	22.6
Interest Rate	Apr. 97	5.57	7.58

Sweden	period	% change from previous: period	year
Gross Domestic Product	Q4 96	1.1	1.9
Leading Indicator	Mar. 97	0.3	13.5
Consumer Price Index	Mar. 97	0.4	-0.7
		current period	same period last year
Current Balance	Feb. 97	0.44	0.68
Unemployment Rate	Feb. 97	10.9	9.6
Interest Rate	Apr. 97	4.03	6.25

Switzerland	period	% change from previous: period	year
Gross Domestic Product	Q4 96	0.0	-0.7
Leading Indicator	Mar. 97	1.0	7.0
Consumer Price Index	Apr. 97	0.1	0.5
		current period	same period last year
Current Balance	Q4 96	5.57	5.70
Unemployment Rate	Mar. 97	5.5	4.4
Interest Rate	Apr. 97	1.77	1.70

Turkey	period	% change from previous: period	year
Gross Domestic Product	Q2 96	1.0	7.7
Leading Indicator		..	..
Consumer Price Index	Apr. 97	6.6	77.2
		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	year
Gross Domestic Product	Q4 96	1.1	2.6
Leading Indicator	Mar. 97	0.4	1.5
Consumer Price Index	Mar. 97	0.3	2.6
		current period	same period last year
Current Balance	Q4 96	1.43	-1.84
Unemployment Rate	Feb. 97	7.1	8.4
Interest Rate	Apr. 97	6.37	6.00

United States	period	% change from previous: period	year
Gross Domestic Product	Q1 97	1.4	4.0
Leading Indicator	Mar. 97	0.2	5.4
Consumer Price Index	Mar. 97	0.3	2.8
		current period	same period last year
Current Balance	Q4 96	-41.38	-30.44
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Interest Rate	Apr. 97	5.71	5.36

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OECD Bibliography

- **OECD Economic Surveys: Ireland**, 1997
- Stefano Scarpetta, 'Assessing the Role of Labour Market Policies and Institutional Settings on Unemployment: A Cross-country Study', **OECD Economic Studies**, No. 26, 1996
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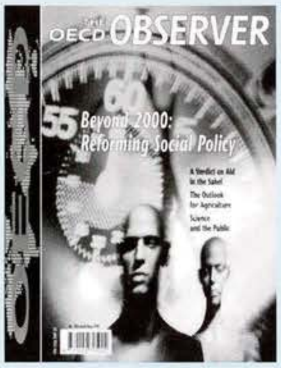

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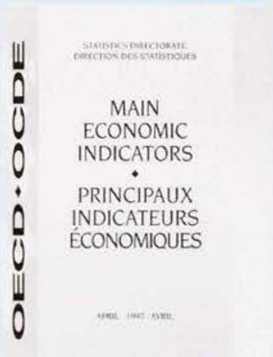

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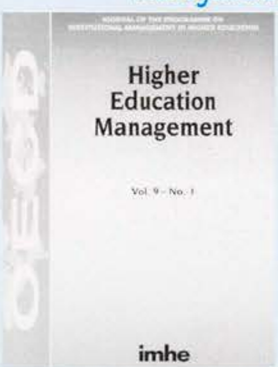

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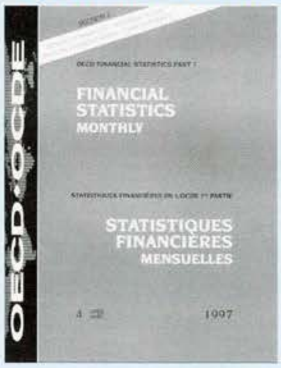

