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**THE OECD REVIEW OF REGULATORY REFORM IN
THE UNITED STATES**

This report will be reviewed in a meeting "Regulatory Reform in Japan, Mexico, the Netherlands and the United States at the OECD on 8-9 March 1999. The provisional agenda for the meeting can be found at DAFFE/CLP(99)5. Please contact Scott H. Jacobs, Head of Programme on Regulatory Reform, at: Tel: (33-1) 45 24 90 67, Fax (33-1) 45 24 87 96, e-mail: scott.jacobs@oecd.org with any questions about this report or the meeting.

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Executive Summary:

Regulatory Reform in the United States

0.1. Regulatory reforms in the United States helped launch a global reform movement that is still underway. Significant regulatory problems still exist in the United States, but far-reaching economic deregulation combined with efforts to improve the quality of social regulation have contributed to the construction of one of the most innovative, flexible, and open economies in the OECD, while maintaining health, safety, and environmental standards at relatively high levels.

0.2. This has not been achieved by indiscriminate deregulation. The United States is not, on the whole, *less* regulated than other OECD countries. The United States is, however, often *differently* regulated, even where policy objectives are substantially similar. US regulation tends to be based on two fundamental regulatory styles that support economic dynamism and market adjustment:

- The *pro-competition policy stance* of federal regulatory regimes, supported by strong competition institutions, has meant that regulators tend to prefer policy instruments such as social regulation and market-driven approaches that are competition neutral over public ownership and economic regulations that impede competition. In post-war years, regulation has usually been used to establish conditions for competition rather than to replace competition.
- The *openness and contestability of regulatory processes* weakens information monopolies and the powers of special interests, while encouraging entrepreneurialism, market entry, consumer confidence, and the continual search for better regulatory solutions.

0.3. Yet social regulation that is competition-neutral and transparent can be inefficient and costly if policies are misguided or outdated, or regulation is badly designed or applied. Enterprises and citizens in the United States suffer from rigid, complex and highly detailed social regulations and government formalities that impose unnecessarily high costs in many policy areas. The quality of regulations varies widely. Regulators are sometimes hampered by poor and out-dated laws, and are mired in lengthy procedures and excessively adversarial approaches that impede good regulatory practices. Overlapping federal/state jurisdictions compound the problem. These tendencies reduce innovation and responsiveness in the federal regulatory system, eroding the benefits of pro-competitive reforms and regulatory transparency.

0.4. Chapter 1: *Regulatory reform produces important static and dynamic benefits, and potential gains from further reform are still large.* An expanding economic deregulation movement has, over 20 years, removed almost all entry and exit restrictions, with some exceptions. These deregulation efforts are still working their way through the economy, but in almost every sector the results for consumers in terms of prices, service quality, and choice are positive. Reform has probably also improved macro-economic performance, with long-term benefits to productivity growth, and the dynamic effects of regulatory reform help position the US to benefit from a global economy. While regulatory reform promoted good job growth and boosted standards of living, there were indirect effects on labour bargaining strength and uncertain effects on distribution of wealth. Concerns that reform would reduce safety and consumer protection are not borne out, though vigilance is needed. These effects illustrate the dualistic and complementary nature of “less economic regulation/better social regulation.”

0.5. Chapter 2: *A key challenge for regulatory quality in the United States is improving the cost-effectiveness of social regulation*, which has rapidly increased in quantity and cost. Many different approaches have been tried, and progress has been made over two decades, in part due to the role of the Office of Management and Budget. The use of regulatory impact analysis as an input to decisions is more widespread and rigorous than in other OECD countries. Consultation under notice and comment procedures is open and inclusive, involving a wide range of interests. Yet the quality of individual social regulations still varies widely, and there is great potential for better social outcomes without increasing regulatory costs. Primary laws in particular are often low quality, and impede efforts to improve regulatory cost-effectiveness. A US regulatory style -- adversarial legalism -- has produced complexity, rigidity and sluggish response to changing conditions. Coordination of reform efforts in the federal-state system is difficult and often unsatisfactory.

0.6 Chapter 3: *Competition principles are integrated into the national regulatory system and provide a consistent policy framework supporting regulatory reform*. Competition policy principles are embedded in regulatory mandates in many policy areas. Effective institutions and strong legal tools implement these broad principles. The far-reaching powers of the courts over regulatory policy, competition enforcement, and the unusually important rights of private action have been effective allies in supporting competition principles. Yet common law traditions and pluralistic policy processes resulted in a large number of special industry rules, sectoral regulators and exemptions, which together constrain application of the basic competition laws. Here, too, the federal system poses difficulties, since the “state action” doctrine can undermine larger-scale pro-competitive reform.

0.7 Chapter 4: *The US experience demonstrates the close and supportive relationship between quality regulation, competition, and market openness*. Traditions of openness in the American domestic regulatory system create one of the post-war’s most open national markets for global trade and investment. The pro-competition policy stance results in regulation that is, on balance, trade and investment neutral. Moreover, competition and market openness in the US promotes good regulation elsewhere through international competition, example, and persuasion. Despite the general openness of the national regulatory system, however, its complexity, the interplay of federal, state and local regulation, and heavy regulation in some areas have restrictive effects particularly felt by foreign firms. Foreign competitors face a number of sectoral restrictions on foreign investment, and sometimes are affected by *de facto* discrimination arising regulatory designed or implementation. US experience shows that concerns about sovereignty and the effect of international rules on domestic policies can be resolved by adopting regulations that meet domestic policy objectives cost-effectively and transparently.

0.8 Chapter 5: *In the electricity sector, the United States is relying more on markets to attain economic and social policy objectives, but the move to market has required new institutions and parallel policies that are still in transition*. Reforms aim to encourage competition in power generation by diminishing the threat of discrimination in grid access, by divestiture of some generation assets, and by creating trading institutions such as spot markets. Retail-level competition is being promoted at state levels. Environmental goals for the sector are increasingly met through market-based mechanisms, such as trading of SO₂ emissions permits, while efficiency in the generation of “green” electricity is encouraged by using market mechanisms to determine the choice of technology, generator, and price. Expanding the role of markets has required new institutions -- the independent system operators -- to safeguard competition, and policies avoiding “stranded costs” to resolve disputes about private property rights. The diversity of state structures has promoted faster innovation and learning in regulatory regimes, and has promoted reform by benchmarking good performance. Yet the federal structure also complicates reform, because the scope of efficient regulation, like the scope of many electricity markets, extends beyond state borders. Regional regulatory regimes have been slow to develop. As choice expands, consumer

protection is needed, and some states have responded with initiatives to inform consumers about new rights.

0.9 Chapter 6: *In telecommunications, rapid evolution of technologies, combined with strong competition policies and regulatory reforms, opened long distance markets to competition. The regulatory challenges in this dynamic field today are to extend competition into local markets and to design regulatory regimes consistent with the convergence of telecommunications and broadcasting.* Regulatory reform and competition law enforcement facilitated an extraordinary level of innovation which has transformed the industry, stimulated new products, and increased consumer choice, with significant positive effects throughout the economy. The recent WTO Agreement builds on these successes in the international context and demonstrates the link between domestic liberalisation and international market openness. But extending competition into local markets has proven difficult. The 1996 Telecommunications Act set out three entry routes for new competitors -- resale, unbundling and separate facilities -- but litigation has delayed implementation, and competition has not developed quickly. The dual federal-state roles produce both costs and benefits. Pursuit of different policy initiatives can promote innovation, but jurisdictional overlaps generate costs and uncertainties. Promotion of “universal service”, a central US policy goal, appears to be supported by competition, since the number of households with telephones has significantly increased over the reform period.

0.10 *Conclusions and Policy Options.* The major lessons that can be learned from regulatory reform in the United States are:

- *If concrete benefits are to be realised, sustained and consistent reform efforts are needed over many years, supported by strong political leadership.*
- *The results for consumers of sectoral economic reform in terms of prices, service quality, and choice are solidly positive, but only with sufficient attention to building pro-competitive regulatory regimes and to maintaining consumer protection. Very substantial gains are also possible from efforts to upgrade the cost-effectiveness and flexibility of social regulations.*
- *Therefore, a well-balanced reform programme aims at both economic deregulation and quality regulation.*
- *Dynamic effects were more important than expected. Regulatory reform proved to be a valuable supply-side tool that boosted demand, and improved the efficiency and flexibility of the national economy.*
- *A comprehensive approach produces more benefits, since regulatory reform is more effective when integrated with flexibility in factor markets, when competition is vigorous in upstream and downstream sectors, and when the macroeconomic environment is geared to growth. A policy environment supporting entrepreneurialism and business adjustment multiplies the size of the benefits, and the speed at which changes are felt. Strong competition oversight is needed in reformed sectors (airlines, telecommunications) still adjusting. The US experience supports the OECD recommendation for broad-based reform.*
- *Evaluation of costs and benefits of regulatory reform must be long-term and multi-dimensional to identify the real trade-offs.*

- *Regulatory flexibility and adaptation over time seems to be as valuable as regulatory cost-effectiveness.*

0.11 Based on international experience with good regulatory practices, several reforms (further detailed in Chapter 7) are likely to be beneficial to improving regulation in the United States:

- *Use of flexible and market-oriented policy instruments should be expanded.* By failing to use more flexible and market-oriented policy instruments in social policy areas, the United States is missing the opportunity to exploit one of the world's great innovative cultures in the pursuit of important social objectives.
- *The policy responsiveness of the US regulatory system should be further improved by streamlining cumbersome and sluggish processes.* Sluggishness, delay, and inefficiencies in regulatory processes will increasingly penalise the United States as the pace of globalisation and innovation steps up.
- *Regulations should be reviewed systematically to ensure that they continue to meet their intended objectives efficiently and effectively.* The current system is very weak with respect to systematic review of the vast body of existing laws and other regulations. The quality of laws merits special attention, since in many areas, poor laws have negative effects on the quality of policy implementation and policy outcomes. Faster updating is important in sectors characterised by fast technological change (telecommunications, electricity).
- *In the electricity sector, further reform of economic regulations would stimulate competition.* Large gains are projected from competition in supply, but they will be maximised only if distortions to competition are reduced.
- *The scope and enforcement of competition policy should be reviewed and some weaknesses corrected.* In particular the remaining exemptions and sector-specific jurisdictional provisions should be eliminated.
- *More coordination and review are needed to improve the efficiency and coherence of regulations at the federal and state interface.* The role of states as innovators and testing grounds for new ideas is a national asset that can speed up change and regulatory responsiveness. Yet a federal country must work harder to establish quality regulation and maintain it over time. Static losses from uncoordinated state actions can be large and durable.
- *Important gaps in regulatory quality controls should be closed to improve attention to market openness impacts, and to bring economic regulation under benefit-cost requirements.* In particular, assessments of the effects of proposed rules on inward trade and investment should be carried out as part of regulatory impact analysis, and coverage of mandatory quality controls should be expanded to economic regulation.
- *Continued integration of market openness and regulatory policies will produce benefits both in the United States and in other countries.* Mutual recognition of regulations and conformity assessment procedures, increased use of industry-developed standards in lieu of national regulatory measures, and other approaches to intergovernmental regulatory co-operation offer promising avenues for lowering regulatory barriers to trade and investment. Informal business-driven processes such as TABD have proven valuable catalysts for market-opening regulatory reform across a range of particular sectors and horizontal issues.

CHAPTER 1

Regulatory reform in the United States

1. INTRODUCTION

US regulatory reforms helped launch a global reform movement that is still underway.

1. The United States has been a world leader in regulatory reform for a quarter century. Its reforms and their results helped launch a global reform movement that has brought benefits to many millions of people, and is still underway. Its mistakes have improved understanding of the risks and costs of reform. Significant regulatory problems still exist in the United States, but far-reaching economic deregulation combined with efforts to improve the quality of social regulation have contributed to the construction of one of the most innovative, flexible, and open economies in the OECD, while maintaining health, safety, and environmental standards at relatively high levels.

Contrary to popular belief, the United States is not, on the whole, less regulated than other OECD countries.

2. This has not been achieved by indiscriminate deregulation. The United States is not, on the whole, *less* regulated than other OECD countries. As have other countries, the United States has constructed an enormous and complex regulatory state to provide citizens with a wide range of services and protections ranging from improving the functioning of the market to safer food and cleaner air. More than 140,000 pages of federal rules -- many extremely detailed -- are now in effect, and credible estimates of their direct costs as well as the value of their benefits for citizens and enterprises range from 4 to 10 percent of GDP.¹ Regulations at state and local levels must be added to these totals, though their costs are unknown. Today, "federal regulations now affect virtually all individuals, businesses, State, local and tribal governments, and other organisations in virtually every aspect of their lives or operations."²

The US is differently regulated than most countries due to two regulatory styles: the pro-competition policy stance of federal regulatory regimes, and the openness and contestability of regulatory processes.

3. The United States is, however, often *differently* regulated than most OECD countries, even where policy objectives are substantially similar. US regulation tends to be based on two fundamental regulatory styles that support economic dynamism and market adjustment:

- The *pro-competition policy stance* of federal regulatory regimes, based on historical values of economic liberty and supported by strong competition institutions, has meant that regulators tend to prefer policy instruments such as social regulation and market-driven approaches that are competition neutral over public ownership and economic regulations that impede competition. In post-war years, regulation has usually been used to establish conditions for competition rather than to replace competition.
- The openness and contestability of regulatory processes weakens information monopolies and the powers of special interests, while encouraging entrepreneurialism, market entry, consumer confidence, and the continual search for better regulatory solutions.

In the United States, competition controls and public ownership are rarely used as instruments of social policy.

4. More than in other OECD countries, regulations in the United States are based on an implicit but strong policy framework of competition principles. Evidence for this can be seen in the US aversion to competition controls as an instrument of social policy, and the *ad hoc* but almost complete removal of entry controls in most sectors over the past 20 years. Problems, such as the monopoly characteristics of networks, that other countries traditionally addressed through public ownership are addressed in the United States through less interventionist economic regulation. Problems, such as service quality and distributional issues, that other countries address through economic regulation are usually handled in the United States through competition-neutral social regulation, other social policies, or the market, supported by competition and consumer policies.

Box 1.1. What is regulation and regulatory reform?

There is no generally accepted definition of regulation applicable to the very different regulatory systems in OECD countries. In the OECD work, **regulation** refers to the diverse set of instruments by which governments set requirements on enterprises and citizens. Regulations include laws, formal and informal orders and subordinate rules issued by all levels 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 to increase economic efficiency by reducing barriers to competition and innovation, often through deregulation and use of efficiency-promoting regulation, and by improving regulatory frameworks for market functioning and prudential oversight.
- **Social regulations** protect public interests 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 needed, and to design regulatory and other instruments, such as market incentives and goal-based approaches, that are more flexible, simpler, and more effective at lower cost.
- **Administrative 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 eliminating those no longer needed, streamlining and simplifying those that are needed, and improving the transparency of application.

Regulatory reform is used in the OECD work to refer to changes that improve regulatory quality, that is, enhance the performance, cost-effectiveness, or legal quality 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 a subset of regulatory reform and refers to complete or partial elimination of regulation in a sector to improve economic performance.

US regulation illustrates the conclusion that “...public policies...are better served by using competition-neutral instruments, such as well-targeted social regulations and market incentives...”

5. This pro-competitive regulatory style has proven to be a valuable national asset in a world economy characterised by globalisation, responsiveness, and rapid technological progress. US regulatory practices illustrate well the conclusion in the OECD Report on Regulatory Reform:

“...economic regulations have often proven to be extremely costly and ineffective means of achieving public interest goals...In general, public policies...are better served by using competition-neutral instruments, such as well-targeted social regulations and market incentives, to change behaviour in competitive markets.”³

Differences between the United States and other countries are narrowing, however, as countries shift policy instruments toward market-based approaches through regulatory reforms.

Regulatory transparency supports market entry and risk-taking.

6. In transparency, too, US regulatory practices show important differences. The administrative and legal culture shaping regulation in the United States is the converse of that found in corporatist countries, where decisions are often consensual and the administration has wide discretion in application, often sharing powers with organised market interests. Administrative action in the United States is taken within a legalistic and adversarial environment based on open and transparent decision-making, on strict separation between public and private actions, and on competitive neutrality between market actors. These characteristics support market entry and private risk-taking.

Yet, in many policy areas, economic actors in the United States suffer from rigid, complex and highly detailed regulations that impose unnecessarily high costs.

7. Yet social regulation that is competition-neutral and transparent can still be inefficient and costly if policies are misguided or outdated, or regulation is badly designed or applied. Enterprises and citizens in the United States suffer from rigid, complex and highly detailed social regulations and government formalities that impose unnecessarily high costs in many policy areas. The quality of social regulations varies widely. Regulators are sometimes hampered by poor and out-dated laws, and are mired in lengthy procedures and excessively adversarial approaches that impede good regulatory practices. Overlapping federal/state jurisdictions compound the problem. These tendencies reduce innovation and responsiveness in the federal regulatory system, eroding the benefits of pro-competitive reforms and regulatory transparency. They are the most important challenges to reformers today. As a former head of the regulatory reform office says, “The question is not how much regulation, but how good.”⁴

The roots of regulatory reform do not lie in any coherent “deregulation” theory in the United States.

8. Regulatory reform connects many threads in American society, and has not been a product of any coherent “deregulation” theory. Rather, debate ranges widely over *ideological* issues of the role of the state in society; *pragmatic* issues of the quality and cost of public services and protections; *economic* ideas of regulatory and market failures; *federalist* issues of the balance between federal powers and state rights; *institutional* struggles between the powers of the Congress, the

President, and the Executive Branch; and *constitutional* issues of individual property rights versus collective rights. In most cases, reforms have been linked to broader changes in policies and institutions. Assessment of regulatory change must be done with caution and appreciation for the complexity of the wider policy environment.

2. THE MACROECONOMIC CONTEXT FOR SECTORAL REGULATORY REFORM

9. Reform of economic regulation in network industries that the United States began in the 1970s is the most visible and studied component of the larger regulatory reform programme. Rather than a coherent reform strategy, reform was a case-by-case process that proceeded at different speeds in response to specific problems. Political coalitions and policy consensus varied by sector, though strong and sustained political leadership was essential in every case. Economic deregulation coincided with rapid increases in environmental, health, and safety regulations, and even, in the late 1970s, with direct government intervention in the energy sector and in setting wages and prices.

Two common elements were the search for a response to supply shocks, and awareness of regulatory costs.

10. In retrospect, two common elements lent an underlying unity to sectoral reforms: the search for an effective policy response to the supply shocks of the 1970s, and increasing doubt among economists about the rationale for economic regulation, both in general and in specific sectors.⁵

Regulatory reform was an ad hoc response to stagflation and the productivity slowdown that followed the oil price shocks

Economic performance seemed to suffer from fundamental structural and macroeconomic problems.

11. Concerns that US economic performance suffered from fundamental structural and macroeconomic problems were reinforced by the painful aftermath of the oil price shocks of the 1970s. Performance deteriorated both in relation to the “golden” era of the 1960s, and to the performance of the United States’ competitors. Higher unemployment and slower growth of per capita GDP (in PPP terms) showed the US economy was already sluggish compared to Japan and Europe.

12. The low rate of growth in labour productivity was particularly worrying.⁶ During the 1960s, US labour productivity grew at half the rate of the war-damaged economies⁷ (see Table 1.5 in Annex). In the 1970s, productivity growth declined OECD-wide but fell even further in the United States, from an average annual rate of 2.9 per cent in the 1960s to less than one per cent.⁸ The United States may have lagged in the earlier period because other countries were catching up, but that did not explain why the United States then slowed down even more than others did.

Increasing costs of social and economic regulation were also blamed for poor economic performance.

13. Along with labour cost pressures and changing demographics⁹, increasing costs of both social and economic regulation were blamed for poor economic performance. Reflecting a growing body of research, the 1979 OECD Economic Survey commented:

*Productivity growth has probably been slowed somewhat due to increased government regulations concerning industrial safety, health and environmental protection—the sustained falls in mining productivity appear to be a case in point—as well as government regulation of specific industries (p. 23).*¹⁰

Aggregate demand management had to be supplemented by policies to address the supply side directly.

14. A view emerged that the US economy faced a problem of aggregate supply for which traditional aggregate demand techniques were inadequate. The “sacrifice ratio” between lower inflation and temporarily higher unemployment was perceived to be too high -- contraction would impose heavy costs on the real economy without reducing inflation much.¹¹ There was debate over whether monetary policy and instruments could be effective.¹² The implication was that demand management had to be supplemented by policies to directly address the supply side.¹³

Interest in regulatory reform was reinforced by increasing concern over budget deficits and sectoral crises.

15. Interest in regulatory reform was reinforced by concern over budget deficits and grave sectoral crises. The US budget saw substantial deficits in 1975, 1976, and again in 1979 (Figure 1.3). Meanwhile, failure of a major bank (Franklin National) and railroad (Penn Central) and weakness in key manufacturing sectors such as automobiles¹⁴ foreshadowed demands for federal bailouts or, for railroads, nationalisation. Regulation was partly responsible for low profits in banking and railroads, and it was hoped that reform would return them to profitability and avoid the need for direct government assistance.

Empirical research undermined long-standing justifications for economic regulations that block competition.

Replacing regulation by market competition should reduce prices, research suggested.

16. Economic research cast doubt on traditional justifications for regulation, and suggested that replacing regulation by market competition would in some cases reduce prices. In airlines, comparison between fares on regulated national routes and on unregulated intra-state routes showed that regulated fares were up to 50 per cent higher. In electric power and other sectors operating under rate-of-return regulations, evidence of over-investment and excess capacity suggested that costs were too high. In trucking, entry restrictions were tied to operating inefficiencies, and fragmentation of the network and inability to optimise routing led to higher costs and tariffs.¹⁵ Yet there was little evidence of excess profits, except for the telecommunications giant AT&T. Potential excess profits were either absorbed by competition in service quality (air transport), by inefficiency (electric power), or by rents paid to labour, which were believed to be widespread.

17. In some regulated sectors, the major problem was that profits were too low. Railroads, barred from abandoning unprofitable routes, were losing market share to road transport. Natural gas producers, facing an increasingly complicated maze of price regulations, channelled investment into supplying less-regulated intra-state markets. The surge in energy prices after 1979, combined with partial deregulation of some gas supplies, led many pipeline buyers to enter long-term contracts, only to suffer losses when market prices fell after liberalisation in 1982-83.

18. In some sectors there was evidence that lack of competition resulted in rents being earned by labour. In trucking, wages were estimated to be up to 35-40 per cent above those of comparable workers. Communications workers at AT&T were paid premiums of 17-20 per cent above other manufacturing, after adjusting for labour quality.

19. In financial services, too, the impact of regulations distorted competition and depressed profits. At first, deregulation in this sector was motivated by a desire to “level the playing field”¹⁶ among different kinds of financial institutions. Commercial banks and savings and loan companies were losing market share in the 1970s. As market interest rates rose with inflation, financial institutions that were subject to restrictions on interest rates or to constraints on portfolio choices could not compete against institutions that were free from these restrictions or against foreign banks with access to financing in Eurocurrency markets. Later, declining profitability, evidenced by a rise in bank and savings and loan failures during the 1980-82 recession and subsequent disinflation, reinforced interest in deregulation. Research suggested that Depression-era prohibitions on interstate branching and on combining commercial banking with other financial activities had inhibited diversification of risk across regions and product lines, and thus probably contributed to these failures.

Supply-side strategies were based on reform of economic and social regulations.

Regulatory reform was seen as a more effective anti-inflationary instrument than price controls.

20. Policies to affect aggregate supply had been tried before¹⁷ but the Carter Administration (1976-80) first made major use of “supply-side” economics.¹⁸ Regulatory reform was part of an overall strategy to restrain inflation by lowering prices and inflationary expectations and by increasing efficiency and overall competitiveness. Price controls in regulated sectors were ineffective and increasingly difficult to administer, particularly for the energy sectors and major energy consumers.¹⁹ The Carter Administration’s anti-inflation programme supplemented demand management policies with supply-side measures,²⁰ including deregulation of road transport, airlines, and oil prices (see Table 1.1 below).²¹

21. The Reagan Administration came into office facing worsening stagflation, and embraced supply side economics.²² Its intent was to strengthen the market by reducing the size of government, and to stimulate work effort and investment by cutting tax rates on labour and capital income. Under a theme of “regulatory relief,” a programme of deregulation and regulatory reform was launched. The Reagan Administration adopted the first explicit benefit-cost test for new social regulations, created a Task Force on Regulatory Reform in the White House, and strengthened oversight by the Office of Management and Budget (see Chapter 2).

Table 1.1: Reform of sectoral economic regulations in the United States (status by end-1998)

Industry	Reasons for Deregulation	Key Legislative or Regulatory Changes	Changes in Price Regulation	Changes in Regulation of Entry and Exit	Remaining Regulations on Price and Entry	Mandated Changes in Industry Structure
Air Transport	Evidence of 50% lower fares in unregulated intra-state markets; low load factors; no evidence of scale economies.	Airline Deregulation Act in 1978	Phased out fare regulation completely as of 1983.	Phased out route regulation completely as of 1981	None.	None.
Road Transport	Research showing constant or decreasing returns to scale; potential for efficiency gains and lower prices.	Regulatory changes culminating in Motor Carrier Act of 1980. Intra-state deregulated in 1994.	Curtailed price collusion by rate bureaux that had been permitted under an anti-trust exemption. Complete price deregulation.	Eliminated restrictions on entry by territory, type of product, backhauls, and intermediate service	None (except for household goods movers, who may still agree on prices)	None
Rail Freight	Loss of profitable and low rates of return; deteriorating physical plant and low service quality; fear of bankruptcies. Expectations of higher rates, higher profits and greater investment.	Staggers Rail Act of 1980.	Eliminated rate regulation except for maximum tariffs on 'captive bulk commodities.' Maximum tariffs have not been binding.	Contracts by shippers completely deregulated. Permitted abandonment of low density routes.	Maximum guidelines on tariffs for certain commodities.	None
Electric Power	Technology change eliminated economies of scale in generating; presence of excess capacity; large price variance across individual states; expectation of lower prices.	Substantial regulation by states. Reforms affecting capital investment in 1980s. 1978 Public Utility Regulatory Policy Act 1992 Energy Policy Act FERC order 888, 1996 Deregulation under respective state laws.	Limited inclusion of certain costs in rate base, price caps, demand management. Required non-discriminatory open access tariffs Market price determination, creation of spot markets, pricing of stranded costs..	Required public utilities to purchase power at avoided cost from certain generators. Required public utilities to provide open wholesale transmission access. Open competition in retail (end user) market.	Individuals states may choose to opt in or out of participation in retail wheeling. Requires recovery of stranded capital costs based on revenues lost, imposed as a transmission surcharge.	Required separation of transmission and supply. Establishment of independent system operator of transmission grid.. Some forced divestiture of generating capacity.