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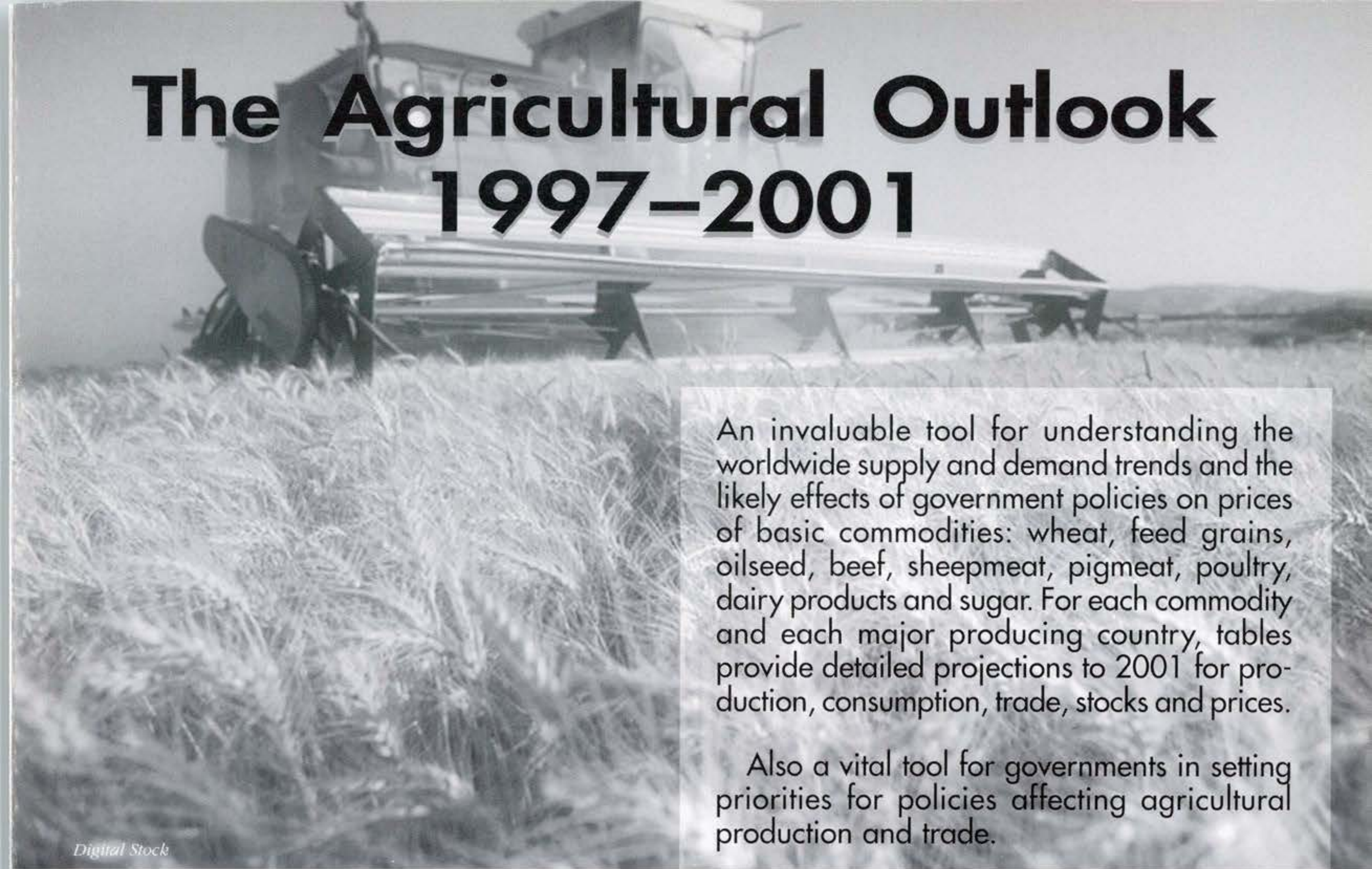

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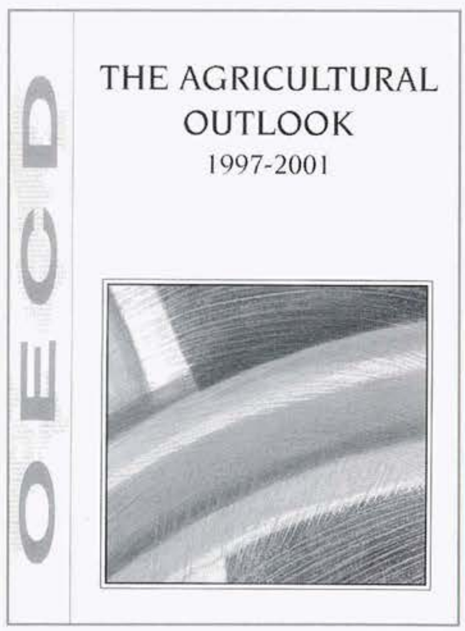