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Industry	Reasons for Deregulation	Key Legislative or Regulatory Changes	Changes in Price Regulation	Changes in Regulation of Entry and Exit	Remaining Regulations on Price and Entry	Mandated Changes in Industry Structure
Telephone	Evidence of monopoly profits by AT&T. Potential savings (60 per cent) on long-distance toll charges, large cross-subsidy of local, residential calls.	1982 AT&T divestiture decision, implemented in 1984 Various changes in state regulation. Telecommunications Act of 1996.	Equipment and long-distance prices <i>de facto</i> deregulated. Introduction at state level of various alternatives to rate of return regulation: revenue sharing, price caps.	Open entry in long distance and business services and data transmission. Legal barriers to entry into local markets removed. Requires open inter-connection to transmission network, unbundling of access to local loops, resale of any retail services.	Local service remains regulated; Regional Bells (RBOCs) are prohibited from entering long distance unless it can be shown that significant competition has developed in their market.	Divestiture by AT&T of regional telephone operators (Baby Bells) and of equipment manufacture (Western Electric).
Natural Gas Distribution	Existing regulation had created a regionalised and monopolistic industry structure.	FERC ruling	Change from LT contracts for uninterruptible and interruptible gas to reservation charges on transmission capacity and unit charges for gas shipped.	Created open access to interconnected grid by brokers, distributors and recently end users..		Mandatory separation of pipeline transmission from marketing subsidiaries.
Financial Services	Disintermediation of bank deposits caused by high interest rates. Continuing loss of bank market share of financial assets. Possible efficiency gains from creation of financial superstores.	Depository Institutions Deregulation & Monetary Control Act (1980), updated 1982. Interstate branching at state level (1982-1990) Federal regulations permitting some cross-holding in financial services. Riegle-Neil Act (1994) Federal regulations increasing cross-holding in financial services.	Interest payments on deposits were effectively phased-out by 1982.	Permitted interstate bank branching. Permitted commercial bank ownership of separately capitalised subsidiaries in investment banking and securities brokerage. Full interstate branching, limits national and state concentration. Increased financial integration, including in insurance.	Banks are prohibited from ownership or offering of insurance services and ownership of non-banks.	
Other		Bus Regulatory Reform Act of 1982.				

3. ECONOMIC IMPACTS OF SECTORAL REGULATORY REFORM²³

Removal of restrictions on pricing, entry, and exit led directly to increased productivity and lower costs.

22. Benefits from the initial round of reform began to appear once growth resumed after 1982. The removal of most restrictions on pricing, entry, and exit in network industries led directly to increased productivity and lower costs in the reformed sectors. More vigorous competition stimulated industry restructuring and innovation and benefited consumers through better service and lower prices (see Table 1.2 below).

Performance across the economy improved as the effects of sectoral reform rippled outward.

23. Performance across the economy improved as the effects of sectoral deregulation rippled outward. Cheaper, more efficient infrastructure and transportation services let downstream industries reduce prices, while stimulating growth in complementary services.

The economy was able to adapt more quickly to changes in technology and to external shocks.

24. Dynamic effects were more important than anticipated, though harder to document. An extraordinary surge in innovation and faster introduction of new technologies, services, and business practices multiplied benefits for consumers and produced new high-growth industries. Direct and indirect effects of sectoral reform helped increase flexibility in the labour market and elsewhere. These effects allowed the US economy to adapt more quickly to changes in technology and to external shocks, improved the trade-offs between inflation, growth, and unemployment, and boosted the US lead in productivity.

Box 1.2. Estimating the economic impact of regulatory reform

Regulatory reform can affect both sectoral and macroeconomic performance. Analysis of sectoral impacts draws on the large body of academic research that has developed since the 1970s. Microeconomic effects include benefits to consumers in terms of prices and service, impact on labour markets, changes in industry structure, competition and profits, and changes in costs and productivity, especially from innovations. Where possible, numerical estimates of sectoral effects are based on comparing what actually happened with an estimate of what would have happened without reform; where that is not possible, the observed change is reported. Quantitative measures for features such as service quality and innovation are generally not available, so key changes or anecdotal information are reported. The sectoral impact is summarised in Table 1.2. The impact of regulatory reform on macroeconomic performance is notoriously difficult to measure, and relies on estimates by other authors and previous estimates by the OECD.

The OECD's Regulation, Structure and Performance Database was also used to generate performance benchmarks of relevance to regulation (see figures 1.4 - 1.7). Based on information from Member countries and other data sets, macroeconomic and sectoral indicators of economic performance have been developed by the Economics Department. Performance is defined as a multifaceted phenomenon (including static, dynamic and resource mobilisation dimensions). Synthetic indicators were constructed using multivariate data analysis techniques such as factor analysis. The database includes indicators for business sector manufacturing and service industries and for six specific service sectors (electricity, telecommunications, rail transport, air passenger transport, road freight and retail distribution). For more information see OECD (1998), "Performance and regulation patterns in OECD countries", ECO/CPE/WP1(98)15, Paris.

3.1 Sectoral impacts of regulatory reform

Consumers benefited from lower prices and generally better service with no documented deterioration in safety.

Consumer prices in almost all deregulated sectors dropped 30 to 75 per cent.

25. Consumer prices in almost all deregulated sectors dropped substantially. Declines ranged from 30 to 75 per cent (Winston, 1998). These impacts are reported in Table 1.2 below.

26. A sector in which the price evidence is not clear is telephony. Per minute rates in domestic and international long-distance have fallen substantially, but local service charges have increased.

Regulatory reform brought about substantial gains in labour and capital productivity.

Gains were seen in all types of productivity: labour, capital and TFP.

27. Prices declined primarily because real operating costs fell in most sectors by 25 to 75 per cent (Winston, 1998). Gains were seen in all types of productivity: labour, capital and TFP (see Table 1.2). Reform stimulated substantial firm restructuring which improved labour productivity. Entry of non-union competition in traditionally unionised sectors forced concessions on work rules, increasing flexibility and raising labour productivity, although competition with non union labour reduced wage levels and job security in some cases.

28. Regulatory reform also improved capital productivity. It accelerated the introduction of new technology, such as fibre optic and digitalized networks in telecommunications. It forced firms to eliminate excess capacity, as in electricity generation. It required firms to achieve higher load factors by more appropriate choice of capital stock, such as plane size in air transport. Reform improved efficiency by encouraging:

- *economies of scope*, as free entry and exit permitted better network systems and more efficient routing. In airlines, freedom of entry and exit accelerated the shift to the hub and spoke system that has been the major source of greater productivity. The trucking industry enjoyed similar gains by centralising maintenance, service, and routing centres. Permitting back hauls and free entry into new routes and different products reduced empty miles.
- *adoption or innovation of new technologies*, such as information technology, which helped transport firms maximise load factors. Airlines use information technology to continually change the available price and mix of fare categories. Trucking companies applied information technology to track trucks' precise locations and optimise routes, and freight brokers used it to develop systems for finding the least cost intermodal routing. Railroads accelerated adoption of intermodal methods with containers and trailers and innovations such as double-stacked cars. New technologies improved capital productivity in energy and long distance telephony.

- *creation of deeper and more complete markets*, as a result of more efficient pricing and lower transactions costs. Improved markets have improved the allocation of resources and increased productivity. Deregulation led to unbundling, so each service could be priced at cost.
 - Airlines used computer reservations systems and other technology to offer multiple fare categories based on relative price elasticities and the value of fare restrictions.²⁴ This in turn has permitted economies in allocating such resources as airport landing slots.
 - Similarly unbundled prices, for such service features as guaranteed delivery times, have appeared in road and rail transport, natural gas, and electric power. Lower transactions costs in these sectors are likely to have reduced long-term costs and increased productivity in their customer industries, by easing industry relocation and expanding supplier networks, which created larger markets. In these larger markets, there are greater opportunities to achieve economies of scale, but also an increased number of competitors and thus increased pressure to contain prices through greater productivity.
 - In natural gas, four separate markets have developed: commodity gas (both spot and future), interstate transportation, core distribution, and non-core distribution. Deeper markets permit companies to use the future energy prices revealed in commodity markets to choose the energy intensity of investments in new technology.

Table 1.2: Impacts of the reform of sectoral economic regulation in the United States

Industry	Industry Structure & Competition	Industry Profits	Output and Prices: Absolute & Relative	Service Quality & Universal Service	Sectoral Labour: Wages, Employment	Efficiency: Productivity & Costs	Innovations and Other Changes
Air Transport	<p>Number of effective competitors declined and concentration increased after some initial entry.</p> <p>Competition per route increased through 1990, then declined slightly. Net increase in effective competition of 70% in long-distance, 2% in short-distance.</p>	<p>Profits have risen slightly on average, but have been highly cyclical and affected by excess investment/ capacity and slow adjustment to optimal fleet mix of planes. Large losses and some bankruptcies immediately after deregulation and again in early 1990s.</p>	<p>Pre-reform large cross-subsidies from long to short-haul routes. Total price decline of 33 per cent, 20 per cent from deregulation. Larger declines in prices of long-haul high volume cities; 80 per cent of fares now lower. Sources of declines split 60/40 between greater competition, and efficiency gains. Annual savings of \$30 billion (1996).</p>	<p>Safety performance improved after reform, for reasons that are unclear, perhaps because safety regulations were not reduced. Positive changes included increased flight frequency.</p> <p>Negative changes included an increased number of connections, increased connection and travel times, more fare restrictions, more difficulty getting seats on desired flights.</p>	<p>Initial loss of employment of about 7 per cent, larger amongst established carriers. By 1996 total employment had increased by around 40 per cent over initial levels as output soared in response to lower fares. (CONFIRM) No effect on earnings of mechanics. Flight attendants earnings were lower by 39 per cent or more by 1992. Depending on seniority, pilots earnings are 22 per cent lower.</p>	<p>Increase in load factors, especially on long-haul routes, from 55 per cent to 70 per cent in 1996. Accelerated network efficiencies through hub and spoke. TFP increases of 15 per cent in early years.</p>	<p>Constant innovation of information technology in pricing and computer reservation systems applied to maximising loads and revenues. Innovation of peak-load pricing, pricing related to embedded option value. Discount fares now available on Internet.</p>
Road Transport	<p>Tenfold decline in number of large “less than truck load” (LTL) trucking firms. Increased competition from UPS, Federal Express.</p> <p>175% increase in number of “truck load” (TL) carriers, but greater concentration in largest firms.</p>	<p>Profitability has been cyclical, many firms with unfunded pensions forced into bankruptcy. Overall profitability has declined, especially in LTL.</p>	<p>TL and LTL prices fell by 25 and 11 per cent through 1982, 75 and 35 per cent by 1995. Large reductions for high volumes and for larger shippers. 30 per cent decline in intrastate rates. Annual savings of \$18 billion (1996).</p>	<p>Innovation of negotiated contracts, binding estimates, guaranteed delivery times. Improvements in service time and reliability.</p>	<p>Drop in overall wage level of 1-4.5 per cent (counterfactual), 10 per cent for union workers. Employment declined in LTL and rose in TL, net gain of 16 per cent through 1990. Increase in flexible of work rules.</p>	<p>Initial drop in costs of 2 per cent . By 1996 operating costs fell by 35 per cent (LTL) and 75 per cent (TL). Increased customised service costs partly offset productivity gains in volume service. Evidence of higher capital productivity.</p>	<p>Constant innovation in application of information technology to maximise routing efficiency, track shipments, and analyse shipper distribution patterns; development of third part freight analysts and brokers.</p>
Rail Freight	<p>Continued mergers have left four large Class I firms. Substantial entry of small firms creating small systems on abandoned track. Evidence of intense duopoly competition and competition from road freight.</p>	<p>Rate of return on equity rose from under 3 percent to over 8 per cent. Market share of freight shipments recovered from 33 to 38 per cent. Substantial increase in high volume, container and trailer traffic up 133 per cent.</p>	<p>Initial price declines around 7 per cent, 39 per cent by 1990 and 50 per cent by 1995. Greater price drops for high value, non-bulk than bulk commodities. Permitted railroads to compete in these areas. Relative increase in prices on low-density routes. Annual savings of \$12 billion (1996).</p>	<p>Steady improvement in service quality. More frequent departures on high volume routes. Volume discounts and increase in shipper specific rates: tailored to cost, service and demand conditions.</p>	<p>Large additional decline of 41% in employment Significant initial wage gains above pre-existing rents of 6-40% maintained until late 1980s and then substantially eroded with declining labour demand. Adjustments occurred gradually over a number of years.</p>	<p>Consolidation and abandonment of low density uneconomic routes, decline of about 1/3. Increase in intensity of track usage by 54 per cent by 1990. Annual labour productivity growth doubled and TFP gains tripled in 1980s. Total drop in costs of 60 per cent, about 2/3 due to deregulation.</p>	<p>Same as road transport. Innovation of intermodal, double stacked cars. Pricing more closely based on distance, number of switching,</p>

Table 1.2. The impact of regulatory reform in the United States (continued)

Industry	Industry Structure & Competition	Industry Profits	Output and Prices: Absolute & Relative	Service Quality & Universal Service	Sectoral Labour: Wages, Employment	Efficiency: Productivity & Costs	Innovations and Other Changes
Telecommunications	AT&T's market share of long distance fell from 68 per cent in 1984 to under 50 per cent in 1997, with Sprint and MCI accounting for most of the rest of the market. The seven RBOCs, GTE and other local exchange companies control virtually 100 per cent of local services in their regions. .	[NO EVIDENCE]	Long distance rates fell, but were partially offset by higher cost of local service. Urban and business customers continue to subsidise residential and rural rates; long distance subsidises shorter distances.	Service has improved: universality of service rose, percentage of calls completed increased.	Loss of jobs in components of AT&T offset by growth in new entrants. Overall sectoral employment fell by nearly 10 per cent through 1992-93 recession, has rebounded to pre-deregulation levels. Evidence of small declines in wages (Hendricks 1994, Winston 1993).	Equipment costs declined by two-thirds after divestiture.	More rapid introduction of fiber optic and digitalized networks. Increase in R&D expenditures and manpower of 50 per cent (Noam 1992). Automation and computerisation of operator and directory services accelerated.
Natural Gas Transmission and Distribution	Direct market transactions between suppliers and users replaced merchants. 50 gas spot markets. 1400 distributors hold rights on 21 major pipelines. Nearly complete unification of prices in national market four years after deregulation	[NO EVIDENCE]	Drop of 31 per cent in transmission and distribution margins between 1984-93. Increase in natural gas demand of 30 per cent. (not counterfactual)	Service quality and system reliability have improved.	Decline in employment of 13 per cent by 1994. (not counterfactual)	Drop of 35 per cent real dollars in operating and maintenance. Labour productivity increases of 24 per cent. (not counterfactual)	Innovations in automation and information technology in meter-reading, billing, route planning and scheduling. New technologies in boring and extension. (not counterfactual)
Financial Services	Steady consolidation of industry in 1980-97, net decline of 30-40 per cent in number of firms and increased asset concentration. (top 100 from 1/2 to 3/4 of total assets). 40% foreign-owned. .	Rates of return declined in the 1980s with higher costs from paying interest on deposits and higher capital requirements.		Improved service quality, some questions during 1990-94 if decline in lending to small businesses was permanent.			

Some cost improvements developed over the long-term. The speed of adjustments varies directly with the extent of fixed costs in the industry.

Regulatory reform triggered a long-term process of capacity adjustment that is lowering fixed costs.

29. Regulatory reform triggered a long-term process of capacity adjustment that is lowering fixed costs. Most reformed sectors are capital intensive, with high fixed costs and low marginal costs. Regulation had burdened firms in these sectors with excess capacity, a mismatch between types of capacity and demand, or both. This was most obvious in air and rail transport, where regulation prevented exit from unprofitable routes. After rapid initial restructuring to improve competitiveness, further adjustments to capacity and the mix of capital stock have been slower, and continue in most sectors, especially those with the highest proportion of fixed costs.

- In air transport, carriers tried at first to compete with more frequent service by buying larger fleets of larger aircraft, but this strategy led to over-investment, fare wars and large losses in the late 1980s.²⁵ Firms learned from that experience, and in the 1990s slowed the growth of fleet size, while better adapting the mix of aircraft to flight distance and passenger volumes.
- In railroads, with the highest fixed costs of any transportation sector, routes are still being pruned. The slow pace of change is reflected in the slow decline of costs and prices, which fell by 7 per cent in the early 1980s, 39 per cent by 1990, and 50 per cent as of 1995 (Wilson, 1997).

Industry structure is continuously evolving. The trend is toward both greater concentration and greater contestability.

Deregulation attracted substantial entry, followed by consolidation.

30. In most sectors, deregulation attracted substantial entry, followed by consolidation (Table 1.2). Initial entry of many low cost, non-union air carriers was important in driving down fares, partly through reducing industry wages and liberalising work rules. In railroads and trucking, a dual market developed, combining a few large national firms with many small local ones. In long-distance telephony, AT&T's market share has dropped by almost half since deregulation, but three firms (AT&T, MCI and Sprint) account for 75 per cent of the market.

Vigilance by competition authorities continues to be necessary, but competition has generally increased despite consolidation.

31. Vigilance by competition authorities continues to be necessary, but consolidation has not prevented competition.

- In transportation, competition in individual sectors was reinforced by intermodal and cross-sectoral competition, a synergy that highlights the importance of reforming all transportation modes simultaneously. In road transport, the emergence and rapid growth of package delivery services such as Federal Express created substantial competition for some forms of trucking.

- The significance of trends in airlines has been hotly debated. Overall, competition has increased under reform, especially on major routes, and prices have dropped dramatically. Morrison and Winston (1998) note that 90 per cent of the realignment of relative prices of different routes reflects differences in underlying costs of serving those routes. But there has been significant retrenchment on smaller routes and around hubs where there is a dominant carrier.²⁶ In these cases, monopolistic pricing has raised prices by an estimated 2 to 27 per cent (Grimm and Windle (1998)), sometimes substantially reversing the initial price declines (Borenstein 1990).
- Competition in natural gas transmission and the development of commodity markets have all but eliminated arbitrage possibilities from wellhead to final user.

Changes in profits have been mixed across sectors but have been generally small.

32. The expected impact of reform on profits is uncertain. To the extent that regulated industries face little competition and exploit market power, profits should fall after reform. But if regulation prevented firms from optimising inputs, profits could rise after reform. Cyclical factors make measuring the net effects of reform difficult, but it does not seem that overall profits changed much. Profits rose slightly in airlines and banking and declined slightly in road transport. Profits of natural gas pipelines and railroads rebounded substantially as firms left unprofitable routes and re-negotiated contracts. Rate of return on equity for railroads rose from 3 per cent before reform to over 8 per cent after. Developments in banking are difficult to analyse but interest rate deregulation and interstate branching probably contributed to the decline in profits experienced during the 1980s. Rates of return for AT&T and the regional Bell companies have exceeded those of the S&P 500.

Benefits of sectoral reform are not evenly distributed across society because relative prices of services changed substantially...

For the great majority of consumers, prices declined substantially, but others saw few benefits or even price increases.

33. Regulatory reform produced mostly winners, but some losers. The distribution of benefits across society varied as the relative prices of different types of service changed. Cross-subsidies between different types of service in many sectors declined or disappeared as rates aligned with costs. For the great majority of consumers, prices declined substantially, but others saw few benefits or even price increases.

34. These impacts are clear in airlines: 80 per cent of passengers benefit from lower prices, especially on long-haul high volume routes where prices dropped 25 to 50 per cent, but for 20 per cent of passengers real prices have not declined or have increased.²⁷ In natural gas, prices to industrial users fell substantially, but prices to commercial and residential consumers have been fairly constant as competition in retail delivery is just beginning to emerge (Costello and Granieri, 1997).

...but service quality and safety in sectors under reform have usually been maintained or improved.

35. Service quality has generally improved. Large customers in particular benefit from more customised services. In road transport and railroads, shippers, especially those transporting high volumes, now enjoy individually negotiated contracts with prices tailored to cost and demand conditions. In addition transporters improved delivery times and reliability and offered innovations such as binding estimates and delivery guarantees. In financial services, interest rate deregulation has resulted not only in higher interest payments on deposits, but also increased customer convenience. Scheduled airline and railroad departures became more frequent except for some smaller cities. Some aspects of airline service have deteriorated: restrictive conditions on some fares have increased (for example, required Saturday overnights), as have connection and travel times.²⁸ In a competitive market, though, the multiplication of fares (and fare restrictions) has stimulated travel agents and businesses to develop software to find the cheapest fares. Businesses have developed strategies to offset rising business class fares, including direct bargaining with airlines in exchange for exclusive service, and consumers have organised buying clubs to benefit from volume discounts.

Although vigilance is warranted, reform has led to no documented deterioration in safety and reliability.

36. Although anxiety is still high in some areas and vigilance is warranted as incentives change in more competitive markets, reform has led to no documented deterioration in safety and reliability. This may be because safety regulations were not removed in any sector, but instead were often augmented. Moreover, markets may support rather than erode safety incentives. In trucking and airlines, despite some well-publicised airline crashes, over-all safety records have improved.

Reliability was also maintained after reform.

37. Reliability was also maintained after reform. Industry observers feared that a competitive environment for natural gas pipelines would undermine system integrity and security from a supplier of last resort. This concern is echoed in current discussions of electric power reform. Yet system reliability in gas pipelines improved. One reason is that development of spot and future markets, a direct result of reform, gave prices a time dimension. Spot and future prices adjust to shortages immediately and, as demand responds, the increased interconnectedness of pipeline networks permit rapid re-routing.²⁹ Innovations in information technology, metering, route planning, and scheduling contributed.

3.2 Sectoral performance after regulatory reform

38. Performance in sectors that the United States has reformed compares well with that in other OECD countries by measures such as employment, output growth, and labour and total factor productivity, and by a measure of X-efficiency (Figures 1.4 – 1.7 show US sectoral performance compared to the rest of the OECD).

Sectoral performance improved most when reform was deepest.

39. US productivity and efficiency performance, relative to other countries, varies substantially across sectors. In telecommunications, US performance is average, but the retail distribution, air and rail transport sectors are productivity leaders, and electricity is in between. This pattern roughly corresponds to the extent of reform.³⁰

Restructuring after reform led to high output growth, and low employment growth, and productivity soared in the reformed sectors.

40. Performance in terms of growth in sectoral output was clearly affected by deregulation. Output growth was relatively high in all sectors in the 1980s, and, combined with relatively low employment growth in labour productivity soared. In the 1990s output growth decelerated in sectors where reform occurred early but accelerated in sectors undergoing reform. Thus in air transport, the US ranking among the G7 in terms of sectoral output growth fell from first to fifth, and electricity and rail transport followed a similar pattern, although the relative movements were smaller. The one sector where US ranking and output rose in the 1990s was telecommunications; as deregulation there became broader and deeper.

3.3 Macro-economic impacts of regulatory reform

Sectoral innovations and productivity gains boosted economy-wide productivity in the 1980s.

Gains in reformed sectors spilled over to other sectors.

41. Gains in reformed sectors spilled over to other sectors, either through demonstration effects or because reformed sectors supplied important inputs. Improved, unbundled, and customised service permitted customers to improve productivity. Guaranteed delivery times facilitated more efficient supplier-producer relationships such as just-in-time inventories. Development and application of sophisticated pricing, routing and logistical software in formerly regulated sectors had important demonstration effects in other sectors. And their pioneering reduced the costs and improved the quality of new technologies, facilitating their adoption in other industries. Deeper and broader markets, such as the spot and futures markets that developed in natural gas and are emerging in electricity, have allowed energy consumers to set their own output prices with lower risk (see Chapter 5).

Reform also improved the dynamic allocation of resources and investment.

42. Regulatory reform also improved the dynamic allocation of resources and investment, possibly leading to long-term gains in productivity. While this effect is difficult to measure, deeper markets and more efficient pricing are likely to have generated long-term benefits to productivity growth.

Regulatory reform increased the efficiency of investment, important in the United States where investment levels are low.

43. Regulatory reform improved the functioning of capital markets, increasing the efficiency of investment. Reforms in banking and other financial markets have been important to facilitating the flow of credit for new investments. Most striking have been reforms that let pension funds invest directly in venture capital. Venture capital is a major source of funding for businesses that generate jobs and new technology.³¹

Innovative forms of funding are particularly important in the US economy, where investment levels overall are relatively low. Capital market reform had another benefit for economic growth. Effective overhaul of bank and savings and loan supervision—effective regulatory reform, not deregulation—meant that the US credit crunch was shorter than in other countries that suffered from asset price bubbles.

Spillover effects and efficient application of capital helped maintain high productivity and standards of living, despite lower savings.

44. Spillover effects, efficient application of capital, efficient use of infrastructure, and better dynamic allocation of investment helped the United States maintain its high productivity and standard of living despite lower rates of savings and investment.³² While the United States had the slowest capital stock growth in the OECD, it also had the lowest capital-output ratio in the G7, indicating the efficiency with which capital is employed (see Table 1.3).

45. The combined size of reformed sectors is relatively small—five per cent of GDP— but the benefits of productivity growth in those sectors may have contributed to improvements in productivity performance in the economy as a whole. Correlations must be drawn cautiously, but productivity growth during the 1982-87 recovery, following major reform, was much stronger than during the 1975-79 recovery (see Figure 1.1). Labour productivity growth in the business sector did not decelerate in the 1980s and 1990s as it did in other G7 countries. In the 1990s, labour productivity in manufacturing has risen faster than in other G7 countries, permitting the United States to retain its lead in productivity.³³

Regulatory reform has helped restore US competitiveness in manufacturing.

46. Explicit links between regulatory reform in largely non-traded sectors and external performance are difficult to make. Nonetheless, through its effects on productivity growth, regulatory reform has helped restore US competitiveness in manufacturing. Growth in US export volumes has outpaced competitors so that US exporters have gained market share in manufacturing exports relative to the rest of the G7.

The macroeconomic effects of reform include lower inflation and a better tradeoff between price and quantity adjustment.

47. Lower prices in sectors under reform lowered costs in other sectors, reducing their prices or raising their value added. Price levels in US manufacturing are the lowest in the OECD by over ten percent compared to the next best country, and price levels in services are among the five best-performing countries. Studies³⁴ show that the United States has the highest levels of relative price flexibility of any OECD country.

Lower prices and greater price flexibility helped to reduce inflation while avoiding an increase in unemployment.

48. Lower prices and greater pricing flexibility have translated into better inflation performance. Despite strong growth and unemployment well below most estimates of the NAIRU inflation has declined and is now close to the range consistent with price stability. The G7 countries experienced low inflation in the 1990s, and the United States was at the higher end of the range among this group; though probably largely due to more flexible labour markets, regulatory reform helped the United States

become one of the few G7 countries to engineer a decline in inflation over the last 20 years while avoiding a secular increase in the unemployment rate.

Regulatory reform worked with flexible labour markets to re-allocate labor to high-growth sectors, especially services, though this may have reduced productivity growth.

The flexibility of the labour market resulted in the rapid absorption in new jobs of workers displaced by restructuring.

49. The flexibility of the US labour market permitted workers displaced by restructuring to be rapidly absorbed in new jobs, mostly in the service sector. Rapid employment growth within sectors was supported by downward wage flexibility. Reform stimulated employment creation in complementary services such as freight brokers and logistical firms in transport, travel agents and in the travel industry, and financial service jobs in energy commodity markets. Many of these are high wage jobs. A liberal regulatory environment for shop opening hours, zoning and retail store size also stimulated employment in wholesale and retail distribution, restaurants and other services, where many jobs are not highly paid. In occupations like distribution, restaurants and hotels, flexible labour markets permit part-time and temporary employment. Employment of low skill workers is encouraged by low minimum wages and the absence of notification periods for firing and of mandatory vacation, health and pension benefits.

50. Ironically, reallocation of labour may have lowered total business sector productivity. Many service sector jobs are high-skilled, but on average productivity in services is lower than in manufacturing³⁵. As a result, in a full employment economy like the United States, labour released in some sectors may be absorbed in lower productivity sectors, with the net effect of lowering economy wide productivity.

Initial declines in employment were followed by substantial increases. But reform had negative effects on wages in some sectors.

Employment growth was boosted by the rapid expansion of output to meet the higher demand generated by regulatory reform.

51. In most reformed sectors, long-run employment levels have increased and employment has been reallocated to more efficient firms within the sector. Initial reductions in established, often unionised, companies were largely offset by growth in new, often non-unionised, entrants, and then by growth in pre-existing firms after an adjustment period. Employment growth was spurred by rapid expansion of output to meet the higher demand generated by the results of regulatory reform: lower prices, better customer service and increased product diversity.

- Employment fell in US telecommunications in the 1980s, but grew in the 1990s and was higher than the G7 average. Employment cuts among the original members of AT&T have been offset by substantial growth in other telecommunication companies so that employment in the sector has returned to pre-reform levels.

- In air transport, US employment growth was the highest in the G7 in both decades, and the gap grew in the 1990s as most other G7 countries were restructuring. Initial employment losses were around 7 per cent and were concentrated in large established carriers. New entrants and the explosive growth of demand resulted in a substantial increase in long-run employment of 37–46 per cent (the range depending on whether air freight is included).

Regulatory reform raised unemployment rates briefly, but in the long run contributed to strong employment growth.

52. Reform increased employment directly by stimulating growth in sectors like airlines and telecommunications, and helped economy-wide employment by boosting demand and by increasing competition, so that firms are more likely to meet higher demand with higher output rather than higher prices. Stronger sectoral employment performance is reflected in labour markets as a whole (see Figure 1.2 and Table 1.3 in Annex). Employment growth has been much faster than in almost all other OECD countries. The US economy created over 13 million new jobs (net) between 1992 and 1997, equivalent to ten per cent of the labour force. Regulatory reform raised US unemployment rates for brief periods, but in the long run contributed to the overall strength of employment growth. The unemployment rate has fallen to well below five per cent, levels not seen since the 1960s, and the largest decline in the OECD. Low unemployment and rising labour force participation have steadily reduced the non-employment rate..

Regulatory reform may have contributed slightly to poor performance of wages and to widening income distribution.

Effects on wages and income distribution must be understood in the context of a general stagnation in real wages.

53. Effects on wages and income distribution must be understood in the context of the general stagnation in real wages in the US economy since the mid-1970s. Wage growth has been near zero over the last 30 years and compensation growth has only been marginally positive at 0.2-0.3 per cent, in both cases the worst performance among the G7 countries. Growth in per capita compensation was more substantial, in part because of a decline in the savings rate. Poverty measures have improved, but income distribution is likely to have continued the widening which began in the 1970s, as non-wage income grew while wages stagnated.³⁶

In reformed sectors, wages declined at roughly the same rate as the economy as a whole, except in certain sub-sectors or specific occupations where substantial wage premia had existed.

54. In reformed sectors, wages declined at roughly the same rate as in the economy as a whole. The exception has been in sub-sectors and specific occupations where substantial wage premia existed under regulation, often as a result of a strong union. These premia were reduced or eliminated. In these sectors and occupations, new entry following reform was often composed largely of non-union firms, putting pressure on unionised firms to reduce wage premiums and relax restrictive work rules. This was particularly true in airlines and road transport. A major sector of road transport found that union wages declined by 10 per cent. In airlines, a study found that wages were 22 to 39 per cent lower than they would have been. By contrast, wages in rail transport rose as the industry recovered, but then declined slightly as employment shrank.

Causes of the poor performance of US wages and widening in income distribution are debated. Reform may have made a minor contribution to both trends.

55. Causes of the overall poor performance of US wages and the widening in income distribution are extensively debated and the contribution of regulatory reform is difficult to assess. On balance, reform may have made a minor contribution to both trends. This may have occurred directly through downward pressures on wages of relatively well-paid skilled workers in reformed sectors—contributing to the widening between the middle and upper ends of the income distribution—and indirectly by contributing to the overall weakening of the bargaining position of unions and labour in the economy. Balanced against this is the fact that workers overall benefited from lower prices, and potentially higher wages from improvements in labour productivity.

In summary, regulatory reform contributed to improving macro performance in the 1990s.

The United States has moved from stagflation to steady growth with low inflation, falling unemployment and a budget surplus.

56. The United States has moved from stagflation to steady growth with low inflation, falling unemployment and a budget surplus. All countries have substantially reduced inflation, but the United States is rare in doing this while sustaining high and increasing levels of employment. Real GDP growth has been positive since 1992 and maintained strength even after several years of recovery (see Table 1.4). Poverty measures have fallen since the 1980s. Export performance has been strong, and the United States maintains a productivity advantage in key manufacturing sectors. Price levels, especially in manufacturing, are among the lowest in the OECD, as is the capital-output ratio. This partly compensates for lower levels of savings and investment. At the same time, income distribution has widened and the living standards of a portion of the population may have declined.

Regulatory reform may have increased GDP by two percent.

57. Regulatory reform made positive and important contributions to these trends. Attempts have been made to quantify effects on GDP. An attempt by Winston (1993, 1998) to measure first-round effects³⁷ estimated that the combined sectoral effects of reform in transportation, energy and telecommunications increased US GDP annually and permanently by one percentage point. Previous work by the OECD found that, for the US economy, this can be translated to an overall macroeconomic effect roughly twice the size, suggesting that regulatory reform to date has increased US GDP by two percent.³⁸

Box 1.3. Regulatory lessons from the US savings and loan crisis

The savings and loan (S&L) crisis resulted from the interaction of archaic restrictions on investment with a changing macroeconomic environment.

S&Ls were set up in 1934 to encourage home ownership by channeling funds into residential mortgages. Deposits were insured by the Federal Savings and Loan Insurance company (FSLIC).

Federal insurance created the potential problem of moral hazard. Owners of S&Ls had incentives to seek as much risk as possible in their investments. They could borrow at a fixed interest rate and then lend at high rates, while passing losses to the FLSIC. To avoid this problem, S&Ls were regularly audited and both the interest rates they could pay on deposits and their eligible investments were tightly regulated. This resulted in investment portfolios composed largely of long-term mortgages financed by short-term deposits.

This arrangement was inherently risky but worked well in the environment of stable inflation and interest rates in the post-war period. Problems emerged in the 1970s when inflation, and market interest rates rose, causing S&Ls to lose deposits to banks and money market funds. Regulators responded by permitting S&Ls to pay higher rates to attract deposits. But as inflation rose, interest rates on short-term deposits exceeded interest earnings from long-term mortgages. Total losses were \$8.7 billion in 1980–81, and 118 S&Ls failed between 1980–82 at a cost of \$3.5 billion. By 1982, 415 additional institutions with assets of \$220 billion were insolvent.

Deregulation made the problem much worse...

The Congress and Administration faced two choices. One was to close down bankrupt institutions and leave the FSLIC to absorb the losses. But the FSLIC had only \$6.3 billion in assets, compared with estimated costs of \$15-25 billion. A bailout required an injection of taxpayer funds.

The alternative was to hope the industry could grow out of the problem by restoring profitability through easing restrictions on investments. Congress passed new legislation in 1980 and 1982 deregulating interest rates and constraints on investments, and loosening capital requirements and qualifications on S&L owners to encourage new entry. Federal deposit insurance was retained and expanded. The threat of moral hazard thus became a reality. The industry attracted so-called “high-fliers” willing to undertake high-risk investments. Nearly 500 new S&Ls came into existence between 1980 and 1986, and industry assets grew by 56 per cent, twice the rate of commercial banks. The share of residential mortgages in S&L portfolios declined, largely replaced by loans to real estate developers.

Moral hazard problems were exacerbated by other factors. First, lower capital requirements reduced the injection of new capital into the weakened industry. Second, Federal deregulation caused states, which also charter savings and loans, to engage in competitive deregulation. The 1981 Tax Act helped create a boom in real estate which was in large part burst by the 1986 Tax Act. Third, the regulatory system was weak. Examiners assigned to S&Ls had the lowest salaries and poorest training and the industry was allowed greater self-regulation than commercial banks. National chartering and insurance functions were housed in the same agency.

...resulting in even greater losses, an expensive Federal cleanup operation and appropriate reregulation.

Instead of restoring profitability, poorly designed deregulation increased losses as many new loans went sour. The losses were further increased by delays in confronting the problem. Congress, faced with the mounting costs of the crisis, repeatedly delayed legislative changes or injecting needed capital. Serious clean up finally began in 1989 with passage of new legislation (FIRREA) that established the Resolution Trust Corporation (RTC) with initial financing of \$50 billion and \$55 billion in additional financing. The RTC closed down and liquidated over 700 S&Ls with over \$400 billion in assets between 1989 and 1995. The eventual cost was \$160 billion, two-thirds borne by the tax payer.

The 1989 legislation contained several measures to reregulate the industry to avoid future problems. In the new system, safety and soundness regulation is institutionally separated from industry promotion. Higher and risk-based capital requirements are backed up by mandatory corrective action as an institutions’ capital deteriorated. The legislation established a new deposit insurance fund with insurance premiums related to differences in risk. Finally, Congress required the insurance fund to maintain a minimum ratio of capital to insured deposits, with powers to increase premia whenever this minimum was breached.

The regulatory lessons from the S&L crisis are clear:

- Problems must be recognised and addressed rapidly. Use of the least cost market-based solution encourages political support, while lowering overall costs.
- Capital and deposit insurance should be risk-based to provide proper incentives.
- Moral hazard problems must be avoided by having powerful independent regulatory agencies with well-trained examiners and strong enforcement powers and clear, transparent and well-defined accounting procedures.
- Safety and soundness regulation needs to be separated from industry promotion.

4. ANTICIPATED EFFECTS OF FURTHER SECTORAL REFORMS

Additional reforms will increase net benefits to the US economy.

58. Two decades of regulatory reform in the United States have not completed the reform of sectoral economic controls. Regulations on entry and prices still cost consumers and producers an estimated \$70 billion annually, while producing few benefits (OMB, 1998). Hence, these kinds of regulations probably substantially reduce social welfare. Additional reforms are needed to complete reform in some sectors, and new initiatives are needed in areas where more competition or more efficient regulation can yield economic benefits. Reforms in the electricity and telecommunications sectors are assessed in Chapters 5 and 6 of this report. The OECD Report on Regulatory Reform (1997) estimated that the impact of additional sectoral regulatory reforms in transportation, energy and telecommunications would raise labour, capital and total factor productivity in the economy as a whole by one-half percentage point each. This was estimated to increase GDP by an additional one percent, in addition to the two percent cited above.

Expansion of market forces in electricity, telecommunications and financial services promise substantial gains for consumers.

59. As Chapter 5 explains, recent regulatory changes in electric power have moved the industry nearer to full competition. In telephony, the Telecommunications Act of 1996 is designed to introduce competition into local service. Chapter 6 explains that this has not been easy, though the potential benefits are large. Further reforms in these sectors, and to some extent financial services, should have substantial effects.

Potential annual savings in the electricity sector range from 0.25 to 0.50 per cent of GDP.

- Retail competition in electricity generation and distribution will reduce costs and prices. If retail competition is introduced in most states, prices in some could decline by up to 20 per cent over the next five years (OECD 1997) as cost differentials across the country equalise. Estimates of annual savings range from \$20 to \$40 billion (0.25 to 0.50 per cent of GDP).

Consumer benefits of full competition in the telecommunications industry would range from \$4 to \$30 billion.

- Until there is competition in local telecommunications markets, cross-subsidies will remain, costing an estimated \$6 to \$15 billion per year (OECD US 1997). Crandall and Waverman (1995) estimated that consumer benefits of full competition would range from \$4 to \$30 billion, depending on the distribution of gains between consumers and producers. The FCC estimated potential gains from the 1996 Telecommunications Act at \$3.8 to \$5.4 billion annually.
- US financial services are relatively efficient, but eliminating remaining barriers can generate small percentage cost reductions. These could be large in absolute terms, because consumers spend \$300 billion on financial services annually.

Box 1.4. Regulatory reform in US health care

A more carefully constructed regulatory regime for health care could improve service and reduce costs. The major motivations for health care reform in the United States are: (1) rising costs and burdens to private employers and to the Federal government³⁹ (2) the perception of widespread inefficiencies in insurance and delivery of services; and (3) concern over the public costs of policy goals such as universal coverage.

Health care expenditures in the United States rose from 8.9 per cent of GDP in 1980 to 13.6 per cent in 1993, and have remained steady since. By a variety of measures, US expenditures are much higher than in any other OECD country, even correcting for differences in per capita income or medical out-comes⁴⁰.

In the past, the predominant form of health insurance was fee-for-service plans, which reimbursed most health expenditures after they were incurred. This market structure led to a large expansion in service and may have generated incentives to develop more costly medical technology (Cutler, 1996). In response to growing price pressures, the private sector has turned to managed care providers such as health maintenance organisations (HMOs). The share of workers covered by such plans rose to about 3/4 in 1996 (CBO, 1997a). Because HMOs receive a fixed fee per customer, they have strong incentives to minimise costs. Competition between HMOs, in principle, provides incentives for service quality⁴¹.

Managed care systems are growing as a share of public health insurance, but the predominant form continues to be fee-for-service. To increase incentives for cost reductions in the Medicare system, Congress implemented several other reforms, principally imposing a fee schedule that reimbursed hospitals and physicians a fixed payment for each type of treatment. In 1997, the Balanced Budget Act mandated that the Health Care Financing Administration extend these systems to other types of health payments, unilaterally lowered reimbursement rates and provided additional incentives for the elderly to choose a Medicare managed care provider. Total cost savings over five years are projected to be about 57 per cent of 1997 expenditures.

The effects of these private and public reforms have been mixed, and the cost savings may be only temporary. The shift to managed care providers clearly produced a one-off reduction in price levels, but effects on long-term trends and quality of service are unclear. Managed care providers are coming under increasing pressure to improve quality, and probably increase costs, as consumers realise that much of the savings come from a reduction in services⁴². The reforms to the federal pricing mechanisms did cut the growth rate of expenditures significantly soon after their introduction, but they have proved to be less effective in limiting the long-run rate of increase.

Health care costs and the trade-offs between cost, quality and coverage will continue to be an issue for the United States. In terms of regulating private insurers, policy makers face a real dilemma. On the one hand, there is the demonstrable case that fee-for-service plans generate wasteful spending on care. On the other hand, managed care providers have strong incentives to limit services, and consumers often have little say in the health services they receive. There is a case for some regulation with a recognition that limiting services can yield efficiency gains⁴³.

In terms of reforming public health insurance, the ageing population will increase pressures for cost containment. Few of the modifications to date will lower the long-term growth rate in costs (OECD, 1997). There are some additional reforms the government can implement without changing the basic nature of the Medicare and Medicaid programmes. Congress could expand competitive bidding in rate setting, and could integrate programmes to make them more cost effective. Others have proposed dramatically increasing the share of managed care providers as a way to control costs. A commission is now studying proposals for long-term reform of Medicare and will report to Congress in 1999.

CHAPTER 2

Government capacity to assure high quality regulation in the United States

60. With the introduction of competition into most previously regulated sectors of the economy, a key challenge for regulatory reform in the United States is improving the cost-effectiveness of social regulations so that they deliver the optimal level of regulatory protections with the best possible use of the country's resources. This requires not only more attention to regulations and primary laws, but development of more flexible and market-oriented instruments in a wide range of policy areas. Reduced economic intervention could, in fact, lead to pressures for more social regulation to protect public interests in new markets, emphasising the importance of this dimension of reform.

The United States places more emphasis on the cost-effectiveness of social regulations than do most countries.

Social regulations impose direct costs 3 to 4 times higher than costs of economic regulations, and deliver more benefits.

61. Today, the United States is rare among OECD countries in focusing on improving the quality of social regulations as the main objective of regulatory reform. This is rational, since estimates of regulatory costs and benefits suggest that social regulations impose direct costs 3 to 4 times higher than costs of economic regulations, and that social regulations, if well designed and targeted, can deliver substantially more benefits to citizens (OMB, 1998).

Improving their quality has proven to be a difficult and long-term task.

62. Improving the quality of social regulations has proven to be a difficult and long-term task. Attempts to impose quality controls on the use of delegated regulatory powers in social policy areas began in the 1970s "in reaction to the explosive growth of new regulatory programs" of the 1960s and 1970s.⁴⁴ By the mid 1970s, over 100 federal agencies were issuing economic and social regulations in areas such as health, safety, housing, agriculture, labour contracts and working conditions, environment, trade, and consumer protection.

The balance of federal action has shifted from "regulatory relief" under Reagan to the Clinton philosophy of "regulatory quality".

63. Each President since the early 1970s has attempted to control the costs of the expanding federal regulatory state and to carry out policies more cost-effectively, while at the same time supporting the establishment of major new regulatory programmes. The balance of action has shifted from "regulatory relief" under Reagan to the Clinton philosophy of "regulatory quality" (Clinton, 1993).

Social regulations can yield large net benefits, but only if they are high quality, that is, produce net benefits at lowest cost over time.

The potential benefits of federal regulation, considered in the aggregate, are increasing.

64. The ultimate measure of the worth of a country's regulatory system is whether it increases or reduces the quality of life. If net social benefits increase over time, the regulatory system can be said to be increasing in quality. Measured in that way, the quality of federal regulation, considered in the aggregate, is probably improving.

Direct costs of federal regulation appear to be around 10 percent of GDP...

...and social regulations may, in aggregate, produce more benefits than costs...

...while economic controls reduce social welfare.

These estimates miss the indirect and dynamic effects of regulation, which are potentially large for both costs and benefits...

...but the shift from economic to social regulation has improved the potential social benefits of federal regulation.

65. Some studies suggest that federal social regulation costs several hundred billion dollars annually, but produces even greater benefits. The total direct costs of regulation and paperwork appear to be on the order of 10 percent of GDP, with considerable uncertainty on either side. Recently, the office of the President reported to Congress that:

- Federal regulations related to the environment, safety, and health and other social policies impose direct costs of between \$170 billion to \$224 billion per year, and produce between \$258 billion to \$3.55 trillion in annual benefits (the huge range in benefits estimates is due to considerable uncertainty about the impacts of the 1990 Clean Air Act) (OMB, 1998).
- As noted in Chapter 1, economic controls on entry and prices cost \$70 billion each year, and probably reduce social welfare.
- Other sources estimate the annual costs of federal paperwork for citizens and businesses at around \$230 billion (Hopkins, 1996 and 1995). Federal data suggest that compliance with federal paperwork requires the full-time equivalent of 3 million private-sector employees.

66. Such benefit and cost estimates are uncertain due to what OMB calls “enormous data gaps” and “a variety of estimation problems”⁴⁵ (Hahn, 1998a), and more complete data could reverse these conclusions. For example, indirect beneficial effects that result from better health and longer lives are not included, but may be large. Also, estimates of direct costs understate the full costs of regulations, because they miss impacts on productivity and welfare, and dynamic effects such as lost opportunities to create wealth. These effects can be very important for macroeconomic performance. Social regulations appear to have substantial impact on investment levels and innovation in industrial processes⁴⁶, modest adverse impacts on productivity,⁴⁷ but little effect on overall economic competitiveness.

67. Despite their weaknesses, these estimates suggest that the shift since the 1970s from economic regulation to social regulation, together with the investments in quality control of social regulation, has greatly improved the potential benefits of the regulatory system as a whole, since social regulations are, in aggregate, more likely to produce net benefits.

68. The United States is the only country to have seriously examined the aggregate costs and benefits of regulations. Though flawed, these aggregate estimates are a large advance in understanding the costs and benefits of regulatory activities, and work is underway in OMB and elsewhere to improve them.

Box 2.1 The judiciary in US regulation

No discussion of US regulation would be complete without acknowledging the role that the courts play in regulatory decisions. Issues that in other countries would be resolved through management and dialogue are resolved in the United States by the courts. "The courts have played a profoundly important role in setting the limits of congressional, presidential, and even judicial influence over regulatory policy-making in the agencies...the courts are empowered to hear variety of challenges to regulatory decisions, ranging from the delegation of authority to agencies by Congress to the legality and fairness of agency dealings with individual regulated parties."⁴⁸ Legal challenges to major regulations are the norm rather than the exception.

The role of the courts in providing an alternative to regulation is also important. In the US, private legal actions complement the fragmented regulatory system, which can have several advantages. It can *deter* socially undesirable behavior without unnecessarily pre-empting private initiative. It probably reduces regulatory costs and the need for direct government oversight. As a system to compensate victims, it may be more precise than broader social safety nets in other OECD countries.⁴⁹

An assessment of the impact of the courts on regulatory quality is beyond the scope of this review, but it is fiercely debated. Wide opportunities to challenge regulatory decisions before the courts on procedural and substantive grounds in theory enables regulated citizens to challenge and hold accountable the regulatory powers of the government, but also can reduce regulatory innovation and responsiveness, while increasing uncertainty and costs.

As a mediator of social conflict, the US tort system has attracted heavy criticism. The US legal industry is larger than the domestic auto and steel industries. High legal expenses and the risk of potentially large punitive damage awards in liability cases are claimed to increase business costs unnecessarily and discourage innovation and risk taking. The OECD cited evidence that the number of civil cases increased by four-fold between the 1960s and the 1980s and their total cost have risen to 2.7 per cent of GDP, four to five times the levels found in the rest of the OECD (OECD, 1993).

But the quality of individual social regulations varies widely, and many regulations produce more costs than benefits.

Yet many social regulations are not cost-effective. There appears to be the potential for very large gains from further regulatory reform.

69. The second key question is whether a country's regulatory system produces the highest possible level of benefit from the resources used to reach regulatory objectives. That is, are regulations cost-effective? For most US social regulations, the answer is probably no. Data at the micro-level suggest that there are substantial inefficiencies, and the potential for very large gains from further reform.

More than half of federal regulations fail a benefit-cost test.

- Research on 106 federal regulations showed that just two rules (automatic restraints in cars and lead reductions in gasoline) produced over 70 percent of total net regulatory benefits, and that more than half of federal regulations fail a strict benefit-cost test, using the government's own estimates (Hahn, 1998b). The study suggested that net benefits could be increased by \$115 billion simply by eliminating those rules that failed the benefit/cost test.

Redirecting regulatory activities away from low-priority to high-priority issues would have enormous payoffs.

- The cost-benefit ratios of different regulations differ greatly. For example, safety and health regulations aimed at reducing fatality risks have saved lives at costs ranging from \$10,000 to \$72 billion per life saved (Morrall, 1986; Viscusi, 1992 and 1996). Redirecting regulatory activities from low-priority to high-priority issues would have enormous payoffs in terms of delivering benefits at lower cost.

Re-targeting safety and health regulations could avoid 60,000 deaths each year without increasing regulatory costs.

- A recent study found that if existing regulations were re-targeted at those health and safety risks where lives could be saved at lowest cost, some 60,000 more deaths could be avoided each year without increasing regulatory costs⁵⁰ (Teng and Graham, 1997). Hahn (1996) concluded that: “[T]he differences in cost-effectiveness across regulations suggest that there is significant potential for achieving much greater risk reduction at a lower cost to society.”

Legalistic and adversarial styles have produced more complex, detailed and inflexible regulations than those in many other countries

Complex, detailed, and inflexible federal regulations undermine the results and raise the cost of policies.

70. One reason why much US regulation is not cost-effective is that legalistic and adversarial administrative styles produce more complex, detailed, and inflexible regulations than those in other OECD countries. This undermines the results and raises the cost of policies.⁵¹ Economists have noted that “many of the laws Congress has passed call for highly prescriptive and often excessively costly regulation” (Crandall *et. al.*, 1997). Regulations that mandate specific technologies, rather than set standards and allow industry to develop least cost methods of achieving them, are common. Superfund regulations on cleaning up toxic waste sites and corporate average fuel economy standards for cars are often cited as regulations whose costs vastly exceed benefits. Problems have been identified with coherence and consistency, both horizontally across the US government and vertically in federal/state relations.

A vicious cycle is seen: disappointment with regulatory performance produces demands to “tighten up” standards, which further worsen the problems of complexity and rigidity.

71. A study of nursing home regulation found that the United States has adopted over 500 federal standards, supplemented by state standards. Australia has adopted 31 broad results-oriented standards. Yet the Australian standards produce the best results and best compliance, and by a very wide margin. Pursuit of reliability in US regulations produced so much complexity and detail that policy performance declined. A vicious cycle appeared: disappointment with regulatory performance produced demands to “tighten up” standards, which further worsened the problem of complexity and rigidity (Braithwaite, 1993).

The regulatory process itself has become so encumbered and burdensome that regulatory problems are difficult to fix.

72. The regulatory process itself has become so encumbered and adversarial that even commonly-recognised regulatory problems are hard to fix. A presidential inquiry found that a federal agency needed an 18-foot chart, with 373 boxes, to explain the rulemaking process, and “this process was not unusually complex” (Gore, 1993). Producing new regulations or revising old ones often requires several years. Judicial review is routine for important regulations, increasing uncertainties and delays and encouraging risk-avoidance in the administration.

The US government has tackled some of these problems by steadily improving its capacities to produce high quality social regulations.

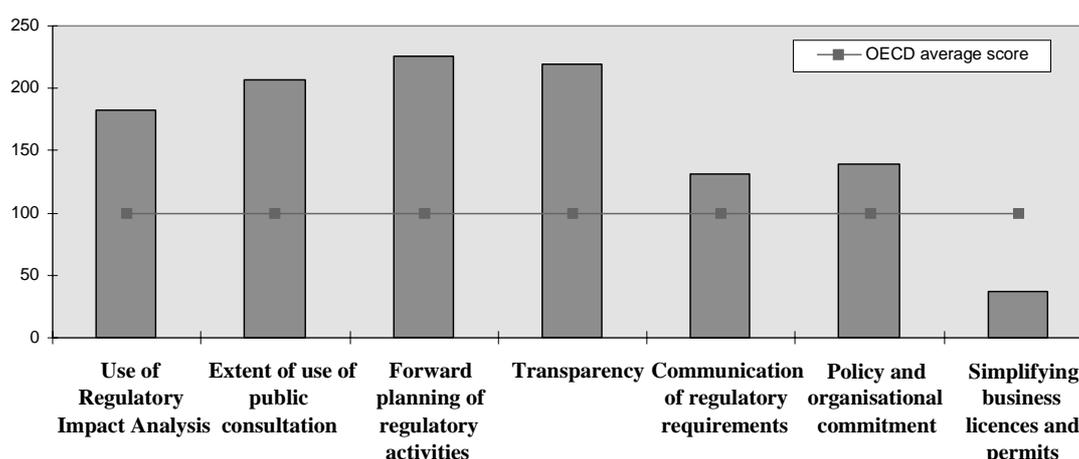
A major programme of regulatory quality control has steadily increased attention to these problem, and is good framework for further progress.

One lesson to be learned is the value of persistence, policy stability, and political support over the long term.

73. Within the constraints of the federal policy process, the capacities of the federal government for improving the quality of social regulation are among the best in OECD countries (see Figure 2.1) and establish a sound framework for further progress. In fact, an important measure of success is that, unlike in many countries, regulatory problems are sufficiently transparent and well-defined to support specific remedies. Critical regulatory quality controls in place are summarised in Box 2.2.

74. An impressive element of reform is the steady effort over 20 years to improve analytical capacities and acceptance of the benefit-cost principle within regulatory agencies. The lesson to be learned is the value of persistence, policy stability, and political support over the long term in embedding new ways of thinking into bureaucracies.

Figure 2.1: Indicators of strengths and weaknesses in the US regulatory system
(These synthetic indicators measure US scores against the OECD average, measured as 100)



Explanation: These indicators measure the formal aspects of national regulatory reform policies. They do not directly measure the intensity and effectiveness of application of those policies, and hence may not be a good proxy for results.
Source: Public Management Service, OECD, based on information from OECD countries, March 1998.

A key strength is a high level of transparency. Consultation is open and inclusive, some problems merit attention.

"Notice and comment" procedures increase the quality of policy by reducing the risk that special interests will have undue influence.