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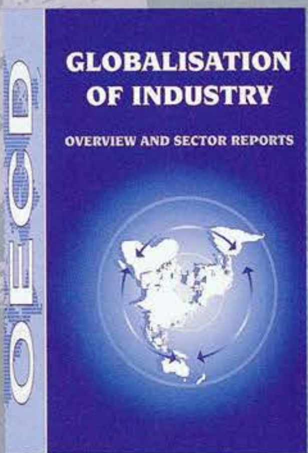

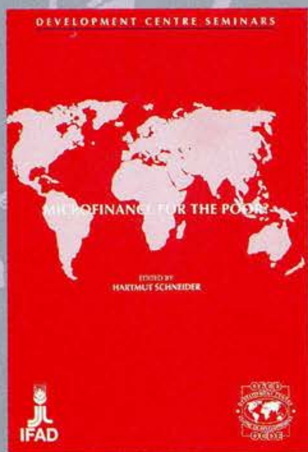

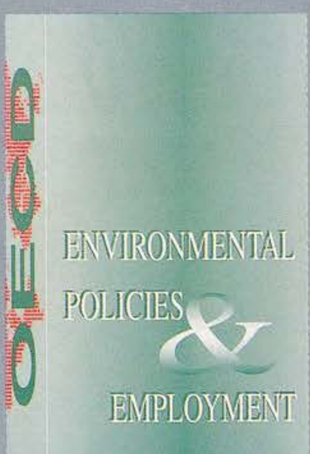

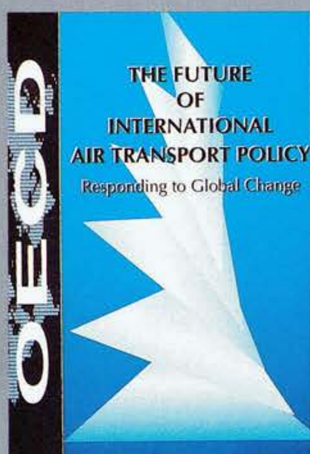

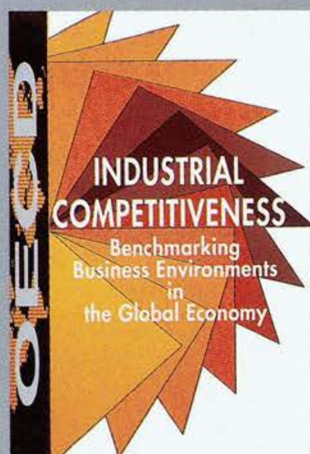

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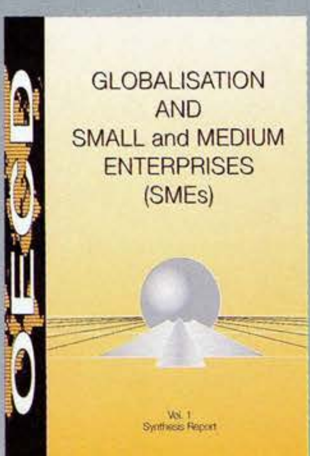

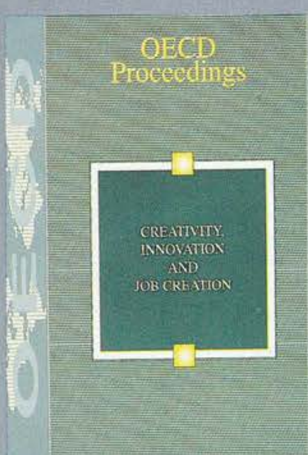

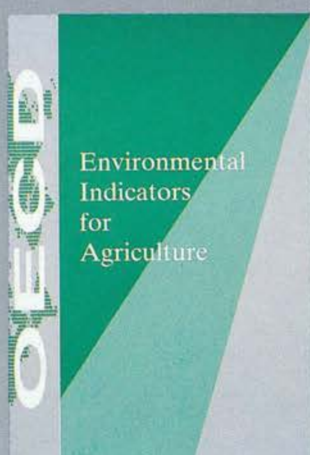

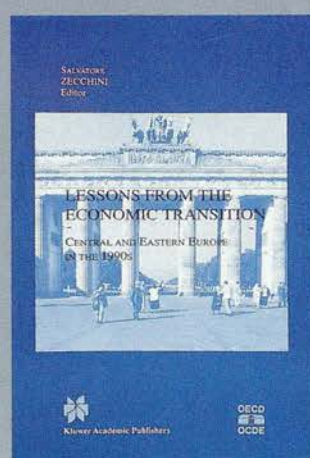

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