75. Transparency of regulation is essential to an environment that promotes competition, trade, and investment. The primary mechanism for transparency in the United States is a standardised system of public consultation as regulations are developed and revised. The Administrative Procedure Act of 1946 establishes a legal right for citizens to be consulted, and mandates minimum procedures. These "notice and comment" procedures create open channels for public discussion, and increase the quality and legitimacy of policy by reducing the risk that special interests have undue influence. The procedure is simple in theory:

- An agency publishes a proposed rule in the Federal Register (the federal gazette). The regulatory impact analysis is summarised.
- The public is usually given at least 30 days to comment in writing. The agency must consider any comments received. All comments are made public in a formal rulemaking “record”.
- When an agency publishes a final rule, it must explain its factual and legal basis, and how it dealt with the public comments.

Yet public consultation tends to be adversarial and procedural, rather than an attempt to communicate and find solutions.

76. Notice and comment has resulted in an open and accessible regulatory process consistent with international good practices. That said, serious problems with consultation are rooted in the legalistic and adversarial tendencies of the US regulatory system. Notice and comment has tended to develop into a formalistic process that prevents rather than promotes dialogue, co-operation, and communication. It can resemble court proceedings, more focussed on legal procedure than finding efficient solutions. An inquiry by Al Gore noted that even before the comment period, agencies had sometimes already made their decisions.⁵²

The key task is to marry a high level of transparency with development of a less adversarial and more efficient system for consultation.

77. The key task is to marry a high level of transparency with development of a less adversarial and more efficient system for consultation. A thorough reassessment of the notice and comment process and of the effects of administrative procedures is needed. Panels of interested citizens have been successfully used in other countries as a supplement to other forms of consultation, though their use in the United States is hampered by inflexible statutes. Communication through the Internet has the potential to transform access to decision-making, and even within the current system has already increased participation.

Box 2.2. Managing regulatory quality in the United States

Ensuring regulatory transparency:

- A public forward planning system for regulations allows citizens “to be a well-informed participant in the regulatory matters that affect your life,” according to Vice-President Gore.⁵³ The comprehensive Unified Agenda of Federal Regulatory and Deregulatory Actions is published twice a year, while the Regulatory Plan is published annually as a statement of the Administration’s regulatory policies and priorities.
- When draft regulations are proposed, the “notice and comment” process permits open and accessible consultation that allows all interested voices a chance to be heard.
- Once a regulation is adopted, it is easily accessible to affected entities. Final regulations are indexed and published in the consolidated Code of Federal Regulations, which is also available on-line on the Internet.

Promoting regulatory reform and quality within the administration

- Reform policies are established directly by the President on the basis of his executive authority. The Vice President is identified as the principal advisor to the president on regulatory policy, planning and review.
- Day to day centralised oversight and quality management is conducted by the Office of Management and Budget, which is well resourced and located at the very centre of government. The OMB has a strong co-ordination, reviewing, and reporting role in relation to regulatory reform.

Adopting explicit standards for regulatory quality

- President Clinton's 1993 executive order requires regulators to identify the problem to be addressed and assess its significance, identify and assess alternatives to direct regulation, design regulation in the most cost-effective way, regulate only upon a reasoned determination that benefits justify costs, avoid regulations that are inconsistent or duplicative with other regulations, and draft regulations to be simple and easy to understand.

Assessing regulatory impacts

- A federal RIA programme, in place since 1981, requires assessment of benefits and costs against several key threshold, cost-effectiveness, and benefit-cost principles. Analysis is carried out by the agencies, and OMB provides quality assurance. A separate assessment of small business impacts is required by law.
- The Congressional Budget Office carries out analysis of costs of bills for purposes of Congressional debate, under the Unfunded Mandates Reform Act of 1995.

Toward accountable and results-oriented regulation

- The 1993 National Performance Review (NPR) aims to "to create a government that works better and costs less" The Review recommended reforms that are similar to best practices accepted by OECD countries, including use of more innovative approaches to regulation, and consensus-based rulemaking.
- Government Performance and Results Act of 1993 requires government departments to prepare strategic plans that identify, among other issues, mission statements, strategic objectives, and performance measures. Among the performance measures set out by regulators in 1999 are commitments by the Labour Department to reduce fatalities in the construction industry by 3 percent, and by the Food and Drug Administration to assure that 40 percent of domestic produce is grown and processed using good practices to minimise dangerous contamination.

Mechanisms to promote regulatory quality within the public administration are strong.

To promote regulatory reform, both the president and the Congress carry out strong oversight.

78. Mechanisms to promote reform inside the administration are needed to maintain policy coherence and keep reform on schedule. Both the president and the Congress carry out strong regulatory oversight, the president through a central office accountable directly to him, and the Congress through oversight committees, and investigations by its agencies such as the Congressional Budget Office.

The role of the Office of Management and Budget is among the most powerful of the central oversight bodies in any OECD countries.

79. Competition between president and Congress for influence over regulatory decisions has contributed to the emergence of an unusually centralised and hierarchical process for regulatory quality control. The role of the Office of Management and Budget (OMB) within the Executive Office of the President is among the most powerful of the central regulatory oversight bodies in any OECD country. Well resourced, expert, and located at the very centre of government, OMB is responsible for reviewing the cost-effectiveness of major regulations, and for management tasks of government closely linked to regulatory reform, including preparation of the President's budget and legislative review. Direct participation by OMB in these policy processes gives it the capacity to be effective in promoting broad-based reform across the administration. Its dependence on strong presidential support to stop poor regulations supported by the line departments is evidence, however, that administrative processes cannot substitute for strong political leadership.

Regulatory oversight by the Congress is increasing, but the effects on regulatory quality are unclear.

The United States was the first country to adopt broad requirements for benefit-cost analysis for regulations.

Quantitative benefit-cost analyses are prepared for over 90 percent of major social regulations, but only 18 percent of major economic regulations.

US experience shows that RIA, when well prepared, helps increase the net social benefit of regulations.

Yet substantial weaknesses in the quality and completeness of the analysis contribute to wide variance in the quality of federal regulations.

80. Regulatory oversight by the Congress is increasing. Recently, it has passed laws requiring that regulations be tabled in the Congress for scrutiny and that costs of new laws on state and local governments and the private sector be assessed. The effect of these new mechanisms on regulatory quality is not yet clear.

The use of regulatory impact analysis as an input to decisions is more widespread and rigorous than in other OECD countries.

81. The OECD Report on Regulatory Reform recommended that governments “integrate regulatory impact analysis (RIA) into the development, review, and reform of regulations.” The United States was the first country (in 1981) to adopt broad requirements for benefit-cost analysis (Jacobs, 1997) and is still one of only a handful of countries to use a benefit-cost test. Such a test is the preferred method for considering regulatory impacts because it aims to produce public policy that meets the criterion of being “socially optimal” (i.e., maximising welfare).

82. The high priority placed on regulatory analysis reflects a belief that regulators are not truly accountable to the electorate unless the consequences -- the social benefits and costs -- of their actions are known. Today, quantitative benefit-cost analyses are prepared for over 90 percent of major social regulations, but only 18 percent of major economic regulations. (OMB 1998, p. 44049). OMB provides quality control and guidance for these analyses. RIA has only recently been prepared for primary legislation as part of Congressional processes under the Unfunded Mandates Reform Act of 1995, and its value in improving the quality of primary legislation has yet to be proven.

83. Evidence is building that RIA, when well prepared, helps increase the net social benefit of regulations. In 1987, EPA analysed its experience with RIA in 15 cases and concluded that a \$10 million expenditure on RIA had reduced the costs of rules by \$10 billion, or a benefit/cost ratio of 1000 to 1. The General Accounting Office found in 1998 that that, out of 20 RIAs, 12 were used to identify the most cost-effective approaches and that several others helped define the scope and timing of implementation (GAO, 1998).

84. Yet weaknesses in the quality and completeness of the analysis contribute to wide variance in the quality of federal regulations. In 1997, OMB reported that, out of 41 regulations, only in eight cases did agencies provide monetized benefits estimates, while cost estimates were presented in 16 cases. Hahn (1997) found that in fewer than 20 percent of RIAs were benefits monetized and shown to justify costs. His analysis found important inconsistencies -- within and between agencies -- in assumptions and methodology. These included the use of different discount rates, the failure to present BCA in net present value terms and wide variations in assumed benefits for reduced death and injury rates. It also seems likely that the multiple assessments now required -- benefit-cost analysis, small business analysis, paperwork analysis, and unfunded mandates analysis -- are fragmenting efforts and reducing analytical quality overall.

Despite efforts to spur innovation, the federal regulatory system lags behind in flexible and market-oriented regulatory approaches.

Lagging regulatory innovation and sluggish responsiveness in social regulation impose a hidden drag on economic performance.

85. Many countries are expanding use of innovative policy instruments that are flexible and market-oriented. These approaches spur, rather than block, innovation and adjustment in the economy. One of the anomalies in American regulation is that positive social views toward competition have not led to a greater use of market-based approaches to problem-solving. Market approaches have been recommended for years, most recently by the Vice President's National Performance Review. However, US regulation is less innovative than that in other OECD countries. Only one national system of marketable permits for air emissions exists, though the benefits of the approach are well-documented. Other countries use taxes to restructure incentives to a much greater extent than does the United States, suggesting missed opportunities for cost-effective action. Voluntary approaches have been hampered by inflexible statutes.

Innovation has been blocked by legalistic styles, risk-avoidance, and cumbersome procedures.

86. Efforts to expand the use of innovative instruments have been hampered by legalistic styles, risk-avoidance, and cumbersome procedures, combined with weak accountability for regulatory results, that discourage experimentation and learning. Initiatives include:

- A pioneering law -- the Performance Management and Results Act of 1993 -- should strengthen incentives to innovate to improve program results. The Act requires regulators to establish concrete performance measures and annual plans.
- Another good practice is to better use the states as testing grounds. A 1998 agreement⁵⁴ gives the states greater scope to implement innovative ideas for achieving better environmental outcomes. More attention to good practices in other countries could also spur regulatory innovation.
- General rules⁵⁵ for local air-pollution-permit trading were proposed by the EPA to speed up use of emissions trading by the states.

Innovation will be boosted by increasing attention to policy results, using the states as testing grounds, and learning from other countries.

At the heart of the most severe regulatory problems is the quality of primary legislation.

Poor quality laws limit, and threaten to reverse, the benefits from regulatory reform.

87. At the heart of the most severe regulatory problems in the United States is the quality of primary legislation. The trend toward higher quality in delegated regulation in the administration cannot be seen in the quality of primary legislation in the Congress. This limits, and threatens to reverse, the benefits from regulatory reform. Strikingly, major laws, such as the Clean Air Act, prohibit regulators from using good decision practices. Innovation and the development of more cost-effective policy approaches are often blocked by rigid legislation. Rational priority-setting is difficult. The Environmental Protection Agency "is hobbled by overly prescriptive statutes that pull the agency in

too many directions and permit managers too little discretion to make wise decisions," concluded a recent report of the National Academy of Public Administration.

Perversely, there is less attention to quality of laws than to decisions authorised by the laws.

88. More so than in other OECD countries, the United States has found it extremely difficult to improve legislative quality and coherence. This is partly structural, arising from the constitutional balance of powers between the executive and the legislative. And, unlike parliamentary systems, bills originate from many sources. The result is that there is less attention to quality of laws than to decisions authorised by the laws.

Members of Congress should become consumers of information on the downstream consequences of legislative decisions.

89. Recent reforms, such as the legal requirement that the Congressional Budget Office estimate the costs of proposed legislation and "unfunded mandates" on state and local governments, are positive. But if it is to have value, the Congress will have to integrate such information in its deliberations. Current proposals to establish a new congressional agency to study the costs and benefits of regulations could improve the attention of the Congress to the downstream consequences of its legislative decisions.

The most important determinant of the scope and pace of further reform is the attitude of the Congress.

90. In the end, it will be the management of a more results-oriented relationship between the executive and the legislative that will determine the scope and pace of regulatory reform in the United States. Without genuine progress at the legislative level in placing accountability on results and in encouraging risk-taking and policy innovation, it is doubtful that the executive branch can make substantial additional progress in improving the quality of delegated regulations, or can even preserve the progress that has been made. Yet Congressional incentives to relinquish control over how policies are carried out in return for more accountability for policy results are not strong.

CHAPTER 3

The Role of Competition Policy and Enforcement in Regulatory Reform

91. A robust competition policy is one of the pillars of regulatory reform, the OECD Report on Regulatory Reform concluded. Competition principles provide a market-oriented policy framework to guide reform, and competition policy can be a better alternative to economic regulation to protect consumer interests. US experience in sectoral regulation described in Chapter 1 vividly demonstrates the positive interaction between regulatory reform and competition policies.

Competition principles provide a market-oriented framework for regulatory reform in the United States.

Competition principles are woven tightly into the legal framework for regulation, and are backed up by strong watchdog institutions.

92. Regulatory reform in the United States is market oriented, consistent with the pervasive competition doctrine underlying the Federal use of regulatory powers. Competition principles are woven tightly into the legal framework for regulation, and are backed up by strong watchdog institutions. Where regulation has impaired competition, the legal and policy foundation for reform is already present. This has provided reforms of economic regulation, ad hoc though they may be, with a stable long-term policy framework that adds coherence, legitimacy, and credibility to reform. This is one of the key reasons why the United States started earlier and moved faster with regulatory reform than did many countries.

Box 3.1. The roots of competition policy in the United States

Government support for competition in the marketplace was formalised in the first national competition laws, the 1887 Interstate Commerce Act and the 1890 Sherman Act, which created federal powers and institutions to apply principles derived largely from common law. The Supreme Court called the Sherman Act “a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade,” resting on the premise that “the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress, while at the same time providing an environment conducive to the preservation of our democratic political and social institutions.”⁵⁶

US competition policy aims to promote consumer welfare, protect the competitive process, and enhance economic efficiency.

93. The US concept of competition policy is basically economic, though there are complexities and occasional contradictions in objectives. Its principal aims are to promote consumer welfare, protect the competitive process, and enhance economic efficiency, aims also pursued through regulatory reform. Its underlying principles assert that:

- Consumer welfare is improved by greater variety, higher quality, and lower prices, and is protected by eliminating restraints that reduce the impact of consumer preference in setting price and output.
- The competitive process is protected by preserving static and dynamic conditions that discourage collusion and permit efficient entry and innovation.

- Efficiency is promoted as competition forces firms to lower costs and respond to market signals.

Laws and enforcement capacities are strong, and provide credible assurance that public interests will remain protected in the absence of economic regulation.

The United States has strong competition institutions and enforcement capacities, but they share the US regulatory habits of complexity, duplication, and legalism.

94. The United States has strong, well-established enforcement institutions, and so many enforcement methods that maintaining co-ordination and consistency among them is a continual challenge. The two enforcement agencies -- the Antitrust Division of the Department of Justice and the Federal Trade Commission -- are both staffed by lawyers and economists, both combine policy expertise and prosecutorial duties with political accountability (achieved in different ways), and both implement competition policy by applying general principles case by case. The duplication has not historically led to conflict, as the two agencies have managed to avoid duplication and forum shopping. But co-ordination of policies and actions imposes costs.

Crucially, transparency is high, and enforcement decisions do not appear to depend on political influence.

95. Due to institutional independence, a strong tradition of professionalism, and judicial oversight, enforcement decisions do not appear to depend on political influence. Both agencies publicise decisions to initiate actions. Final decisions from the courts or the Commission are almost always accompanied by detailed explanations. But there are concerns that, when the agencies settle a case without a trial, public explanations give little guidance on how doctrines are developing. In some respects, notably concerning the time and expense of their procedures, the agencies' own regulatory process may be improved. Unnecessary delay has long been a concern about competition cases.

Judicial review provides a constant process of defining and balancing the roles of competition policy institutions and regulators.

96. Competition policy illustrates the important role of the courts in establishing and coordinating national regulatory policy. The meaning of the basic competition laws is determined principally by a common-law process in which courts are the highest authorities. The courts also play important roles in interpreting the laws that establish regulatory programs. The mediating role of the judiciary helps keep US competition policy coherent, despite multiple participants and laws. Judges may be required to acknowledge and accommodate many objectives and effects of different legal aims. The result is a constant process of defining and balancing the roles of competition policy institutions and those responsible for economic and social regulation. The increasing influence of judges with an economic perspective has reinforced the economics-oriented antitrust policy of the last 20 years.

But involvement of many different regulators and other bodies in implementing competition policy may increase uncertainty and inconsistency.

97. The breadth of support for competition principles has diffused responsibility for implementation. Because so much US economic policy is based on competition, many different regulators and other bodies, in both federal and state governments, implement competition policy. Such wide diffusion risks weakening competition policy by increasing uncertainty. Duplication and second-guessing are virtually inevitable. Resources expended on co-ordination could be better applied to analysis and enforcement.

Competition enforcement policies are stringent, credible and well-designed to deal with potential market abuses in the aftermath of regulatory reform.

Anxiety about reform and deregulation has been to some extent overcome by the credibility of competition law enforcement.

98. Competition enforcement tools are among the most stringent in OECD countries. Anxiety about reform and deregulation has been to some extent overcome, by the credibility of competition law enforcement. Agreements among competitors about the critical competitive dimensions of price and output can be treated as crimes, subject to felony penalties of high fines and imprisonment. The effect or reasonableness of the prices or market divisions agreed on is not relevant; such agreements are illegal *per se*. Other kinds of horizontal agreement may also be illegal, but their legality depends on the outcome of the “rule of reason” test, that is, on a review of net competitive effects. Sanctions for violation are unusually harsh, a factor that may be a potential handicap when applied to conduct that had been permitted, or even required by other government regulation. High penalties encourage claims for exemption, special treatment, or even regulation as a substitute for competition enforcement. Recognising the risk of disproportion, the agencies have brought most actions against horizontal constraints in regulatory settings as civil, not criminal, cases.

Box 3.2. Competition policy and enforcement support regulatory reform

The law on horizontal agreements has often been used to ensure that deregulated industries become competitive. After airline deregulation, executives attempting to fix prices were indicted.⁵⁷ Another suit stopped concerted practices by which airlines tried to establish or maintain price agreements by signaling through computer networks.⁵⁸ Tariff bureau agreements about trucking rates were challenged as horizontal price fixing.⁵⁹ A non-compete agreement between cable TV firms was challenged as market division.⁶⁰

Self-regulation has been a particular target. Competition law has been used to break down “ethical” constraints that professionals and other service providers have imposed on themselves, typically via their trade associations. The seminal action was the Federal Trade Commission’s successful complaint against the American Medical Association for banning price advertising and contracting practices.⁶¹ Scores of other actions followed.

Concerning vertical relationships, state-level regulations mandating exclusive sales territories or protecting dealers and franchisees against contract partners or competitors have been challenged. In health care markets, competition enforcers have sued to eliminate price protection clauses where their net effect may be to discourage entry and price reductions. And agency advocacy has criticised proposals to force medical coverage plans to admit “any willing providers” as contract parties, because the requirement is likely to dampen competition for lower prices.

Mergers are handled flexibly so that competition authorities can tailor their actions to the market structures of different sectors.

99. Mergers are handled flexibly so that competition authorities can tailor their actions to the market structures of different sectors. Mergers and combinations, including joint ventures and open market acquisitions, are covered by the Clayton Act. In part because the statutory test is phrased explicitly in terms of competitive effect, merger law is perhaps the purest expression of the economics-based approach to competition policy. Markets are defined based on data about actual and likely cross-elasticities and substitution responses. Assessment of likely effect depends critically on the long-term significance of entry. Possible entry by a firm that could exit quickly, at no cost, is treated differently than possible entry by a firm that would have to commit sunk resources.

Different treatment of entry can be significant in regulatory settings. Hurdles faced by a “facilities-based” competitor could be higher than those faced by a reseller of an incumbent’s basic service.

Access to essential facilities has been enforced in network industries. 100. In network industries, law enforcement has ensured access to “essential facilities” in regulatory settings such as telecommunications and electric power (see Box 3.3).

Box 3.3. Competition enforcement to restructure network monopoly

A Sherman Act monopolisation case, filed in the 1970s, restructured the national telephone system. The consent decree issued in 1982 separated manufacturing, long distance, and local service operations. The basis for the action was the incumbent monopolist’s efforts to exclude competitors in equipment and long distance services. The judge considered public comments about how the proposed divestiture would affect other regulatory requirements, including the responsibilities of state-level regulators.⁶² But the consent decree led to prolonged, continued controversy, about the respective competences of the judge, the Antitrust Division, and the sectoral regulator to implement further reforms in telecommunications.

Private litigation has played a significant role in regulatory reform but this is not a substitute for determined government action. 101. Private litigation has played a significant role in competition policy and regulatory reform by supplementing government enforcement. Private enforcement, through suits for treble damages or injunctions, has been available since 1890. But the cost and uncertainty of private litigation mean that this is not a substitute for determined government action. Treble damages and attorneys’ fees awards were included in the law to compensate for the high cost and risk of taking on a firm that is often the plaintiff’s supplier or major competitor. However, now that class actions are available to aggregate many small claims, and criminal fines have greatly increased, it may be worth reconsidering whether awarding exemplary damages in antitrust cases is still a sound policy.

Box 3.4. Private litigation and regulatory reform

Private litigation played a significant role in deregulating professional services. The landmark case of *Goldfarb v. Virginia State Bar* applied the antitrust laws for the first time to the professions. The Supreme Court held that minimum fee schedules for lawyers, adopted by a county bar association and enforced through disciplinary action by the state bar, constituted private, anti-competitive activity. This decision opened the way to private litigation and government enforcement challenging restrictions on professionals’ business practices.

Enforcement is complemented by strong advocacy by competition authorities to promote regulatory reform.

102. US competition agencies have been unusually active in promoting competitive, market methods and outcomes in policy- and regulatory processes. Their advocacy contributed to the first major deregulation successes in airlines and natural gas and continued with trucking, communications, broadcasting, and electric power. Advocacy interventions in recent years have included:

- Price and rate regulations affecting long distance telephone service, liquor distribution, and marine pilotage.

- Entry in such contexts as allocation of airport landing and take-off privileges, certified public accounting, local multipoint telephone and video distribution services, automobile sales, and conveyancing.
- Output regulation such as television's prime time access rules, must-carry rules for television retransmissions by satellite and open video system, and restrictions on collision damage waivers for automobile rentals.
- Limitations on forms of practice, such as rules against commercial relationships by optometrists and veterinarians with non-professionals and against linkages between cemeteries and funeral establishments.

103. The level of advocacy activity declined in the 1990s, probably because the easier battles at the federal level have been won. Today, the Antitrust Division concentrates advocacy almost entirely on federal agencies and departments, while the FTC addresses about half of its efforts to state and local issues.

Competition policy is closely integrated with consumer policy, reinforcing a virtuous circle of market initiative and openness.

Dealing with both competition and consumer protection in the same organisation allows closer integration of the two complementary policies.

104. Antitrust and consumer protection policies are complementary tools for achieving the benefits of market competition, and the FTC is responsible for both policies. The general competition law is intended to ensure that markets provide consumers with an appropriate range of options, while the general consumer protection law is intended to ensure that consumers can select freely and effectively from the options offered in the market. Having both responsibilities in the same organisation allows closer integration of the two complementary policies.

Application of competition principles has sometimes been undermined by conflicting regulatory policies exempted from competition law.

Many special industry rules, sectoral regulators and exemptions constrain application of the competition laws.

105. In the US legal system, competition policy often enjoys priority over regulatory policies. Exercise of authority by another regulatory body will not usually displace competition law. If Congress wants to exempt conduct from competition law or apply special rules, it must say so clearly. It has done so, often. A surprisingly large number of special industry rules, and sectoral regulators and exemptions constrain application of the basic competition laws.

Some sectoral regulatory programs harmonise reasonably well with general competition laws, but some fall short.

106. Most national regulation that fixed prices, limited output, reduced quality, divided markets or constrained entry has been eliminated. Many of the remaining sector-specific agencies apply competition policies consistently with the competition agencies. But there is room for more progress. Remaining differences in treatment may not be clearly justified by compelling public interests. The transport sector offers several examples (see Box 3.5). Trucking has been free of nearly all economic regulation since 1995, when Congress pre-empted the

remaining state-level regulations. But pockets of regulated immunity remain, the most troublesome being the exemption and economic regulation of household goods removal. There was concern that reform would leave the industry's consumer protection rules unenforceable. But protecting consumers does not require permitting movers to agree not to compete. Industry collusion may mean that individual consumers, lacking the information or bargaining power of larger customers, may receive poorer service or pay too much.

Box 3.5. Sectoral problems with special merger authority

Deregulation of air transportation was a success of competition-based reform. The government-enforced cartel was dismantled in the late 1970's and the regulatory agency was abolished in 1985. But the Department of Transportation (DOT) retained exclusive jurisdiction over mergers among domestic airlines until 1989. DOT approved essentially all of the transactions it reviewed, apparently under the belief that new entry would prevent any exercise of market power. Economic studies have shown that, where these combinations led to eliminating rivals and higher concentration at several hub airports, prices were significantly higher because passengers had fewer choices.

The rail freight system has been substantially deregulated since 1980. But the Surface Transportation Board retains authority over mergers, and it has power to correct complaints about railroads' exercise of market power. In 1996, STB approved the largest merger in US rail history, between two of three major railroads in the western United States. The Antitrust Division urged the STB to reject the merger, because the divestitures required to fix the threats to competition would not be worth the effort. But STB approved the merger with minor conditions. Within a year, severe and persistent operating problems and capacity limitations developed on the merged system. The STB apparently believed that its own regulatory interventions could remedy market power problems. But STB's actions in response to the crisis were tentative, and did not solve the problems.

These failures show the hazards of fragmenting competition policy enforcement among sectoral regulators. As fundamental changes in the deregulated industries attracted new entrants, stimulated reorganisations, forced bankruptcies, and invited new combinations, concerns over the long-term implications of restructurings are heightened. Oversight would probably be better performed by the agency with broader background and perspective.

Where regulatory programs co-exist with general competition laws, introduction of competition principles appears to be proceeding better.

107. In other sectors, notably energy and telecommunications, regulatory programs have co-existed with the application of general competition laws. And in those sectors, the introduction of competition principles through the regulatory process appears to be proceeding better. The courts have instructed the regulators to include competition policy in their application of regulatory statutes. Congress has also supported the move toward deregulation, and the competition agencies have encouraged these moves, offering advice and assistance.

108. Special rules about other sectors show more complex relationships. In banking, overlapping laws and specialised regulators institutionalise the balancing of competition policies against policies on liquidity, solvency, and safety. Consistency in the application of competition principles is accomplished, somewhat inefficiently, by the threat that the competition agency will act independently, and by the fact that decisions are subject to review and correction by general jurisdiction courts. In agricultural sectors, a special competition regime applies to co-operatives, and another to meat-packing, while Depression-era legislation permits the Secretary of Agriculture to issue marketing orders, with the practical effect of enforcing cartels.

Many exemptions and special rules respond to pleading by industry interests.

109. Many exemptions and special rules obviously respond to pleading by industry interests. Indeed, most of these were enacted after the beneficiaries were found liable for violating the law. The business of insurance is not subject to competition law if it is regulated by state law. A special law substantially immunizes the soft drink industry's vertical manufacturing and distribution structures. Some sports leagues are permitted to pool the rights to broadcast their games, in order to sell them as a package to broadcast networks without antitrust liability. And otherwise competing newspapers may enter joint operating arrangements, if all but one is in probable danger of financial failure.

The US exempts government entities involved in commercial operations from competition law.

110. One protected "special interest" is the government itself. The United States does not submit government entities involved in commercial operations to its competition law. This exemption, unusual in OECD countries, may be significant for government owned power systems, hospitals, and port authorities affected by regulatory reform.

State regulations that impede competition are numerous, and can slow adjustment in key sectors.

The "state action doctrine" exempts private anti-competitive conduct from antitrust law if the conduct is explicitly authorised by state policy.

111. Another major set of exemptions arises from the US commitment to federalism. The "state action doctrine" exempts private anti-competitive conduct from antitrust law if the conduct is explicitly authorised by state policy. Decisions applying this doctrine have permitted anti-competitive state regulation of transportation, hospitals, health care and other professional services, retail distribution, utilities, residential and commercial rent, and other areas. The doctrine demonstrates that national competition policy, though privileged in relationship to US national regulatory policy, may be less important than some other political values, in this case federalism.

Anti-competitive state and local legislation reduce the benefits of federal regulatory reform, and may delay reform in telecommunications and electricity.

112. The state action doctrine permits anti-competitive state and local legislation that reduces the benefits of federal regulatory reform. State regulation and special legislation may delay reform, not only in professional services and distribution, but also in telecommunications and electric power. The doctrine and anti-competitive state laws that impair competition affecting interstate commerce are within the power of Congress to correct by federal legislation.

CHAPTER 4

Enhancing Market Openness through Regulatory Reform

113. Market openness further increases the benefits of regulatory reform for consumers and national economic performance. Reducing regulatory barriers to trade and investment enables countries in a global economy to benefit more fully from comparative advantage and innovation. With the progressive dismantling of traditional barriers to trade, “behind the border” measures are more relevant to market access, and national regulations are exposed to unprecedented international scrutiny by trade and investment partners. Regulatory quality is no longer (if ever it was) a purely “domestic” affair.

US domestic regulation is largely consistent with market openness principles, which has boosted trade and inward investment.

US domestic regulation contributes to one of the OECD’s most open national markets for global trade and investment.

114. Maintaining an open world trading system requires regulatory styles and content that promote global competition and economic integration, avoid trade disputes, and improve trust and mutual confidence across borders. US domestic regulation is largely based on these principles, and contributes to one of the OECD’s most open national markets for global trade and investment. Moreover, competition and market openness in the United States promotes good regulation elsewhere through international competition, demonstration, and persuasion.

The benefits for the United States are considerable.

115. The benefits for the United States are considerable. Market-opening regulation promotes the flow of goods, services, investment and technology between the United States and global commercial partners. Expanded trade and investment generate consumer benefits (greater choice and lower prices), raise the standards of performance of domestic firms (through the impetus of greater competition), and boost GDP. Some US regulators have recognised the potential gains to be won from market-opening regulatory reform. In telecommunications services, the FCC expects that “competitive forces will soon result in higher quality, lower priced, more innovative service offerings”.⁶³

The country’s rank as the world’s largest host of foreign direct investment underscores the value of US policy to regulate inward investment activity as little as possible.

116. The country’s rank as the world’s largest host of foreign direct investment⁶⁴ underscores the openness and value of US investment policies. US policy is to regulate inward investment activity as little as possible, and there is no single statute governing foreign investment. While a host of federal, state and local laws governing such matters as anti-trust, mergers and acquisitions, wages and social security, export controls, environmental protection, health and safety have a significant impact on investment decisions, most of these are applied in a non-discriminatory fashion.

The US experience demonstrates the close and supportive relationship between quality regulation, competition, and market openness.

There is a virtuous circle: good regulation at home is good regulation for open markets...

117. US experience supports the proposition that good regulation at home is also good regulation for open markets. Reform of economic regulation has yielded opportunities for foreign traders and investors, though further progress in major sectors such as telecommunications and electricity is needed, in particular with respect to licensing requirements. Cost-efficient regulation and the search for greater analytical rigour in assessing the costs, benefits, and effects of proposed regulations supports legitimate domestic policies, but can also be market-opening. Likewise, the pro-competition policy stance in domestic markets results in regulation that is, on balance, trade and investment neutral.

...and, in turn, market openness encourages domestic regulatory reform.

118. The converse is also true: market openness encourages domestic regulatory reform as domestic firms find themselves in need of international rules and efficient regulation to compete with foreign firms.

But expansion of social regulation at federal, state and local levels presents new challenges for trade and investment.

119. Expansion of social regulation at federal, state and local levels, discussed in Chapter 2, presents new challenges for ensuring that legitimate domestic policies on health, safety and the environment do not unnecessarily restrict trade and investment. A range of initiatives to improve the quality of domestic regulation against benefit-cost, cost-effectiveness, and results tests (Chapter 2) has benefited foreign and domestic firms alike. For example, efforts at federal and state levels to streamline government formalities and “red tape” should benefit foreign traders and investors in the US market.

Concerns that trade liberalisation reduces regulatory protections demonstrate the need for coordination between market openness policies and reform aimed at cost-effective domestic regulation.

120. Concerns are expressed in the United States that, with trade liberalisation, competitiveness pressures could erode government capacities to maintain high regulatory standards. This problem is not discussed in detail in this review, but OECD studies (OECD, 1998, 1995, 1994) suggest that trade liberalisation can in some cases be a positive agent for improvement of social policies. In the absence of effective social policies, however, increased economic activity from trade liberalisation might indeed cause problems. These concerns demonstrate again the need for careful coordination between market openness policies and regulatory reform aimed at cost-effective domestic regulation.

Box 4.1. The OECD efficient regulation principles for market openness

To ensure that regulations do not unnecessarily reduce market openness, “efficient regulation” principles should be built into domestic regulatory processes for social and economic regulations, and for administrative formalities. These principles, described in *The OECD Report on Regulatory Reform* and developed in the OECD’s Trade Committee, have been identified by trade policy makers as key to market-oriented, trade and investment-friendly regulation. They are similar to the principles of competition and cost-effectiveness on which current US regulatory reform is based. This review does not judge the extent to which the United States has complied with international commitments, but assesses whether and how domestic regulations and procedures are consistent with these substantive principles.

- **Transparency and openness of decision making.** Foreign firms, individuals, and investors seeking access to a market must have adequate information on new or revised regulations so they can base decisions on accurate assessments of potential costs, risks, and market opportunities.
- **Non-discrimination.** Non-discrimination means equality of competitive opportunities between like products and services irrespective of country of origin.
- **Avoidance of unnecessary trade restrictiveness.** Governments should use regulations that are not more trade restrictive than necessary to fulfill legitimate objectives. Performance-based rather than design standards should be used as the basis of technical regulation; taxes or tradable permits should be used in lieu of regulations.
- **Use of internationally harmonised measures.** Compliance with different standards and regulations for like products can burden firms engaged in international trade with significant costs. When appropriate and feasible, internationally harmonised measures should be used as the basis of domestic regulations.
- **Recognition of equivalence of other countries' regulatory measures.** When internationally harmonised measures are not possible, necessary or desirable, the negative trade effects of cross-country disparities in regulation and duplicative conformity assessment systems can be reduced by recognising the equivalence of trading partners' regulatory measures or the results of conformity assessment performed in other countries.
- **Application of competition principles.** Market access can be reduced by regulatory action condoning anticompetitive conduct or by failure to correct anticompetitive private actions. Competition institutions should enable domestic and foreign firms affected by anti-competitive practices to present their positions.

The United States is ahead of the OECD average with respect to four out of six efficient regulation principles.

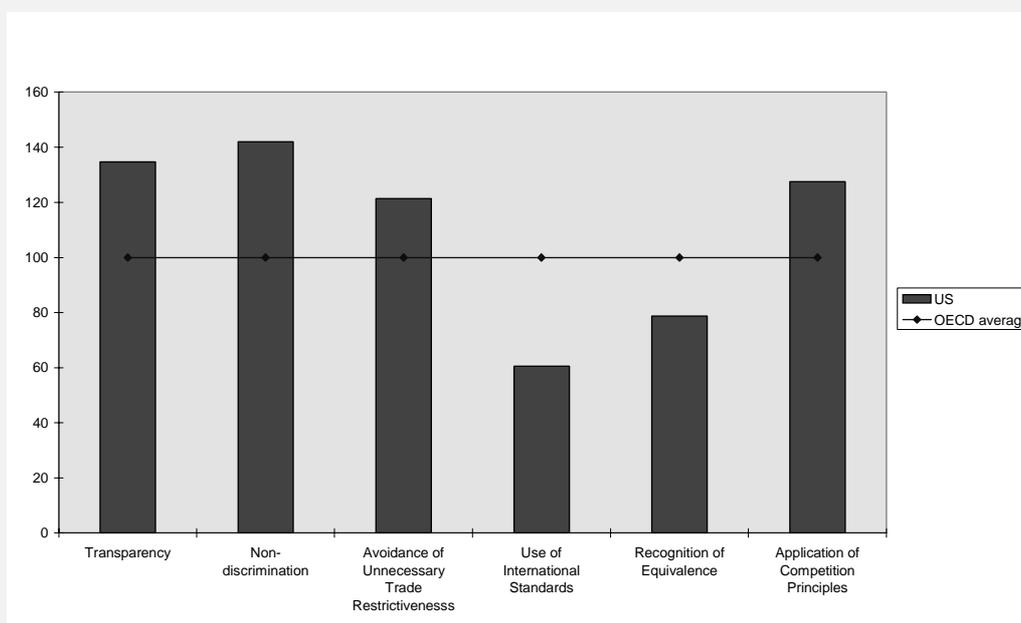
The principles seem to be given ample expression in practice, particularly transparency and openness of decision-making.

121. The United States is well ahead of the OECD average with respect to all but two of the efficient regulation principles (see Figure 4.1). While not all of the principles are codified in US administrative and regulatory procedures, they seem to be given ample expression in practice. This is most clearly the case for transparency and openness of decision-making, which help to mitigate the complexity and high procedural costs of the US regulatory system (see Chapters 2 and 3).

Market openness could be further enhanced by firmly embedding respect for the principles across all levels of government.

122. At the same time, US market openness could be further enhanced by finding ways to embed respect for the efficient regulation principles across all levels of government. Further efforts should be made with respect to non-discrimination, avoidance of unnecessary trade restrictiveness, recognition of equivalence of other countries' regulations and conformity assessment systems, and reliance on internationally harmonised standards as the basis of domestic regulations.

Figure 4.1: The trade-friendly index of the US regulatory system
 (These synthetic indicators measure US scores against the OECD average, measured as 100)



Explanation: These indicators measure the formal aspects of national regulatory reform policies. They do not directly measure the intensity and effectiveness of application of those policies, and hence may not be a good proxy for results.

Source: Trade Directorate, OECD, based on information from OECD countries, March 1998

Domestic mechanisms for transparency and public consultation set a high standard for openness to foreign parties as well.

Foreign traders and investors are well-positioned to participate actively at various stages of federal rulemaking processes...

123. The mechanisms on which regulatory transparency is based in the United States are described in Box 2.2 in Chapter 2. The “notice and comment” procedure sets a high standard of transparency and opportunity for comment by interested parties – national or non-national. Foreign traders and investors are well-positioned to participate actively at various stages of rulemaking processes. Other procedures to improve the quality of domestic regulations -- such as forward planning for future regulations, and publication of regulatory impact analyses -- give foreign competitors opportunities to act as informed and potentially influential participants in the regulatory process. Extensive use by the US government of the Internet across a wide range of agencies and departments could prove a powerful tool in further enhancing regulatory transparency world-wide.

..but respect for transparency at state and local levels should be encouraged.

124. Nonetheless, federal procedures are only part of the story. The complexity and reach of subfederal regulation underscores the need to encourage respect for transparency at state and local levels. Co-ordination of federal regulatory reform with efforts at state and local levels will be increasingly relevant to international market openness.

Discriminatory regulatory content is rare, however, there are enduring exceptions.

The United States makes effective and good faith efforts to share information about preferential agreements to those interested.

125. Preferential agreements give favourable treatment to specified countries and are thus inherent departures from two core principles of the multilateral trading system -- Most-Favoured-Nation (MFN) and National Treatment (NT). To reduce discriminatory impacts, third countries need access to information about their content and operation to make informed assessments of impacts on commercial interests. The United States, party to two free trade agreements⁶⁵ and a network of bilateral investment agreements, makes effective and good faith efforts to share this information as widely as possible. Information is readily available through many avenues. Generally, information on actions to be taken by the United States and requests for comments on proposed actions are published in the *Federal Register* and made available by US agencies through press statements, fact sheets, or the Internet. Submission of information to the WTO and both FTAs improve transparency through public notice.

Overtly discriminatory regulation is rare, but discriminatory elements in regulation for maritime transport, domestic air services, and trucking cabotage block foreign participation.

126. Overtly discriminatory regulation is rare. Regulatory reform has eliminated many opportunities for discrimination. However, there are enduring exceptions. Discriminatory (nationality-based) elements in regulatory structures for maritime transport services, domestic air services, trucking cabotage, and operation of power facilities preclude foreign participation. US commitments in the WTO Financial Services Agreement grandfather deviations from the non-discrimination principle. Nationality-based restrictions in important sectors have been in place for long periods, suggesting the need for a comprehensive review of prevailing measures and their economic rationales. As seen in Box 4.2, subfederal regulation also risks generating discriminatory effects.

Box 4.2 Subfederal regulation and market openness

Chapters 2 and 3 describe how US regulation is a complex mix of federal, state and local rules and enforcement procedures. Regulation at subfederal levels violates the principles of efficient regulation more often than does federal regulation. Sustaining and increasing market openness in the United States will require additional efforts to embed the principles into these levels of government.

- In a 1992 case involving federal and state measures for alcoholic and malt beverages, a GATT panel found that Canadian producers were discriminated against by state regulatory requirements on listing and delisting, beer alcohol content, distribution to points of sale, transport into states by common carriers (as opposed to transportation of a product by a producer or wholesaler in its own vehicle), and licensing fees.⁶⁶
- Some states require direct branches or agencies of foreign banks, but not bank subsidiaries of foreign banks, to register or obtain licenses in order to engage in some banking activities. Some states restrict various commodities transactions by foreign bank branches and agencies, but not by other depository financial institutions.

- Government procurement laws at the state and local level contain “Buy American” and “Buy Local” provisions similar to those contained in the federal Buy American Act which give preferential treatment to domestically and locally produced goods. These provisions are superseded by non-discrimination commitments under the WTO GPA, when applicable. In addition, some states (California) have amended their laws to prevent preferential treatment. However, since state governments account for roughly half of US public purchases, considerable scope remains for discriminatory purchasing practices.
- State procurement laws can also take on an extraterritorial dimension in support of broader policies. In 1996, Massachusetts enacted a law regulating state contracts with companies doing business with or in Myanmar. According to a trading partner, the state government created a “restricted purchase list” of companies that meet a set of “negative criteria” stipulated in the law. In principle, companies so identified would be barred from bidding on state contracts or, when allowed to bid, subject to less favourable terms. In November 1998, the US District Court found the law to be unconstitutional as it impinged on the exclusive authority of the federal government to regulate foreign affairs.

Source: GATT Basic Instruments and Selected Documents; 1998 Report on the WTO Consistency of Trade Policies by Major Trading Partners, Industrial Structure Council, Japan.

There are gaps in the measures taken to avoid unnecessary trade restrictiveness of regulations.

127. To avoid unnecessary trade restrictiveness, regulators should assess the impact of regulations on international trade and investment; consult trade policy bodies, foreign traders and investors in the regulatory process; and ensure access by foreigners to dispute settlement.

The regulatory impact analysis program does not assess regulatory impacts on inward trade and investment.

128. In the United States, the principal tool for measuring the effects of proposed federal regulations is regulatory impact analysis, or RIA (see Chapter 2), based on benefit-cost and cost-effectiveness principles. The RIA programme does not, however, require assessment of regulatory impacts on inward trade and investment. Hence, information on potential impacts on trade and investment is most likely to surface during the public comment phase, which is open to foreign and domestic parties. The onus is on foreign firms to make their concerns known. Their capacity to do so is thus closely linked to regulatory transparency. Too, the RIA mechanism does not cover the rulemaking activities of the independent federal commissions.

There is a high risk that the trade-restrictive effects of a regulation will be identified only after damage has occurred, and trade frictions have arisen.

129. A second line of defense is also weak. OMB and USTR consult informally when questions arise with respect to regulatory compliance with WTO commitments. Proposed regulations with no obvious impacts on international obligations would normally escape scrutiny. OMB staff are not trained to assess the trade effects of proposed regulations. USTR is neither mandated nor staffed to review the 4000 federal regulations proposed each year for adverse effects on inward trade and trade-related investment. Under this system, there is a risk that the trade-restrictive effects of a regulation will be identified only after damage has occurred, and trade frictions have arisen.

Differing standards and duplicative certification procedures between the United States and trading partners reduce trade flows.

A relatively low use of international standards in the United States is a cause of trade frictions.

130. The United States has produced many standards widely used in the global market, but trading partners point to a relatively low use of international standards in the United States as a cause of trade frictions. The European Commission contends that “the relatively low use, or even awareness, of standards set by international standardising bodies” is a problem in the United States, and that although a “significant number of US standards are claimed to be ‘technically equivalent’ to international ones, and some are indeed widely used internationally, very few international standards are directly adopted”. In some cases, “US standards are in direct contradiction to them.”⁶⁷ Trading partners also complain about what is perceived to be an extremely complex system for public and private, federal and sub-federal standards⁶⁸. They criticise the latitude of private quality assurance organisations, such as the Underwriters Laboratories, to impose -- and modify frequently and unpredictably -- the use of non harmonised standards.⁶⁹

Increased US reliance on third party certification and on international standards as the basis of domestic regulations is promising.

131. The poor performance of the United States on the OECD trade friendly index with respect to the use of international standards (see Figure 1) is, however, somewhat misleading, since many US standards have a de facto international application. Recent moves to increase US reliance on third party certification and on international standards as the basis of domestic regulations are promising.⁷⁰ Better US participation in international standards development is also needed. International standards are often developed without adequate US input or representation, and the US administration is concerned about effects on competitiveness⁷¹. Complex standardisation and conformity assessment procedures should be streamlined to improve market openness.

In recognizing the equivalence of regulatory measures in other countries, US policy is moving in the right direction.

Progress has been made in recognising the equivalence of regulatory measures and conformity assessment.

132. The United States has made progress in recognising the equivalence of trading partners’ regulatory measures and results of conformity assessment:

- Unilateral approaches are used in some cases, such as the Department of Transportation’s self-declaration of conformity with safety standards for the automotive sector.
- The US-EC MRA signed in May 1998 provides a framework for recognition of conformity assessment procedures for several products (telecommunications equipment; electromagnetic compatibility; electrical safety; recreational craft; pharmaceutical good manufacturing practice; and medical devices).
- Regional trade agreements have been a useful mechanism. Chapter 9 of NAFTA requires partner countries to “accredit, approve, license or otherwise recognise conformity assessment bodies in the territory of another Party” on a national treatment basis without requiring further negotiation.

- The 1998 EU-US Transatlantic Economic Partnership aims to improve regulatory co-operation in manufactured goods; agriculture; services; electronic commerce; and intellectual property rights.

Application of competition principles from an international perspective are broadly satisfactory.

Foreign firms generally enjoy non-discriminatory treatment to pursue competition cases.

133. US procedures for initiating and advancing complaints about alleged anti-competitive regulatory or private actions are satisfactory from the perspective of market openness. Though different procedures may introduce uncertainties into the handling of particular complaints, foreign firms generally enjoy non-discriminatory treatment to pursue cases along the track they see fit.

Box 4.3. US social regulation and trade

Social regulations aim to protect public interests such as health, safety, and the environment, the interests of consumers and vulnerable social groups. These policies fall within the realm of national sovereignty. While social regulations may not be expressly discriminatory or trade-restrictive, their design or implementation may introduce *de facto* barriers to trade. In most cases, measures can be taken to regulate effectively while not unnecessarily affecting market openness. The following examples illustrate the trade implications of some US social regulations as seen by some trading partners.

Environmental Regulations: A WTO case involving reformulated gasoline shows how some environmental regulations can have trade impacts. Under a law requiring that only “reformulated gasoline” be sold in highly polluted areas, the Environmental Protection Agency issued regulations on the composition and emissions effects of gasoline to improve air quality. In the regulations for reformulated gasoline, EPA methodology for determining domestic refiners’ baselines was based on quality data and volume records for 1990, while most importers (also foreign refiners) were required to use a different baseline set by the EPA. Levels required of foreign refiners were seen as more difficult than those required of US refiners. Venezuela and Brazil successfully argued in the WTO that these regulations violated the principle of national treatment. In 1997, EPA removed the discriminatory element of the regulation.

Health regulations: The 1990 Nutrition Labelling and Education Act requires certain products to be labelled with respect to content, but some trading partners have alleged that the rules differ from international labelling standards established by the Codex Alimentarius. Additional state-level requirements may apply to agriculture and food imports.

Plant health regulations: Phytosanitary regulations for fruits and vegetables set by the Department of Agriculture (USDA) are viewed by some foreign producers as unnecessarily burdensome. Exporters seeking entry to the US market for commodities that may carry pests or diseases must pay for all USDA expenses to research and approve quarantine treatments for products. Shipments of the fruit or vegetable may be subject to an inspection process in both the country of origin and the US port of entry.

Consumer protection regulations: The American Automobile Labelling Act requires passenger vehicles and light trucks to bear labels indicating the percentage of value added in the United States and Canada. The intent is to help consumers make informed decisions. But some foreign competitors see the law as a *de facto* “Buy American” provision. Other features of the law, such as methodology for calculating US content of cars produced by foreign automakers within the United States, are viewed by some trading partners as expressly discriminatory.

Principal Sources: 1998 Report on the WTO Consistency of Trade Policies by Major Trading Partners (Industrial Structure Council, Japan); EU Sectoral and Trade Barriers Database; US Trade Barriers to Latin American Exports in 1996 (UN Economic Commission for Latin America and the Caribbean); Opening Doors to the World: Canada’s International Market Access Priorities – 1998.

Closer coordination between OMB and USTR oversight of regulatory quality could enhance complementarity between trade and domestic policies.

Closer working relations between OMB and USTR processes could avoid regulatory problems long before they surface in the market.

134. One reason that domestic regulations sometimes surface as trade irritants is the failure to identify problematic regulations early in the process. The quality management process for regulation described in Chapter 2 -- based on quality principles and oversight by the Office of Management and Budget -- does not require explicit consideration of trade impacts. The Office of the US Trade Representative (USTR) oversees implementation of transparency provisions relating to US obligations, and those on non-discrimination; national treatment; prohibition of unnecessary obstacles to trade; use of international standards, recommendations and guidelines; and considerations of equivalence. USTR is not directly concerned with the making of domestic regulations on a day-to-day basis, but closer working relations between OMB and USTR processes could promote the efficient regulation principles, enhance complementarity between trade and domestic policies, and avoid regulatory problems long before they surface in the market.

135. Trade and investment friendly regulation can be compatible with strong regulatory protections. High-quality regulation can be trade-neutral or market-opening, coupling consumer gains from enhanced market openness with more efficient domestic policies in areas such as the environment, health and safety. But it is doubtful that this can be achieved in the absence of purposeful, government-wide adherence to the principles of efficient regulation. Avoiding the potentially restrictive effects of domestic regulation through more focused attention to these principles would benefit US consumers and economic performance.

CHAPTER 5

Regulatory Reform in the Electricity Industry

136. In the United States, as in most OECD countries, regulatory reform in the power sector lagged behind that of other sectors, but is beginning to catch up. The complexity of regulatory reform in the federal structure in the United States, the benefits and risks of further competition and consumer choice, and the need to balance multiple economic and social policy goals within a comprehensive programme of reform are illustrated in dramatic reforms now underway in the sector.

Reform must balance the diversity of interests and powers among many different actors.

The principal aim of reform is to stimulate competition in power generation and deliver the benefits to consumers. But many other aims are pursued in the regulatory regime.

137. The principal aim of reform in the electricity sector is to stimulate competition in power generation and supply and deliver the benefits of competition to consumers. But many other aims are pursued in the regulatory regime. The federal government desires lower government spending and increased reliability. Its social goals include cleaner generation, increased energy efficiency, and reduced greenhouse gas emissions, along with protection of consumers and adequate service to the poor. State-level environmental goals include reducing emissions in fossil-fuel based states and maintaining wildlife populations in hydropower-based states.

Reform is limited by the federal structure, and emphasis on individual rights and private property.

138. Structural and legal constraints also determine the reform path: the federal structure of the country, the diversity of starting points among different states, the emphasis on individual rights and private property even in this sector which in other countries is often government-owned.

A complex institutional setting increases the difficulty and risk of comprehensive reform.

139. The complex institutional setting increases the difficulty and risk of comprehensive reform. The industry is dominated by several hundred vertically-integrated, investor-owned companies, which typically operate local franchise monopolies. These are regulated by the Federal Energy Regulatory Commission (FERC) and by utility commissions in every state. Several large federal power projects sell power wholesale. Many government-owned state and local utilities deal directly with end-users. Private, independent producers sell power to distribution systems. Voluntary organisations of private and public utilities ensure system co-ordination and reliability. Specialised regulators oversee nuclear power, financial markets, and environmental protection.

Open public discussion stimulated arguments over regulatory design, reduced the threat of capture by special interests, and improved the outcome.

140. The openness of US regulatory processes led to a characteristically high level of public debate about reform. Federal and state reforms have been discussed by utilities, academics, regulators and other officials, at conferences and public meetings and in the newspapers, trade press and academic literature. Public discussion has stimulated arguments over the design of mechanisms and institutions, reducing the threat of capture by special interests and in principle improving the outcome generally. The open process helped to co-ordinate the interests of diverse jurisdictions and interests.

Box 5.1. Diversity of electricity generation among states

The type of generation varies greatly among areas of the United States. The Pacific Northwest has overwhelmingly hydropower, the Midwest overwhelmingly coal, the mid-Atlantic coal and nuclear, and the Northeast a mix of coal, oil, and nuclear. This heterogeneity results in a range of average state prices,⁷² hence of stranded costs, and the pattern of public ownership (since, in the United States, large water control projects are, historically, publicly owned).

Geographic distribution of generation by energy source

1997 Net Generation by Energy Source (percentage)							
Census Division	Terawatt-hours	Coal	Petroleum	Gas	Hydro	Nuclear	Other
New England	73.0	26.2	30.8	14.1	6.4	22.5	
Middle Atlantic	308.4	43.4	3.5	7.6	9.4	36.0	
East North Central	520.0	79.9	0.4	1.2	0.8	17.7	
West North Central	253.4	74.9	0.5	1.5	6.7	16.4	
South Atlantic	633.4	60.3	4.7	6.0	2.0	27.0	
East South Central	331.5	70.1	0.9	2.0	7.3	19.7	
West South Central	429.9	49.4	0.2	33.4	1.9	15.1	
Mountain	282.1	69.0	0.1	3.9	16.6	10.4	
Pacific Contiguous	273.7	3.1	0.1	13.9	69.3	13.6	
Pacific Noncontiguous	12.7	1.9	66.1	23.8	8.2	0	
US Total	3125.5	57.2	2.5	9.1	10.8	20.1	0.2

Source: U.S. Department of Energy, Energy Information Administration 1998d, Tables 7 to 13.

A central challenge of reform is to encourage competition in power generation and supply by ensuring fair access to the grid...

To ensure “fair” access to the grid, utilities are required to offer competing firms the same information and services available to their own generators. But competition authorities recommend deeper “operational” separation.

141. Effective competition among generators requires that competing generators have non-discriminatory access to the transmission grid. Vertically integrated utilities are increasingly required to separate power generation from transmission and distribution. FERC rules limit discrimination by requiring utilities that own transmission facilities to offer competing generators the same information and services that they give to their own generators. But US competition authorities recommend “operational” separation or “structural” separation (divestiture) over “functional” separation. They argue that functional separation leaves in place both incentives and opportunity for utilities to discriminate against competitors, and that regulatory oversight to detect problems, such as subtle reductions in quality of service to competitors, is difficult.

...preferably through divestiture of some generation assets...

Divestiture is constrained by private property rights, so some states provide powerful financial incentives for firms to sell off their generation capacity.

142. Divestiture of generation from transmission eliminates both the incentive and the opportunity to discriminate. It also reduces concentration in power generation. Yet divestiture is constrained by the rights of private property, and the legal tools to mandate divestiture are not yet in place. Many regulators are not empowered to order divestiture. To avoid these limitations, some states, such as California and Arizona, provide powerful financial incentives for firms to sell off some or all of

their generation capacity. Already, a significant amount of the fossil-fuel generating capacity in California and in New England has been divested to new owners from outside these areas.

...and by creating trading institutions such as spot and future markets to improve price transparency and deepen markets.

Spot markets both facilitate competition and dampen volatility.

143. Spot markets have been established in more liberalised jurisdictions such as California. As Chapter 1 noted, spot markets facilitate competition by improving liquidity and price transparency, and reducing transactions costs. Buyers can more easily compare and switch among competing generators. As spot markets develop, they will help dampen volatility. A well-publicised episode of price spikes in the Midwest in 1998 prompted establishment of a centralised spot market to reduce the risk of a repetition. In addition, an open market for electricity futures has operated for several years. Initially based on two nominal locations in the West, futures contracts are now spreading across the country. Options contracts have been introduced, too. Buyers can turn to these other instruments, as well as financial instruments based on natural gas, to reduce their exposure to electricity spot market risk.

But pricing for transmission services does not yet provide incentives for efficient investments in transmission and generation capacity.

144. Pricing for transmission services still does not reflect market incentives well. Some regions have already experimented with alternatives to traditional methods, such as varying prices in different delivery zones or even at particular locations (termed “nodal” pricing), corresponding to differences in costs and demand. These experiments may help discover a workable pricing method that better reflects transmission costs, and thus provides incentives for efficient investments in transmission and generation capacity.

Expanding the role of markets has required new institutions to safeguard competition.

The independent systems operator is the new watchdog to ensure fair access to the grid, and safe and reliable operation.

145. An important means to prevent anti-competitive discrimination in new electricity markets is the “independent system operator” (ISO). ISOs are a new institution designed to ensure non-discriminatory access to the transmission grid even while it is owned by vertically integrated utilities, and to ensure system reliability. Four ISOs were approved, as of July 1998, in various states and regions. ISOs are managerially and operationally independent of the vertically integrated utilities. FERC rules require only “functional” separation, but FERC encourages formation of regional ISOs to achieve deeper “operational” separation.

146. The effectiveness of this form of separation will depend on assuring the ISO’s real independence, from generators, transmission owners, and users, while maintaining access to the vertically integrated firms’ technical competence in order to ensure safe and reliable operation. Different systems have adopted different governance structures to deal with these concerns. In California, a board of political appointees oversees both the ISO and the spot market operator; in New England, the ISO is monitored by the state regulators.

The effectiveness of this new institution is not yet proven.

147. States are experimenting with different approaches, too. Some ISOs perform many functions, such as managing transmission tariffs and the spot market. Others limit their function to managing the transmission grid. The institutional structure of ISOs is evolving with experience. No ISO has operated long enough to show whether this new institution will deliver on its promise, to maintain reliable and efficient operation while preventing anti-competitive discrimination.

The second major reform with potential for substantial consumer gains is introduction of retail-level competition at state levels.

Several states already permit end-users to choose their electric power supplier, and Federal reforms, if adopted, would permit all end-users to choose their electric power supplier by 2003.

148. The second major reform is promoting competition to supply all end-users. This “retail” competition (or “full end-user choice”) is allowed, but not required, under federal law, and is a matter of state regulatory policy. Several states already permit end-users to choose their electric power supplier. End-user choice provides generators with greater incentives to compete. As of July 1998, Massachusetts, California, and Rhode Island (partially) had introduced retail competition, nine other states had enacted laws leading to retail competition (by dates ranging from 2000 to 2004), and several others were advancing. A federal reform proposal would permit all end-users to choose their electric power supplier by 1 January 2003; however, it would permit individual states (and certain non-regulated utilities) to opt out if, after a public proceeding, they find that another policy would better serve consumers.

149. The prices end-users pay have been regulated, for the most part, by the state public utility commissions. Most states provide a transitional price-cap for residential consumers. In California and Massachusetts, for example, for several years after open access the maximum residential price is to be ten percent below the former regulated price.

The third major reform element is to resolve disputes about private property rights through policies on “stranded costs”.

Mitigation, measurement, and compensation of stranded costs was an essential condition for launching market reforms.

150. Mitigation, measurement, and compensation of stranded costs was an essential condition in the United States for launching market reforms. Stranded costs are unamortised costs, prudently incurred under the prior regulatory regime, that will not be recovered in a market environment. They are due mostly to investments in nuclear generation and in long-term power purchase agreements. Compensation for stranded costs reduces the incumbent firms’ incentive to resist competition.

Estimates of magnitude vary widely, but a likely mid-range is US\$135 billion to US\$200 billion. The decision about who pays is important for political and consumer support for reform.

151. The distribution of stranded costs and benefits has important wealth effects, so the decision about who pays for stranded costs is important for political and consumer support for reform. Estimates of their magnitude vary widely, but a likely mid-range is US\$135 billion to US\$200 billion. These figures are sensitive to assumptions about future market prices and the date when open, direct access becomes effective. But by any measure, stranded costs are large enough, in comparison to book value and revenues, that the design of the cost recovery system will significantly affect the sector’s future development.

Putting stranded cost charges in a tariff that does not vary with use will reduce distortions of market behaviour.

152. In the United States, decisions about how to measure and recover stranded costs are the responsibility of the regulators for assets and operations under their jurisdictions. The key regulatory challenges are to provide incentives for incumbents to reduce stranded costs, to measure them accurately, and to design a means for recouping them that is fair but that does not impede efficient entry or pricing. Putting stranded cost charges in a tariff that does not vary with use will reduce distortions of market behaviour. Preventing users from by-passing the costs will avoid impeding efficient entry.

Environmental goals for the sector are increasingly met through market-based mechanisms...

Traditional measures such as subsidies and command and control regulation are increasingly supplemented by market-based measures.

153. Other policy goals are sometimes pursued by a combination of markets and direct government intervention. For environmental goals, traditional measures such as subsidies -- cash, tax advantages, or surcharges on end-users -- and command and control regulation are increasingly supplemented by market-based measures. A programme of tradable permits for sulphur dioxide emissions has significantly reduced SO₂ emissions from generating plants, as is discussed in Box 5.2. There is ample opportunity to expand the use of market instruments.

Box 5.2. Marketing pollution permits - cleaner air at lower cost

Marketable permit or obligation programs provide an alternative to traditional regulatory techniques. If developed and applied appropriately, they can reduce the cost of regulation, increase compliance flexibility, and support economic-growth, while achieving regulatory goals.

Perhaps the best known example of such trading is the acid rain programme operated by the US Environmental Protection Agency that is designed to reduce US sulphur dioxide emissions by 10 million tons annually from 1980 levels. In the programme, emitters of SO₂, a precursor to acid rain, have been issued a finite number of allowances (permits) that can be used over the next 50 years. SO₂ allowances are denominated in tons of SO₂, but not by year. This is because acid rain is a cumulative problem, so the absolute amount deposited matters more than the timing.

Strict enforcement measures are built into the federal legislation for failure to demonstrate ownership of sufficient allowances. For intentional non-compliance, heavy fines and jail terms are possible.

The program has produced significant unexpected cost savings, and reductions in emissions are ahead of schedule. Annual costs of meeting the full reductions are expected to be between \$2 and \$2.5 billion per year, about half the cost estimated originally. Costs are 25 percent lower than achieving the targets through traditional regulation.

...and efficiency in generation of “green” electricity is encouraged by market-based choices of technology, generator, and price.

A market-based mechanism, is proposed to promote use of renewable fuels and increase the national share of green electricity to 5.5 percent in 2010-2015.

154. The Clinton Administration proposes to use “renewable portfolio standards,” a market-based mechanism, to promote use of renewable fuels. A specified percentage of electricity would be generated from renewable energy sources, subject to a price ceiling. Similar requirements already apply in some states. This device encourages efficiency in the generation of “green” electricity. It creates two separate markets, one for electricity generated by renewable fuels and another for all other electricity. “Green” electricity is then traded in the competitive

market at market prices. The state of Maine has imposed the largest required share of “green” generation, at 30 percent (including hydropower). The Administration’s proposal would increase the national share to 5.5 percent in 2010-2015.

Diversity of state structures promotes faster innovation and learning in regulation, and benchmarking good performance.

State reforms are acting as “test beds” for reform in other states and at the federal level, promoting faster innovation and vigorous competition in reform.

155. State reforms act as “test beds” for reform in other states and at the federal level, promoting faster innovation and vigorous competition in reform. There are common themes in what reform-minded states are doing. Most, for example, are opening choice to all end-users at the same time, rather than phasing in choice for different classes of customers. In some states, reform efforts are limited. Idaho, with virtually the lowest electricity prices in the country, is not liberalising and is working to retain preferential access to low-cost federally-owned hydropower. Michigan, with a local duopoly and constrained imports, allows some end-users to switch suppliers but has made few other changes. But Virginia, with an industry similar to Michigan’s, will begin full retail competition in 2004.

Yet the federal structure also complicates reform, because the scope of efficient regulation extends beyond state borders.

Pacts about regulatory principles and decisions, within regions that coincide with electricity markets, could reduce the costs fragmented and inconsistent state regulation.

156. Costs of the federal structure arise from the need to build interfaces between different regulatory regimes, the efficiencies lost as regional markets operate under several sets of rules, and the need for individual firms to operate under multiple regimes. The largest cost is that regulatory jurisdictions do not match the most efficient electricity market, which is probably regional. Some states are actively harmonising regulatory reforms to enlarge the market and reduce the costs of operating across state lines. Pacts about regulatory principles and decisions, within regions that coincide with efficient electricity markets, could reduce costs, while retaining flexibility to allow regulatory innovation.

For example, it would be more efficient to broker some state environmental policies at the federal level, or form regional pacts.

157. Environmental policy provides an example of the potential for conflict. Electricity markets are generally larger than states, so generators competing in the same market are subject to different state environmental rules with different costs of compliance. Liberalisation implies that there are limits to differences in compliance costs between states in the same electricity market. If a state imposes rules that increase generating costs too much, more power might be generated in, and imported from, an adjacent state. To prevent this, Massachusetts requires that all power sold there must meet its environmental rules, no matter where it was generated. Rather than handle this issue state-by-state, it would be more efficient to broker these state policies at the federal level, or form regional pacts, to be sure that environmental externalities are fully internalised.

Regional regulatory regimes have been slow to develop, but should be the next major push for reform...

Under market conditions, voluntary compliance with reliability standards is expected to decline, and institutional changes may foreshadow regional regulatory structures.

158. The reliability regime, which has worked well over the past three decades, will necessarily change as economic regulation of the electricity sector changes. Voluntary compliance with reliability standards is expected to decline. The system will probably move toward mandatory self-regulation, overseen by the independent regulators of the three North American countries. These institutional changes may foreshadow regional regulatory structures.

Some predict eventual consolidation of reliability oversight and regulation into three ISO-controlled systems for the entire country.

159. It is not clear whether efficient long distance transmission investments will be made under a system of state-by-state as well as federal regulation. It is not clear how the introduction of ISOs will transform the reliability regime, still based primarily on utilities. Some ISOs are limited to a single state, while others control multi-state areas. The reliability regime now divides the country into ten regions for co-ordination and control. Some predict eventual consolidation into perhaps three ISO-controlled systems for the entire country. Adapting state and federal regulatory regimes to these new functions and structures will take time and experimentation.

Box 5.3. Experiment and conflict: variations among state and federal reform programs

Since circumstances and powers vary among fifty jurisdictions, reform proposals and programs also differ. Some differences are beneficial demonstration projects and experiments from which others can learn. But other differences represent conflicts over fundamental issues. California has moved to open access, while other states in the region are unsure, concerned about prices increasing as California bids supplies away.

Priorities about environmental goals: Some states want to reduce their own emissions to reduce local pollution, some want emissions reduced in other states to reduce the effects of acid rain, and still others, with large hydro-power establishments, are concerned about protecting or restoring wildlife habitats.

Environmental issues: Maine requires 30 percent “green” power, but includes hydro-power in that total (because Maine has many dams); Massachusetts, in the same region, requires less, but excludes hydro-power—and also requires that imported power meet its own environmental standards.

ISO organisation and governance: In New England and the mid-Atlantic—Pennsylvania, New Jersey, Maryland, Delaware and Washington, D.C.—the ISOs are under a two-tiered system, with independent governing boards (whose members are not affiliated with market participants) advised by committees of stakeholders. In California, the ISO and the operator of the spot market are both overseen by a board of political appointees.

ISO responsibilities: The mid-Atlantic ISO has the broadest responsibilities, for centralised dispatching, maintaining system stability and reliability, managing the open access transmission tariff, facilitating the spot market, and accounting for energy and ancillary services. The New England ISO has similar responsibilities, except for accounting functions. By contrast, in California, the ISO controls the transmission grid, but does not centrally dispatch, although it can revise the merit order in the spot market to manage the transmission grid efficiently.

Transmission pricing: Zonal pricing is used in California, and nodal pricing in the mid-Atlantic (after a disappointing experiment with zonal pricing).

As choice expands, more consumer protection is needed.

The shift from regulated monopoly to market supply means consumers face new rights and risks. Some states have responded with initiatives to inform consumers about new rights.

160. Consumer protection issues and remedies are similar to those for other goods and services, and, as in other newly liberalised sectors, there is a transition role for enhanced consumer education. The shift from regulated monopoly to market supply means consumers face new rights and risks. In some reforming states, utilities have sent consumers brochures to tell them about the reform and its implications. California spent \$89 million, mandated by the public utility commission, to inform consumers about their new right to switch electric energy suppliers. Confusion about the costs and benefits of the new system can be met by requiring disclosure of separate charges, terms, and characteristics such as fuel mix and emissions, to help consumers make comparisons and evaluate the benefits of switching suppliers.

Controlling unfair marketing practices will require new regulations in some cases.

161. Experience from telecommunications deregulation has been applied in electric power to control an unfair marketing practice. “Slamming” is switching a consumer’s account to a new supplier without the consumer’s consent. California law requires third party verification that the consumer wants to switch, and provides a three day period for a small consumer to cancel a change without cost. California also requires sellers, marketers and aggregators to register, providing some protection that consumers will not be cheated by “fly-by-night” operators. Another concern is false advertising about “green” generation. The Federal Trade Commission has guides about environmental marketing claims, which explain legal requirements that such claims be truthful and substantiated.

Potential effects of reform on universal service are unclear, but some states are acting to protect low-income consumers in new markets.

162. Reforms in some states are designed not to endanger existing social protections to retail customers, which in the US regulatory system are primarily issues of state, not federal, concern. In California and Massachusetts subsidies to low-income consumers will continue to be paid, out of a fee assessed on all end-users. Most systems incorporating retail supply competition provide for a “retail supplier of last resort,” so that consumers are not cut-off from electricity supply. “Red-lining,” or refusal to supply areas where service is less lucrative, is being countered in California with the requirement that utilities continue to supply areas they were assigned before open access became effective.

CHAPTER 6:

Regulatory Reform in the Telecommunications Industry

163. The telecommunications industry is extraordinarily dynamic. Rapid evolution of technologies has shaken up industries and regulatory regimes long based on older technologies and market theories. Twenty-three OECD countries have unrestricted market access to all forms of telecommunications, including voice telephony, infrastructure investment and investment by foreign enterprises, compared to only a handful a few years ago. The industry's boundaries are blurring and merging with other industries such as broadcasting and information services.

Regulatory regimes must simultaneously promote competition and protect other social policies in dynamic markets.

Strong competition policies and efficiency-promoting regulatory regimes are crucial to the performance and future development of the industry.

164. The role of regulatory reform in launching and shaping the rapid evolution of the industry has been described by some as pivotal, and by others as at best supportive. Whatever the truth, strong competition policies and efficiency-promoting regulatory regimes that work well in dynamic and global markets are crucial to the performance and future development of the industry.

165. The central regulatory task is to enable the development of competition in local markets, while protecting other public interests such as reliability, universal service and consumer interests. Entry must be actively promoted in markets where formerly regulated monopolists remain dominant, and consideration must be given to convergence of separate regulatory frameworks applicable to telecommunications and broadcasting infrastructures and services.

The United States is a world leader in the reform of telecommunications regulation

The 1984 antitrust action breaking up AT&T provides a striking example of the central role of competition policy in regulatory reform.

166. The United States pioneered the reform of telecommunications regulation. The famous 1984 divestiture which split AT&T into a long-distance company and seven local operating companies was a pivotal step that directly addressed underlying anticompetitive incentives, and provided a sound foundation for pro-competitive regulatory reform. It also helped to open network equipment markets and contributed, among many factors, to a dramatic decline in telecommunications switching and transmission costs. The 1984 antitrust action provides a striking example of the central role of competition policy in regulatory reform.

The structure of the US telecommunications industry is unique in OECD countries, and, consequently, so are the regulatory challenges.

167. By any measure, the telecommunications market in the United States is large. Nine of the world's twenty largest carriers are American. The total revenue of the U.S. market at a little over \$257 billion is equivalent to 42 percent of the OECD total.

Regional monopolists are not permitted to compete in long distance markets in order to eliminate the incentive to discriminate.

168. The 1984 divestiture generated a market structure that is unique. Under the decree, AT&T was required to divest its local operating subsidiaries, creating seven Regional Bell Operating companies (the RBOCs) which, subject to some exceptions, were not allowed to provide “long-distance” service. The divestiture separated long-distance services and local exchange services. It defined 164 different Local Access and Transport Areas (“LATAs”), generally smaller than states, and stipulated that the RBOCs were not allowed to provide any services that crossed these lines.⁷³ RBOCs were not allowed to provide information services, either.

This structure was based on the view that local exchanges have natural monopoly properties, though developments have eroded those properties.

169. These restraints, by assuring that regulated monopolists could not compete in long distance or other competitive markets, eliminated the risk of discrimination.⁷⁴ This structure was based on the view that local exchanges had natural monopoly properties, though technological developments since 1984 have eroded those properties.

Tendencies toward concentration can be seen as the market structure evolves, which may presage a stronger role for competition authorities.

Within these constraints, market structure continues to evolve.

170. Within these constraints, market structure continues to evolve. The number of important carriers in long distance markets has increased, though a recent merger between MCI and WorldCom, the second and fourth largest providers of domestic long-distance services, suggests that a period of concentration may be starting. Concentration has recently increased at the level of local exchange carriers. From the mid-1990s, US long-distance carriers entered into international alliances with carriers from other countries. To promote international competition, the alliances were permitted on the condition that safeguards are in place to assure that other US carriers have equal access to foreign local markets.

Consumers of long distance and mobile services have been the main winners from regulatory reform...

Regulatory reform facilitated a level of innovation that has transformed the industry and had positive effects throughout the economy.

171. The most important impact of regulatory reform is its contribution to facilitating a level of innovation that has transformed the industry and had positive effects throughout the economy. Regulatory decisions by the FCC played an important role in facilitating the development of markets for value added network services (i.e. data processing) and for the rapid diffusion of the Internet in an unregulated environment. Estimates suggest that over thirty million people in the U.S. use the Internet. Further diffusion of innovation is likely in future years as new initiatives, such as Internet II,⁷⁵ are considered.

Net economy-wide gains are estimated at between \$4 and \$30 billion per year, and consumers gained considerably more.

172. The benefits of regulatory reform in the United States have been concentrated in long-distance, international and mobile communications markets. It is difficult to quantify these benefits, because they include dynamic elements such as new products and increased consumer choice. Crandall and Waverman (1995) provide an estimate of net economy-wide gains of between \$4 and \$30 billion per year. Consumers gained considerably more because firms have largely transferred efficiency gains to consumers, and have seen lower profits.

173. Overall costs to subscribers of long distance toll and international services (as well as mobile) have fallen significantly (see Box 1). Total revenue earned by domestic long distance and international carriers is currently well over \$100 billion per year, therefore reductions in average price levels (30 percent and higher) are saving US business and residential subscribers billions of dollars each year. Reductions in expenditures on telecommunications services also benefit consumers indirectly, since reductions in the costs of doing business generally translate into lower prices for goods and services throughout the economy.

Box 6.1. Indicators of the effects of regulatory reform

	Price changes (nominal)		Incumbent Market Share	
	1984 - 1992	1992 - 1996	1984	1996
Local Residential:	up 45%	up 5%	near 100%	near 100%
Intra-state Toll:	down 10%*	up 3%*	near 100%	near 100%**
Inter-state Toll:	down 50%***	down 17%	85%	55%
International:	N/A.	down 33%	100%	55%
Mobile:	N/A.	down 37%	competitive	competitive

* Based on Bureau of Labour Statistics data that does not include discount plans. Thus the data may understate price reductions.
 ** Incumbent market share in individual states varies considerably and, in select cases, may be considerably lower.
 *** Includes both long-distance and international and composed only of AT&T information.

Source: FCC (1998), *Trends in Telephone Service*, CCB, July. Local price is the average monthly rate including taxes and the subscriber line charge, long-distance (interstate) and international is average revenue per minute. Mobile is average monthly bill and includes both cellular and broadband Personal Communications Service. Incumbent market share is according to total revenue.

...but distribution of direct benefits has been uneven with respect to both quality and price gains.

Customers who consume primarily local services have not seen significant benefits from price reductions, and may have seen price increases.

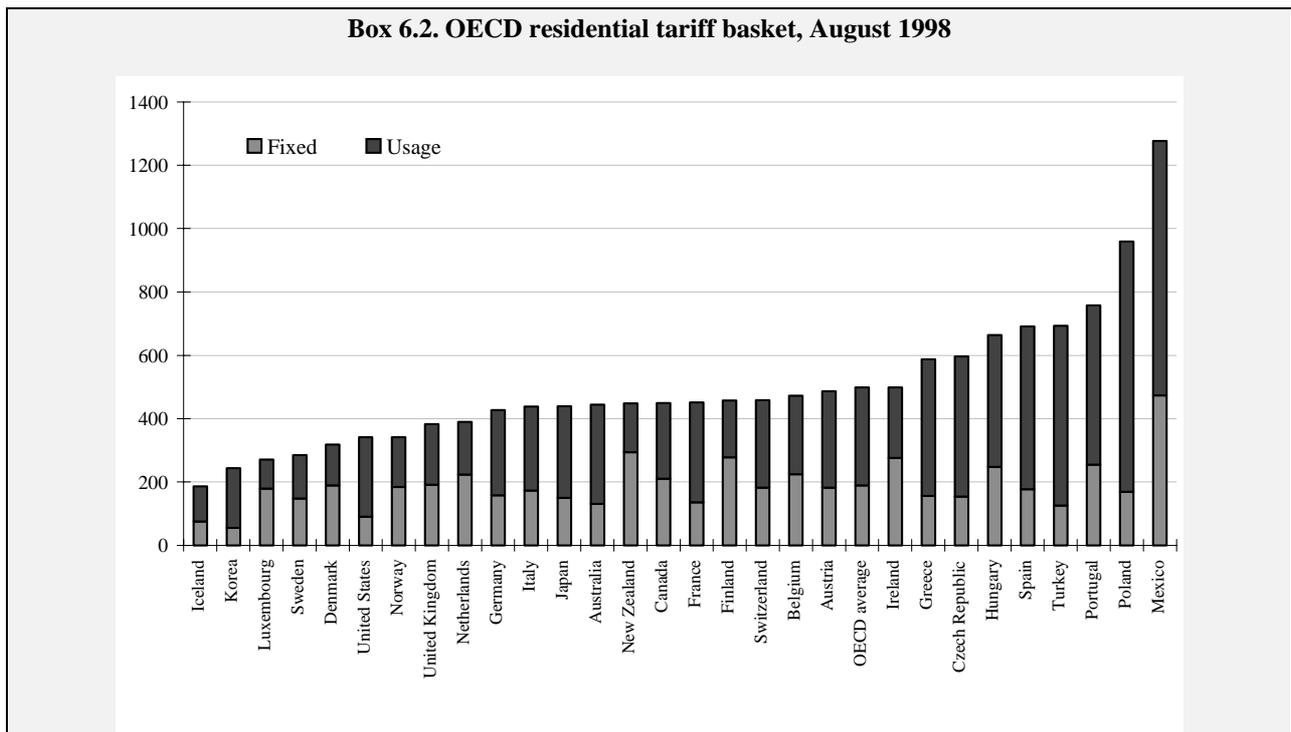
174. As Box 1 shows, distribution of consumer benefits due to price reductions has been uneven across users of telecommunications services. Large business customers enjoyed the most gains while the savings for individual residential subscribers varied, depending on calling patterns. Customers who consume primarily local services have not experienced significant benefits from price reductions, and may have seen price increases. Yet the overall price level of local services continues to be low in the United States, compared to other OECD countries (see Box 6.2).

Similarly, the quality of telecommunications service has improved particularly for large business customers.

Despite considerable ‘downsizing’ by carriers, employment in industry has grown modestly.

175. The quality of telecommunications service in the US has improved, particularly for large business customers, because of technological improvements and also because telecommunication operators compete on the basis for service quality. Moreover, the number of households with telephones increased over the reform period.

176. Despite considerable ‘downsizing’ by carriers, since 1990 employment in the telecommunications industry as a whole has in fact grown modestly. Most of the growth in employment is the result of rapid growth in the radiotelephone (cellular, beepers, paging) industry.



The key policy challenge today is introducing competition into local markets.

The divestiture did not facilitate competition into local markets.

High expectations surrounding the prospects for cable companies and others to compete in local markets have been disappointed.

177. Divestiture did not facilitate competition into local markets. Conditions of entry into local markets varied, and still vary, significantly across states. In the early 1990s, some state regulators developed initiatives to extend the beneficial effects of regulatory reform into their local markets. By 1995, at least twenty three states had certified one or more local competitors.

178. There were high expectations surrounding the prospects for cable companies and Competitive Access Providers as possible entrants into local markets in the early 1990s. They possess potential alternative access since they “pass-by” more than 95 percent of residences in the United States.⁷⁶ Yet potential new entrants have not been a significant competitive influence. Cable companies remain strong potential competitors as they develop the ability to provide broadband Internet access on a widespread commercial basis.

The current strategy establishes incentives for the RBOCs to open local monopolies in return for competing in long distance markets.

179. The approach to promoting local competition differs from the strategy for long-distance markets. The Telecommunications Act of 1996 attempts to strengthen earlier initiatives by making approval to enter in-region inter-LATA toll markets contingent on a demonstration that local markets are open to competition. This was meant to establish incentives for the RBOCs to open local monopolies in return for competing in long distance markets.

Local competition has not developed as quickly as hoped.

180. The US government has acknowledged that local competition has not developed as quickly as hoped.⁷⁷ The current share of nation-wide local service revenues of new entrants is about 1.4 percent.⁷⁸ Applications from RBOCs in several states to enter long distance markets were rejected when the government concluded that the local markets were not sufficiently open to competition.

Box 6.3. Key features of the 1996 Telecommunications Act

Interconnection: Incumbent local exchange carriers (the incumbent “LECs”) are required to provide interconnection to any requesting carrier at any technically feasible point. The FCC concluded that prices should be based on Total Element Long-Run Incremental Cost (TELRIC) plus a reasonable share of forward-looking joint and common costs.

Unbundling: Incumbent LECs are required to provide requesting telecommunications carriers non-discriminatory access to network elements on an unbundled basis at any technically feasible point. The FCC concludes that prices should be based on TELRIC plus a reasonable share of forward looking joint and common costs.

Resale: Incumbent LECs are required to offer for resale, any telecommunications service that the carrier provides at retail to subscribers. The FCC concludes that the price of resale services should be set at a discount off retail based on the costs that the incumbent LEC can avoid by selling at wholesale rather than retail.

Universal Service: An explicit mechanism to maintain local rates at affordable rates is mandated.

Access Charge Reform: To facilitate the development of an explicit mechanism for universal service, the FCC reformed the access charge rate structure.

Entry into long-distance: RBOCs are allowed to provide out-of-region inter-LATA service. A procedure is provided for under which the RBOCs are permitted to enter in-region inter-LATA when their local markets are found to be sufficiently open to competition. In assessing whether the local markets are open, the FCC is directed to give “substantial weight” to the DOJ’s assessment of a “competitive checklist.” Once an RBOC gains approval to offer inter-LATA service, they are required to do so subject to an accounting separation for a three year period.

Forbearance: The FCC is directed to forbear from aspects of regulation that are deemed to be unnecessary.

Removal of State Barriers to Entry: State regulation that raises barriers to entry into local markets is pre-empted.

Yet local competition is promising due to technological advances in alternative delivery systems. Further regulatory changes can speed up competition.

Cable systems, mobile services and wireless local loop can provide local access that is superior to traditional networks in terms of bandwidth and speed.

181. There remains considerable promise for local competition to develop. Technological advances such as digitalization, compression, fiber optics have paved the way for a variety of alternative delivery systems. Technological trials and small scale new entry⁷⁹ suggest that alternative networks -- cable systems, mobile services and wireless in the local loop -- can provide local access that is superior to traditional networks in terms of bandwidth and speed.

The speed with which these alternative delivery systems develop depends in part on regulatory developments.

182. The speed with which these alternative delivery systems are likely to develop depends in part on regulatory developments such as local rate rebalancing. Current geographic rate averaging requirements mean that some high-cost (e.g. rural) subscribers are served at prices below true cost. These are the customers for which wireless technologies are likely to be most well-suited. The speed with which these alternative delivery systems develop also depends on the speed with which new information services are introduced. There is an increased incentive to enter if a new network can expect to earn revenue from both voice telephony and other new information services.

Box 6.4. Why has local competition not developed as quickly as anticipated?

Local Rate Distortions? Are continuing subsidies that hold the price of local service below competitive levels impeding entry?

Technical Impediments? Many states do not provide intra-LATA equal access and number portability will not be fully implemented until 1999. Unlike traditional telecommunications carriers, cable networks' voice telephony service cannot operate in the case of a power outage. Have these technical barriers made entry unattractive?

Restraints on Competition? RBOCs have been prevented from providing one-stop-shopping -- i.e. providing local and long-distance service on a single bill. Prior to the 1996, AT&T and other interexchange carriers were faced with legal barriers to intra-LATA entry in some states. Are these barriers to providing one-stop-shopping inhibiting competition?

Judicial Uncertainty? Central aspects of regulatory policy are currently the subject of judicial challenge. Has uncertainty surrounding regulatory rules created a disincentive for investments by new entrants?

No Clear Strategy to Promote Facilities-Based Competition? Local competition initiatives in the U.S. encouraged resale entry as well as some facilities-based entry. Would a focused effort to promote local interconnection at a small number of points of the network, and selected unbundling of elements (if any are necessary) be more successful?

Technical Problems Faced by Cable Operators? Efforts to provide telephony on cable networks have demonstrated technical problems. Were claims in the early 1990s that cable systems were capable of providing two-way communications excessively optimistic?

Incumbent LEC Anticompetitive Conduct? An objective of the 1996 Act was to give incumbent LECs an incentive to co-operate in facilitating competition. Was the promise of inter-LATA toll entry a sufficient incentive?

Restrictions on RBOCs may be increasingly costly to the economy as the potential for competition grows.

Restrictions on RBOCs arising from the divestiture may become increasingly burdensome and costly to the economy.

183. The restrictions on RBOCs arising from the divestiture may become increasingly burdensome and costly to the economy (through loss of scope economies). These restrictions have had beneficial effects as a competitive safeguard and as an incentive to open local markets. However, as technological developments erode the case that local exchanges have natural monopoly characteristics and increase the importance of being able to provide "one-stop-shopping," the burden imposed by these restraints will become greater over time.

The dual federal-state roles can promote innovation, but also produces complexity and uncertainty in the regulatory regime.

Jurisdictional overlaps generate costs and uncertainties for market players.

184. Regulatory structures in the United States are complex webs that involve the states and the federal government, the relationship between sector-specific regulation and antitrust law, as well as between these agencies and the courts. In OECD countries such as Canada and Australia, the regulatory structure is simpler because there is exclusive federal jurisdiction. The dual federal-state role can give rise to both costs and benefits. The scope for states to pursue different policy initiatives can promote regulatory innovations. But jurisdictional overlaps generate costs and uncertainties for market players. In the highly litigious and adversarial regulatory environment (see chapter 2) in the United States, uncertainties have bred legal challenges and costs.

Federal pre-emption in areas where states have been slow to act could be a step in the right direction.

185. Successes in reducing barriers to entry, promoting cost-based interconnection, rate rebalancing and equal access have been most pronounced at the federal level. The 1996 *Telecommunications Act* provides for the pre-emption of state legislation that raises barriers to entry. While it is too early to assess the implementation of this provision, it is a positive step in the right direction.

Implementation of universal service policies is generally efficient and non-distorting.

186. Promotion of “universal service” has been central to US telecommunications policy.⁸⁰ For many years, regulatory bodies at the state level maintained low prices for local telecommunication service facilitated by long-distance prices well above competitive levels.

187. Policies aimed at promoting universal service through distorting prices impede regulatory reform efforts to rebalance rates and thus giving rise to reductions in economic efficiency.⁸¹ Introduction of competition erodes the ability to maintain price distortions thus causing proponents of other policy goals to oppose regulatory reform initiatives so as to protect implicit subsidies.⁸² Cross-subsidies are coming under increased pressure to be eliminated or reduced. A growing number of countries are putting in place other funding mechanisms that are competitively neutral such as general tax revenues (Chile), contributions from carriers (United States) or contributions from spectrum auctions (Guatemala).

188. The three principal universal service programs in the United States are generally consistent with these principles. Box 6.5 provides highlights of the reforms to universal service.⁸³

Box 6.5. Reforms to universal service

1) Introduction of transparent and explicit support for universal service. All carriers satisfying specific conditions can obtain support from the federal Universal Service Fund regardless of the technology used. All carriers, including wireless carriers, are required to make contributions to the universal service fund based on end-user revenues. To qualify for access to the fund, a carrier must be able to offer (and advertise) service throughout a geographic region known as a “service area.” The size of these service areas is left to the discretion of state regulators.

2) Revision and extension of subsidies for hook-up costs and the cost of monthly phone bills to qualifying low income customers (Lifeline and Link-Up America);

3) Introduction of a specific fund for the needs of schools, libraries and rural health care centers. Discounts to assist schools, libraries and rural health care centers to connect to the ‘Information Superhighway’ were designed to cut between 20 and 90 percent off the monthly charges of connecting to the network, and in some cases, some of the internal wiring costs. The discounts attracted applications from more than 40,000 schools and libraries.

4) Restructuring of the Subscriber Line Charge and the Common Carrier Line Charge, to partially transfer Universal Service Fund support costs to subscribers and interexchange carriers; increased subscriber line charges for second residential lines and multiline business customers; gradual phasing out of the existing traffic sensitive Common Carrier Line charge with a flat-rate Presubscribed Interexchange Carrier charge.

Application of benefit-cost analysis to telecommunications regulation should be strengthened.

Telecommunications regulations are not subject to the quality controls applicable to federal social regulations.

189. As an independent commission the FCC is, in general, not covered by presidential orders on regulatory quality (see chapter 2). This is rooted in historical relations between the independent commissions and the President, but means that telecommunications regulations are not subject to the quality controls applicable to federal social regulations.

The 1996 Act provides “forbearance” procedures to eliminate regulations that are no longer necessary given current market conditions.

190. The 1996 Act provides two mechanisms for systematic review of FCC regulations. First, the Act provides for a “Biennial Regulatory Review.” The FCC is required to review all regulations applicable to providers of telecommunications service in every even numbered year beginning in 1998, to determine whether the regulations are no longer in the public interest due to meaningful economic competition between providers of the service and whether regulations should be appealed or modified.

191. The 1996 Act also provides “forbearance” procedures to eliminate regulations that are no longer necessary given current market conditions.⁸⁴ Carriers can request initiation of the review procedure. While enactment of these provisions is an important step, they do not include an explicit recognition of the costs that regulation imposes, and important provisions of the 1996 Act are exempted.⁸⁵ Additional benefits are possible from a more systematic review process.

Regulatory reform is far from finished. Innovation in the sector will require continual review and adjustment.

Continued review and reform of the regulatory regime in this sector will be critical to encourage and permit new technologies to be brought into the market as quickly as possible.

192. Continued review and reform of the regulatory regime will be critical to encourage and permit new technologies to be brought into the market as quickly as possible. For example, despite the lack of local competition, technological change will continue to improve the prospects for entry in the next few years. As effective competitive safeguards are implemented in telecommunications industries and market forces introduced, the need for sector-specific economic regulation declines. As dominant positions of formerly regulated monopolists erode, reliance on market forces subject to economy-wide competition policy rules becomes a more effective means of promoting economic efficiency in the industry.

CHAPTER 7

Conclusions and policy options for regulatory reform in the United States

The balance between economic deregulation and attention to better social and pro-competitive regulation is a valuable aspect of the US reform programme.

193. Starting earlier and from a lower level of economic intervention, the United States has gone further than most OECD countries in eliminating the most harmful types of economic regulations, but within the context of strong competition policies and more efficient forms of regulatory protection. It has also done more to build quality controls into the public administration to ensure that social regulations make the best use of national resources. The balance between economic deregulation and attention to building better social and pro-competitive regulatory regimes is among the most valuable aspects of the US reform programme. These difficult reforms were aided by a culture of market competition, market openness, and administrative transparency. It was helpful that these institutions were already in place and did not have to be built.

Other countries are catching up. Continuing attention to regulatory quality is needed if the United States is to enjoy competitive advantages from good regulatory practices.

194. The United States was in the forefront of regulatory reform ten years ago and still sets the benchmark in many areas, but the performance gap has narrowed. By being among the first to move to efficiency-enhancing regulation, the United States faced higher risks, but reaped more benefits in global markets. Today, other countries are catching up and in some areas, such as use of flexible regulatory alternatives, surpassing the United States. Continuing attention to regulatory quality is needed if the United States is to enjoy its traditional competitive advantages from good regulatory practices.

The results for consumers of sectoral economic reform in terms of prices, service quality, and choice are solidly positive, but only with sufficient attention to building pro-competitive regulatory regimes and to maintaining consumer and other protections. This demonstrates the complementary nature of less economic regulation combined with better social regulation.

Concerns that reform would reduce safety and consumer protection are not borne out, probably because regulatory protections in these areas were not reduced in any of the reformed sectors.

195. The effects of sectoral reforms are still working their way through the economy. but the medium-term results are clear: *in almost every sector the results for consumers in terms of prices, service quality, and choice are solidly positive.* Concerns that reform would reduce safety and consumer protection are not borne out, probably because regulatory protections in these areas were not reduced in any of the reformed sectors. Debate on the right level of regulatory protection in markets, such as consumer rights in health care, continues to be intense. A trend toward both greater concentration and greater contestability in reformed sectors must be carefully watched to ensure that the first does not erode the second.

Attention to consumer protection is important in parallel with economic deregulation.

196. Attention to consumer protection is important in parallel with economic deregulation. As US consumers have struggled with expanding choice in areas such as health care, telecommunications, and financial services, regulators and competitive markets have tried to respond with better information, new standards for quality, and new definitions of consumer rights. The balance is still evolving, but earlier attention to consumer issues in new markets at federal and state levels would have been beneficial in maximising the consumer benefits of reform.

Dynamic effects were more important than expected. Regulatory reform proved to be a valuable supply-side tool that boosted demand, and improved the efficiency and flexibility of the national economy.

In most sectors, gains from innovation were more important than static efficiency gains.

197. In most sectors, gains from innovation were more important than static efficiency gains. Reform unleashed a level of innovation in products, services, production methods, and corporate organisation that is responsible for most of the economic gains. The ripple effects across sectors as new technologies and business practices had upstream or downstream impacts were unexpected, but accounted for many of the most important gains. The innovation effects of regulatory reform are long-term and are still evolving with the industries themselves.

Reforms helped the US economy to adapt more quickly to changes in technology and external shocks.

198. Sectoral reforms boosted demand in many sectors. They helped increase flexibility in the labour market and elsewhere. These effects amplified consumers gains, and produced new high-growth industries. They also allowed the US economy to adapt more quickly to changes in technology and to external shocks, improved trade-offs between inflation, growth, and unemployment, and boosted the US lead in productivity.

A well-balanced reform programme includes both deregulation and quality regulation.

These reforms show that there is a close and supportive relationship between quality regulation, competition, and market openness that amplifies their value as a common framework for regulatory action.

199. These reforms show that there is a close and supportive relationship between quality regulation, competition, and market openness that amplifies their value as a common framework for regulatory action. Regulatory reform will be more sustainable and will produce greater benefits in terms of economic and policy performance if these three dimensions are integrated. In particular, US experience shows that market performance and protection of social values can be pursued simultaneously by combining economic deregulation and market openness with application of quality and efficiency standards to effective social regulation.

A comprehensive approach produces more benefits, since regulatory reform is more effective when integrated with flexibility in factor markets, when competition is vigorous in upstream and downstream sectors, and when the macroeconomic environment is geared to growth.

The impacts of reform are sensitive to national conditions, and hence lessons learned in the United States must be carefully considered for relevance to other countries.

200. A comprehensive approach to regulatory reform across related policy areas creates positive synergies:

- Stable macroeconomic policy, flexible labour markets, and complementary structural reforms provided a stable environment, and often a context of strong growth, which facilitated adjustments that followed from regulatory reform. Where macroeconomic policy was poor, such as when monetary expansion contributed to the asset bubble of the mid-1980s, it exacerbated regulatory problems in the financial sector and helped fuel the overexpansion in air transport.
- Strong competition authorities helped prevent consolidation in new markets from going too far and undermining the benefits of reform.
- The positive effects of regulatory reform on employment were amplified and the negative effects minimised in part because of the flexibility of US labour markets.
- Positive effects on competition of new entrants and the ability to innovate new products were stimulated by the efficiency of US capital markets.
- Pro-competitive regulation allows entrepreneurship to flourish in combination with other institutions such as private financing and well developed stock markets, corporate governance such as bankruptcy laws, patent laws, and, again, flexible labor markets. With this policy mix, the United States has created one of the most favorable regulatory regimes for entrepreneurs (OECD, 1997).

These linkages suggest that the impacts of reform are sensitive to local conditions, and hence lessons learned in the United States must be carefully considered for relevance to other countries.

A multi-sectoral approach can also boost gains.

201. A multi-sectoral approach can also boost gains. The benefits of sectoral reform are amplified when competition is vigorous in upstream and downstream sectors. In the United States, innovations in information technology and networking in transportation sectors reinforced each other. Nearly simultaneous reform allowed the development of intermodal transport and increased competition across sectors, further stimulating productivity increases and a more rational allocation in the transportation market as a whole. Simultaneous reform prevented efficient consolidation from increasing monopoly power.

A supportive macroeconomic policy environment is important to gain the full benefits of reform.

202. A sustained macroeconomic policy environment within which the market forces released by regulatory reform can operate is important to gain the full benefits of reform. This was achieved in the United States through fiscal consolidation and stable inflation.

Evaluation of costs and benefits of regulatory reform must be long-term and multi-dimensional to identify the real trade-offs.

Often, reform had far-reaching, long-term, and multi-sectoral effects on economic behavior that were not predictable in advance.

203. US experience shows that many benefits of reform are long term and require sustained commitment to reform. In network industries characterised by high levels of capital intensity, readjustment of capital stock and producing efficiency benefits takes time. Often, reform had far-reaching, long-term, and multi-sectoral effects on economic behaviour that were not predictable in advance. Some effects were positive -- such as innovation -- while others were negative -- such as consumer abuses and weakening of labour bargaining strength that contributed to an unknown degree to income inequity. More systematic monitoring and evaluation in the aftermath of reform would probably have helped the United States adjust to unexpected impacts more quickly, though in any case responsiveness would be hampered by sluggish regulatory process.

Reform promoted good job growth and boosted standards of living, but there were indirect effects on labour bargaining strength and uncertain effects on distribution of wealth.

204. Evaluation of the costs and benefits of regulatory reform must also be multi-dimensional to identify the real trade-offs. Reform promoted good job growth and boosted standards of living, but there were indirect effects on labour bargaining strength and uncertain effects on distribution of wealth. In the United States, slower productivity growth and widening of income distribution are related to high employment growth; high levels of human and physical capital imply lower growth of total factor productivity.

Regulatory flexibility and adaptation over time seems to be as valuable as regulatory cost-effectiveness.

Technological change and globalisation will increasingly reward dynamic regulatory efficiency.

205. The US experience suggests that regulation that adapts over time to changing conditions may contribute more to economic and policy performance than does regulation that is optimally efficient at a point in time. Technological change and globalisation will increasingly reward dynamic regulatory efficiency. Hence, flexibility and capacity for regulatory adaptation are important in today's regulatory regimes.

Timely regulatory reform is more likely to be launched and sustained if regulatory policies are contestable.

206. The implications are far-reaching, since regulatory rigidities are common. A question often asked in OECD countries is how regulatory reform can be initiated and sustained against powerful special interests who benefit from existing regulatory practices. US experience suggests that one element of the capacity for change is contestability of regulatory policies. In the United States, contestability is driven by open processes, multiple actors in the federal system, and administrative, political, and judicial channels for challenge. These characteristics are key assets for the American regulatory system, even though they might lead to static regulatory costs and inefficiencies. A frequent element of economic reform of network industries in the United States was that some firms in each sector believed reform would benefit them, but this produced change only because they had channels to pursue their interests.

Transparency in regulatory decisions and application helps to cure many reasons for regulatory failures.

207. The high level of regulatory transparency in the United States has been particularly valuable. Transparency in regulatory decisions and application helps to cure many reasons for regulatory failures: capture and bias toward concentrated benefits, inadequate information in the public sector, policy rigidity, uncertainty, and lack of accountability. Moreover, transparency helps create a virtuous circle -- consumers trust competition more because special interests have less power to manipulate governments and markets.

POLICY OPTIONS FOR REGULATORY REFORM

Yet there are recurring patterns in US regulatory regimes that reduce consumer welfare and policy effectiveness.

208. This report is not a comprehensive review of regulation in the United States, but the areas reviewed show recurring patterns in regulatory regimes that reduce consumer welfare and policy effectiveness. Problems with complexity, coherence and consistency, both horizontally across the US government and vertically in federal/state relations, have been identified in many policy areas. Regulatory quality controls are fragmented, and have important gaps in the areas of primary legislation, economic regulation, and state-level regulation. US regulatory habits of excessive detail, legalism, and rigidity are still dominant, reducing innovation and responsiveness, and undermining market openness. Consistent application of the benefit-cost principle requires more years of effort, and better data reveals substantial inefficiencies in net benefits and cost-effectiveness of social regulations. New regulatory challenges have emerged with new technologies in network industries.

209. This section identifies actions that, based on international consensus on good regulatory practices and on concrete experiences in OECD countries, are likely to be particularly beneficial to improving regulation in the United States. The summary recommendations presented here are discussed in more detail in the background reports to Chapters 2-6, published separately. They are based on the recommendations and policy framework in The OECD Report to Ministers on Regulatory Reform.

Use of flexible and market-oriented policy instruments should be expanded.

The United States is missing the opportunity to exploit one of the world's great innovative cultures in the pursuit of important social objectives.

210. By failing to use more flexible and market-oriented policy instruments in social policy areas, the United States is missing the opportunity to exploit one of the world's great innovative cultures in the pursuit of important social objectives. Although the private sector is innovative, public sector regulators are typically not. The hidden costs of the rigid and legalistic regulatory style typical in the United States are even higher in an innovative and entrepreneurial economy.

- *Operational guidance should be developed for ministries and support experimentation on a wider range of co-operative methods.* A good practice that should be considered government-wide, and by other countries, is to build responsibility for innovation into the bureaucracy through processes such as the 1998 ECOS-EPA Agreement, which creates a transparent channel for new ideas from states and regions to be considered at the federal level.
- *Use the Government Performance and Results Act to focus on the performance of regulators in delivering net benefits.* Innovation has been discouraged by traditionally weak accountability mechanisms for the performance of regulatory programmes, which have emphasised inputs such as inspections and rules, rather than outcomes in terms of results and costs. Increased attention to results-oriented management in public sector can help break through legalistic and procedural bottlenecks to regulatory innovation.
- *In the electricity industry, subsidies for public purposes should be supported by non-bypassable and transparent fees. The regulatory system to promote “green” generation should provide incentives for such generation to be provided at least-cost. Provision should be made for consumers to be allowed voluntarily to buy “green” generated electricity beyond that required.*

The policy responsiveness of the US regulatory system should be further improved by streamlining cumbersome and sluggish processes.

Sluggishness, delay, and inefficiencies in regulatory processes will increasingly penalise the United States as the pace of globalisation and innovation steps up.

211. Sluggishness, delay, and inefficiencies in regulatory processes will increasingly penalise the United States as the pace of globalisation and innovation steps up. New regulations that are socially beneficial should be issued faster, and existing regulations should be updated regularly. The cost and length of time needed for regulatory change has imposed large hidden costs on the quality of the regulations. Regulators are less willing to implement new regulatory quality procedures when it already takes so long to get regulations through the pipeline. Beneficial modifications to old regulations are less likely to be carried out. Regulators are less likely to innovate and take risks, since a setback can cost several years of effort.

- *Continue to seek means to streamline regulatory processes through the National Performance Review process.* The 1993 NPR noted that a layering of procedural requirements has “made the rulemaking process increasingly burdensome and rigid.”⁸⁶ Since 1993, the situation has worsened.
- *Strengthen quality management in executive and legislative branches as a substitute for some aspects of judicial review.* There is little doubt that litigation rights, whatever their benefits, increase costs and slow innovation in regulation. The 1996 Small Business Regulatory

Enforcement Fairness Act, for example, allows judicial review of agency studies of small business impacts; several cases have been filed. A less costly approach would have been to establish a stronger watchdog in the administration to resolve problems before regulations are issued. At the same time, stronger internal controls and filters will help to increase the percentage of regulations that meet the benefit-cost test and increase regulatory net benefits.

- *Review current administrative law practices for regulatory development and consultation.* A thorough review of administrative practices would be an important contribution to identifying where regulatory procedures can be simplified, while maintaining transparency and full consultation. Supplements to “notice and comment” procedures that enrich dialogue and draw in a wider range of interests should be considered as part of the review of the Administrative Procedure Act.
- *Better integrate numerous regulatory quality procedures such as impact analyses, review processes, and performance measurement.* The current system of regulatory quality control is the sum of various piecemeal procedures that have accumulated over years. In this case, the whole is less than the sum of its parts, because scarce resources are scattered through many steps rather than targeted on the most important issues. Rationalization of benefit-cost analysis, unfunded mandates analysis, paperwork estimates, small business analysis, and environmental assessments into a single integrated assessment will produce better results at lower cost, better target real problems, improve consistency of treatment, and avoid duplication of effort
- *Increase the use of sunseting to ensure that regulations are kept on the books only if they are still necessary.*

Regulations should be reviewed systematically to ensure that they continue to meet their intended objectives efficiently and effectively.

The incremental and piecemeal nature of legislative change in the United States compares unfavorably to the greater capacity for fundamental reform often enjoyed by parliamentary governments.

212. A strong point of the US system is the central review mechanisms within OMB and elsewhere to test the quality of new regulations. Yet the current system is very weak with respect to systematic review of the vast body of existing laws and other regulations. It looks forward, but not back, though in many areas poor laws have substantial negative downstream effects on the quality of policy implementation and policy outcomes. Other OECD countries have unfavorably compared the incremental and piecemeal nature of legislative change in the United States to the greater capacity for fundamental reform often enjoyed by parliamentary governments. The job is not done, for example, in important sectors characterised by fast technological change (telecommunications, electricity) and strong competition oversight is needed in reformed sectors (airlines, telecommunications) still adjusting. Here, the sluggishness of US regulation can erode competitiveness.

Current regulatory review processes seem focused on pruning each tree rather than improving the health of the forest. The reinvention principle should guide future regulatory policy reviews.

- *Expand the value, speed and scope of review of primary legislation and other regulations by launching a structured process of rolling reviews, reviewing policy areas rather than individual rules, and experimenting with use of advisory bodies for the reviews. High priority should be placed on systematic review and upgrading of laws and major regulatory policies through a rolling review process based on prioritisation of policy areas. Areas subject to a fast technological change or where regulatory failure is most costly should have highest priority. The reinvention principle should guide the reviews to improve understanding of interactions between regulations having a cumulative and overlapping impact, originating from different agencies or even different levels of government. Such linkages are often not analysed. In every law reviewed, emphasis should be given to encouraging innovation in approaches, with clear accountability for results, and to identifying the most efficient federal/state relationship in the policy area. Comprehensive regulatory review could be improved by involvement of panels of users or advisory boards.*

Market openness considerations should be incorporated into regulatory reviews.

- *Include a market openness perspective in the reviews of existing legislation and sectoral regulation. The six efficient regulation principles (see Chapter 4) should be incorporated into regulatory reviews. FCC biennial regulatory reviews provide a useful model for such an exercise in other sectors.*
- *Review existing sectoral restrictions on foreign investment with a view to preparing the ground for their early removal.*

The universal service funding mechanism in the telecommunications sector should be reviewed.

- *In the telecommunications industry, the US universal service funding mechanism should be reviewed to minimise the economic distortion in the telecommunications market.*
- *In the telecommunications industry, barriers to entry by alternative communications networks should be reduced by eliminating asymmetries in the treatment of communications services. In particular, the regulatory regime for broadcasting should be reviewed, in the light of convergence, as soon as possible.*

In the electricity sector, further reform of economic regulations would stimulate competition.

Distortions to competition between public and private electricity utilities should be eliminated.

- *In the electricity industry, distortions to competition should be reduced by making appropriate changes in the tax and subsidy systems, the jurisdiction of FERC and the antitrust authorities, and other different treatment of public and private utilities. Consideration should also be given to privatisation of the electricity-generating businesses of publicly-owned utilities, or at minimum corporatisation with market-like returns to debt and equity-holders for their commercial activities. Distortions of energy choices through subsidies, taxes, and other support policies should not unnecessarily distort competition.*

Where mandatory divestiture is not feasible, “operational separation” should be required and divestiture encouraged.

- *In the electricity industry, to achieve effective competition in generation and non-discriminatory access to the transmission grid and system operation, divestiture of generation from transmission should be required. Where mandatory divestiture is not feasible, “operational separation” should be required and divestiture encouraged. Connections for new generation to the existing transmission grid should be provided on non-discriminatory terms. To achieve effective competition in supply, entry into supply should not be economically restricted and non-discriminatory access to distribution should be ensured. To provide greater incentives for efficiency in the sector, direct access by all end-users to electricity markets (“retail competition”) should be granted as soon as possible and within technical feasibility. The governance of entities such as independent system operators, power exchanges and reliability councils should be structured in such a way as to avoid discrimination.*

Locational pricing could improve efficiency in the power sector.

- *Also in the electricity sector, further experimentation in locational pricing of electric power should be undertaken. Decisions about grid pricing schemes should take into account not only the economic efficiency losses from imposing the price constraints implicit in those schemes, but also implementation costs. Based on these results, consideration should be given to the widespread application of locational pricing. Multi-part transmission tariffs might provide appropriate incentives for grid investment.*

Likewise, the scope and enforcement of competition policy should be reviewed and some weaknesses corrected.

The risk of inconsistency and gaps in competition law coverage should be corrected.

- *Eliminate from the competition law the remaining exemptions and sector-specific jurisdictional provisions. The risk of inconsistency and gaps in coverage should be corrected by eliminating unnecessary exemptions and clearly assigning responsibility to the general competition law rather than a sectoral regulator. Sector-specific authority concerning mergers and other competition issues in energy and telecommunications should also be eliminated in the course of deregulation.*

Competition authorities should intensify their oversight of the electricity sector as reform proceeds.

- *In the electricity industry, the antitrust authorities should continue their advocacy of competition at both federal and state levels. In order to ensure adequate enforcement of the competition law, competition authorities should refine the methodology for reviewing mergers in this sector, should closely oversee the spot market surveillance by the independent system operators, and be responsible for investigating and remedying anticompetitive behavior detected through this surveillance.*

More coordination and review are needed to improve the efficiency and coherence of regulations at the federal and state interface.

The role of states as innovators and testing grounds for new ideas is a national asset that can speed up change and regulatory responsiveness.

Yet a federal country must work harder to establish quality regulation and maintain it over time. Static losses from uncoordinated state actions can be large and durable.

State regulation and special legislation impairs competition and may delay reform.

Transparency and non-discrimination in state and local regulation needs work.

213. The quality of US regulation is both boosted and hindered by the federal state structure. The role of the states as innovators and testing grounds for new ideas is a national asset that can speed up change and regulatory responsiveness. States can better adapt regulation and reform to local conditions. This asset is under-utilised by federal regulators, who tend to prefer standardised federal solutions to problems.

214. Yet the value of experimentation and learning in the federal system should not discourage efforts to find efficient regulatory solutions through coordination and, if justified, pre-emption. More attention to the coherence of the regulatory framework through comprehensive reviews and more coordination between federal and state actions would reduce the costs of overlaps and inconsistencies, speed up reforms of sectoral regulatory regimes, and improve the cost-effectiveness of social regulation. A federal country must work harder to establish quality regulation and maintain it over time. Static losses from uncoordinated state actions can be large and durable. This review has identified several areas where coordinated regulatory reform would produce gains.

- *In competition policy, undertake a comprehensive study of the extent and effect of the state action doctrine, in preparation for legislation to reduce its scope or eliminate it.* The impact of the state action doctrine, and of anti-competitive state and local legislation, is a matter of concern. State regulation and special legislation impairs competition and may delay reform in many areas, such as professional services, distribution, telecommunications and electric power. Congress has already corrected this in some sectors, such as trucking, where anti-competitive effects of continued state regulation were clear. A comprehensive study should be undertaken to assess the competitive effects of state laws and regulations and to identify sectors where reform is most needed. A model for such a study is the review of state constraints on competition now underway in Australia.
- *In competition policy enforcement, develop clearer assignments of responsibility among enforcement officials between the federal and state levels to avoid overlap and duplication.* Adoption of rules to permit greater informal staff-level consultation in enforcement matters among sectoral agencies with competition policy responsibilities would improve co-ordination.
- *Heighten awareness of and encourage respect for the OECD efficient regulation principles in state and local regulatory activities affecting international trade and investment.* Ensuring transparency of subfederal regulation is crucial to international market openness. Experience shows that rigorous attention to ensuring non-discriminatory subfederal regulation is also needed.

New ideas for permits and licenses used in other countries could be useful in the United States.

- *Encourage entrepreneurialism by streamlining permits and licenses at the federal level, by co-ordinating with the states on review and streamlining of permits and licenses, and by building more complete information systems for enterprises. Ex ante permits and licenses can inhibit business start-ups and are costly to administer. Efforts in the United States place too little focus on ensuring that such requirements are the minimum necessary to achieve policy objectives, probably due to the fact that most such requirements are state and local. New ideas -- such as the move to a “supply model” in Germany that offers choices to investors depending on the degree of risk they wish to accept -- are being developed and implemented in OECD countries, and could be useful in the United States.*

More attention is needed to creating efficient regional electricity markets.

- *In the electricity sector, to reduce overlapping or duplicative regulatory responsibilities, and to promote clearer, simpler and more practical regulation, a framework for the establishment of regional pacts among states for electricity regulation should be established, and the respective roles of federal and state regulators should be clarified. Lost efficiencies stem from regional markets having to operate under multiple regulatory regimes, and there are increased compliance costs from utilities operating in multiple regimes. Regional pacts regarding the regulation of the sector, where the regions are coincident with electricity markets, could reduce some of these costs, while retaining the flexibility and heterogeneity to allow regulatory innovation.*
- *In the electricity industry, consideration should be given to granting to the Federal Energy Regulatory Commission siting authority for transmission.*

Larger independent system operators would, for example, reduce reliability costs.

- *To reduce the cost of reliability in electricity grids, larger independent system operators should be promoted; where independent system operators are sufficiently large, they should be given some responsibility for reliability. To adapt the reliability regime to the development of markets for electricity, the Federal Energy Regulatory Commission should be given oversight of reliability councils, and their recommendations should become mandatory.*

If states continue to erect barriers to entry in telecommunications, Federal authority to regulate the sector should be expanded.

- *In the telecommunications sector, competition in intra-LATA markets should be promoted by federal initiative as a necessary step to promote rebalancing of rates to reflect economic costs and thus to promote entry into local markets. If current initiatives fail to eliminate state actions that have the effect of raising barriers to entry, consideration should be given to vesting exclusive authority in the federal government as is done in Australia and Canada.*

Important gaps in regulatory quality controls should be closed to improve attention to market openness impacts, and to bring economic regulation under benefit-cost requirements.

Trade and investment impacts are neglected when assessing regulatory benefits and costs...

- *Require assessments of the effects of proposed rules on inward trade and investment as part of the Regulatory Impact Analysis (RIA).* Requirements for benefit-cost analysis do not include specific reference to assessing impacts on trade and investment. Weaknesses in oversight by OMB and USTR suggest that this aspect is neglected in the quality control process, increasing the risk that such impacts will be discovered only through trade frictions. The six efficient regulation principles provide a good guide to incorporating market openness impacts into benefit-cost analysis.

..and the independent commissions responsible for most economic regulations are not required to base their decisions on benefit-cost analysis.

- *Expand coverage of mandatory quality controls to economic regulation.* Economic regulation is less likely to produce net benefits than is social regulation. An ideal regulatory reform program would put stricter controls on the use of economic regulations than on social regulations. The US program does the opposite. The independent commissions responsible for most economic regulations are not required to base their decisions on benefit-cost analysis. This gap is rooted in historical and legal relations between the independent commissions and the president, but the result is that these commissions provide relatively little information on the benefits and costs of their actions. Streamlining of regulations in the US telecommunications industry, for example, would be supported by extending mandatory regulatory quality controls to regulatory activities of the Federal Communications Commission.

Continued integration of market openness and regulatory policies will produce benefits both in the United States and in other countries.

Regulatory barriers to trade can be lowered through regulatory co-operation with trading partners.

- *Seek to ensure that bilateral or regional approaches to regulatory co-operation are designed and implemented in ways which will encourage broader multilateral application.* Mutual recognition of regulations and conformity assessment procedures, increased use of industry-developed standards in lieu of national regulatory measures, and other approaches to intergovernmental regulatory co-operation offer promising avenues for the lowering of regulatory barriers to trade and investment.

Business initiatives to lay the groundwork for regulatory co-ordination could drive market-opening reforms.

- *Build on the TABD model to encourage the continued involvement of the US and international business communities in domestic regulatory reform efforts.* Informal business-driven processes such as this have proven valuable catalysts for market-opening regulatory reform across a range of particular sectors and horizontal issues. Wider government-to-business partnering on regulatory issues holds strong potential for pragmatic, result-oriented reform attuned to evolving business realities.

- *Intensify efforts to use existing international standards and to participate more actively in the development of internationally harmonised standards as the basis of domestic regulations. A useful step would be to systematically assess the extent to which regulators currently rely on international standards and to explore rationales for departures from this practice.*
- *In the electricity industry, the United States should consider whether the objectives of the reciprocity requirement in the federal open access regulation could be met in a less trade restrictive manner.*

MANAGING REGULATORY REFORM

Continued reform will proceed faster and more deeply if reformers take concrete steps to demonstrate that protection has been maintained and good regulations are well enforced.

215. While the US public debate over regulatory reform is among the most well-informed and transparent in OECD countries, there is still too little information on the results of reform strategies, including their effects on programme effectiveness, costs, economic performance, and distribution of gains and losses. Such information is critical if reform is to enjoy support from citizens who place high value on safety, health, environmental quality, and other values promoted by regulation. At this juncture, it seems that fears about the effects of reform on levels of protection have not been borne out, but continued reform will proceed faster and more deeply if reformers take concrete steps to demonstrate that protection has been maintained and good regulations are well enforced. Evaluation of the impacts of reform and communication with the public and major stakeholders will be increasingly important to further progress.

ANNEX

OTHER FIGURES AND TABLES

Figure 1.1 United States labour productivity growth, business sector
(Actual 3-year moving average vs trend ¹)

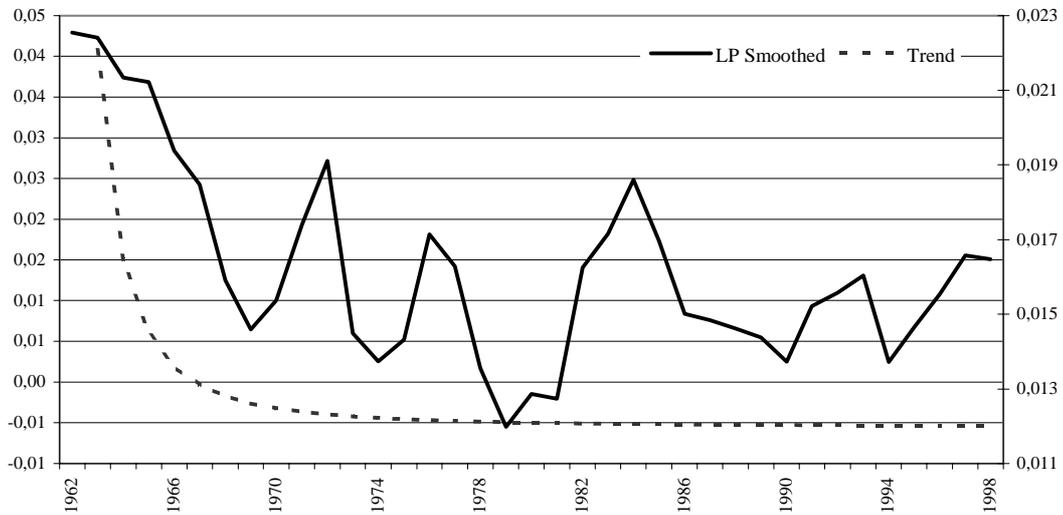


Figure 1.2. United States labour market performance ²

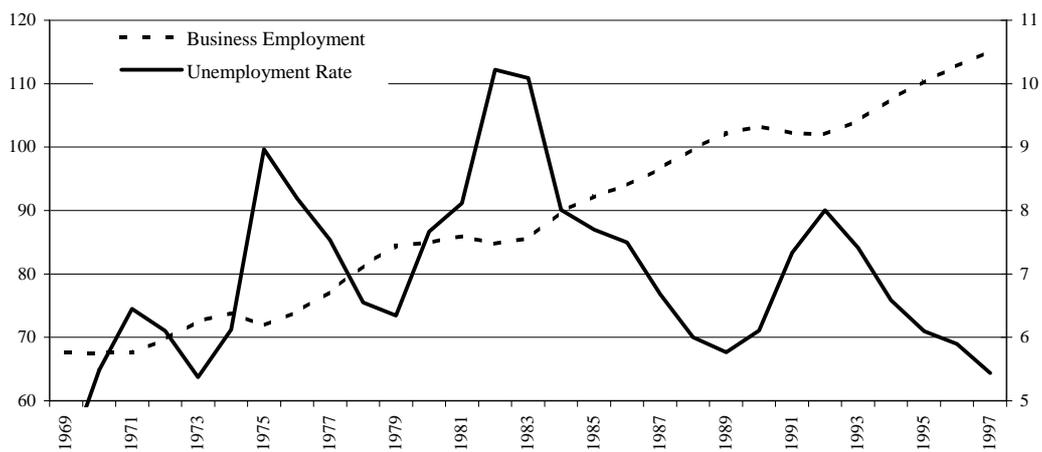
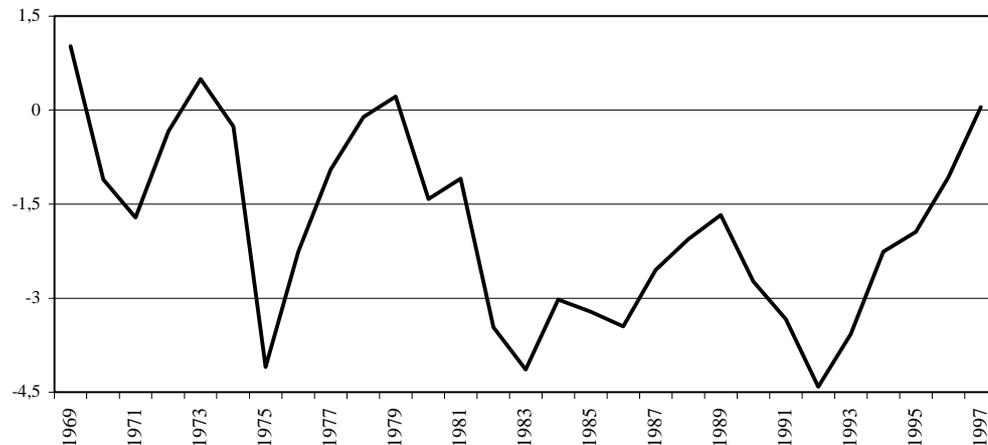


Figure 1.3 United States budget balance
As a percentage of GDP



1. Data for Trend refers to the right scale.
2. Business employment in millions (left scale).
Source : OECD, ADB database.

Figure 1.4a United States growth performance in telecommunications VS OECD countries

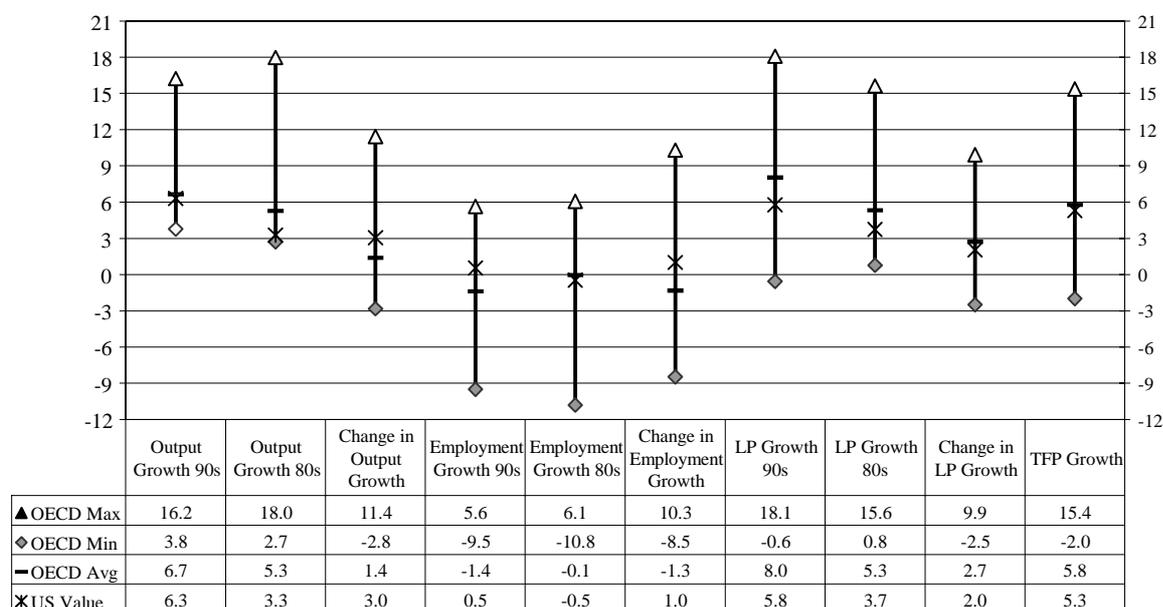
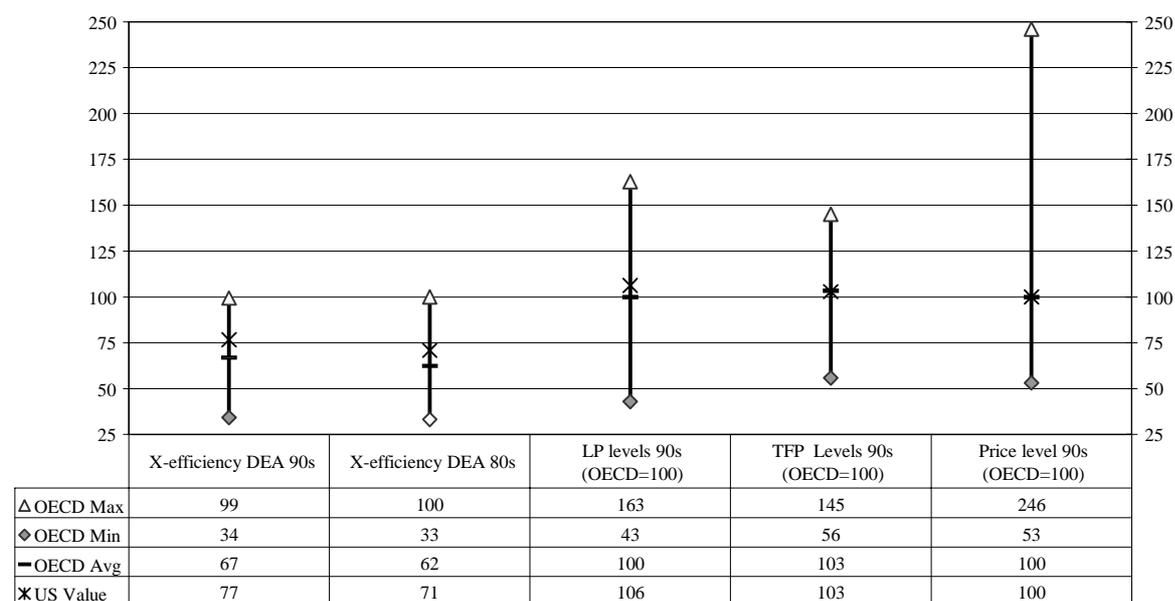


Figure 1.4b United States performance in levels in telecommunications VS OECD countries



Notes :

For each figure the vertical line covers the range of all values from the maximum to the minimum of the relevant group of countries.

Output = mainlines + cellular subscribers

Employment = total employment

Labour productivity (LP) = mainlines+ cellular subscribers/employment

Total factor productivity (TFP) = capital is calculated using the perpetual inventory method and the investment PPP (the labour share is set at 0.54 which is the OECD average for telecommunications)

DEA = results of data envelope analysis with revenue (converted with sectoral PPP), mainlines+cellular subscribers and numbers of pay phones as output concepts and employment and capital (as in TFP) as inputs.

Price level = simple average of a basket of services (including business and residential prices of local, trunk and international fixed voice telephony, leased lines and internet).

Source : OECD Telecommunications database 1997, OECD Communications Outlook 1997.

Figure 1.5a United States growth performance in electric power VS OECD countries

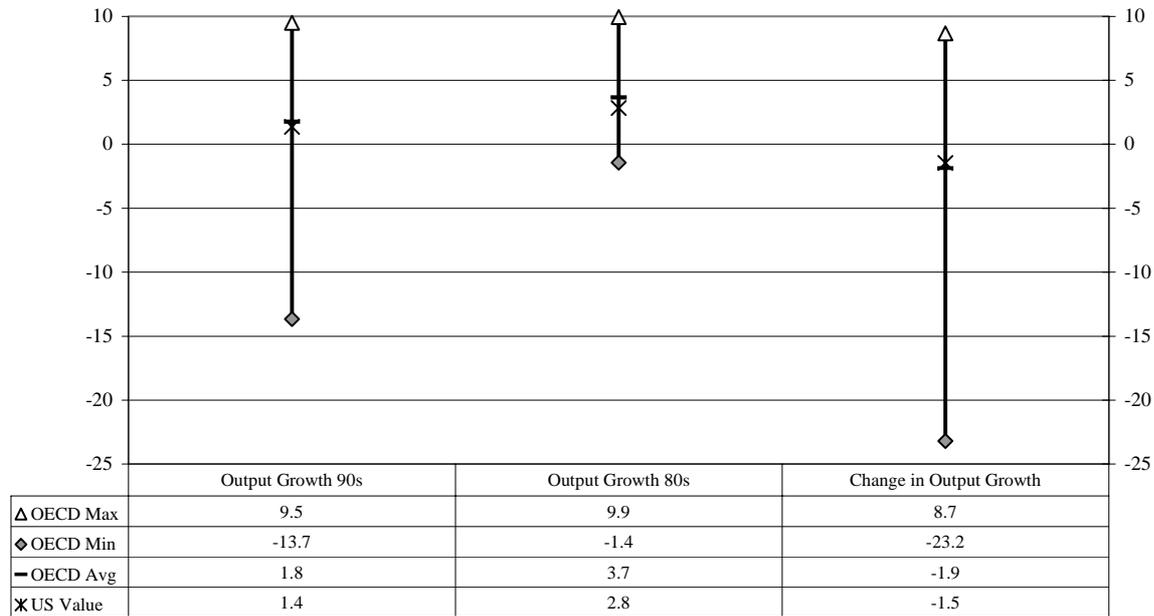
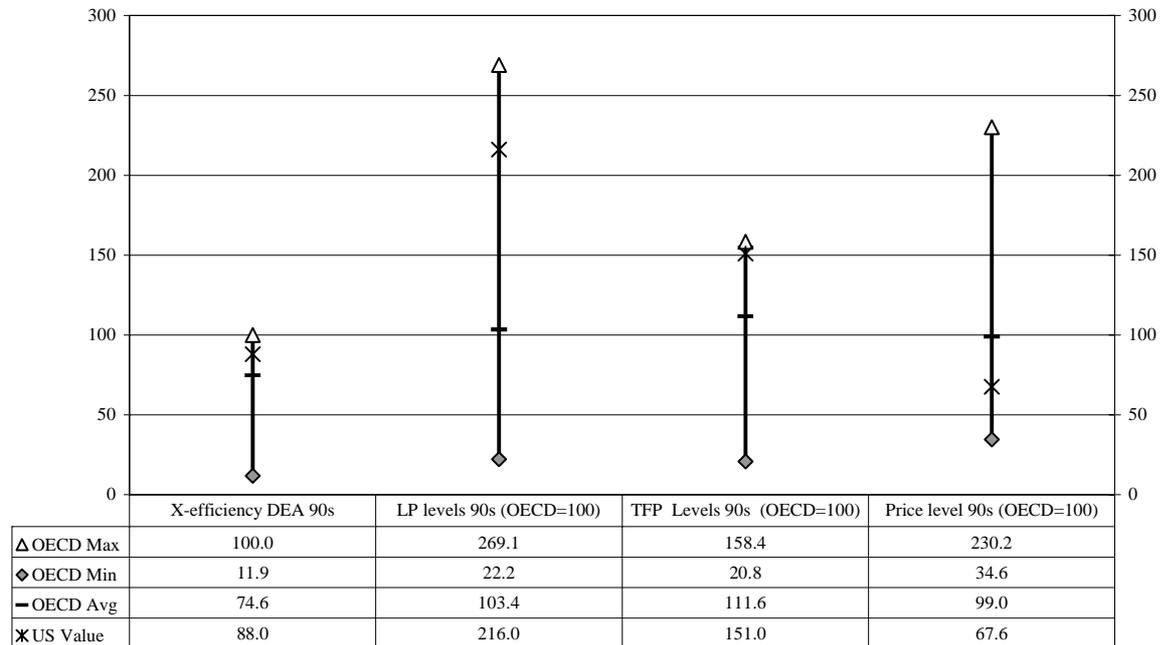


Figure 1.5b United States performance in levels in electric power VS OECD countries



Notes :

For each figure the vertical line covers the range of all values from the maximum to the minimum of the relevant group of countries.

Output = net electricity production

Employment = total employment

Labour productivity (LP) = net electricity production/employment

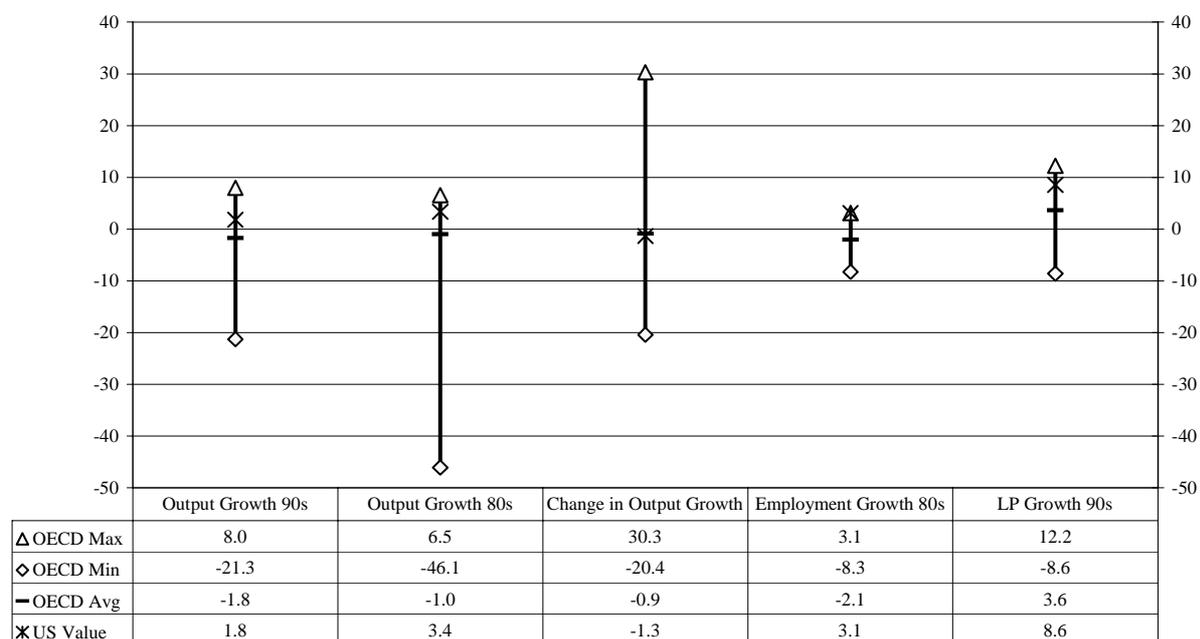
Total factor productivity (TFP) = output is net electricity production, inputs are employees and total installed capacity (the labour share is set 0.25 which is the OECD average for electricity, gas and water).

DEA = data envelope analysis with net electricity production as output and labour and installed capacity as inputs

Price level = business electricity price, converted with GDP-PPP

Source: International Energy Agency.

Figure 1.6 United States growth performance in rail transport VS OECD countries



Notes :

For each figure the vertical line covers the range of all values from the maximum to the minimum of the relevant group of countries.

Output = passengers -km

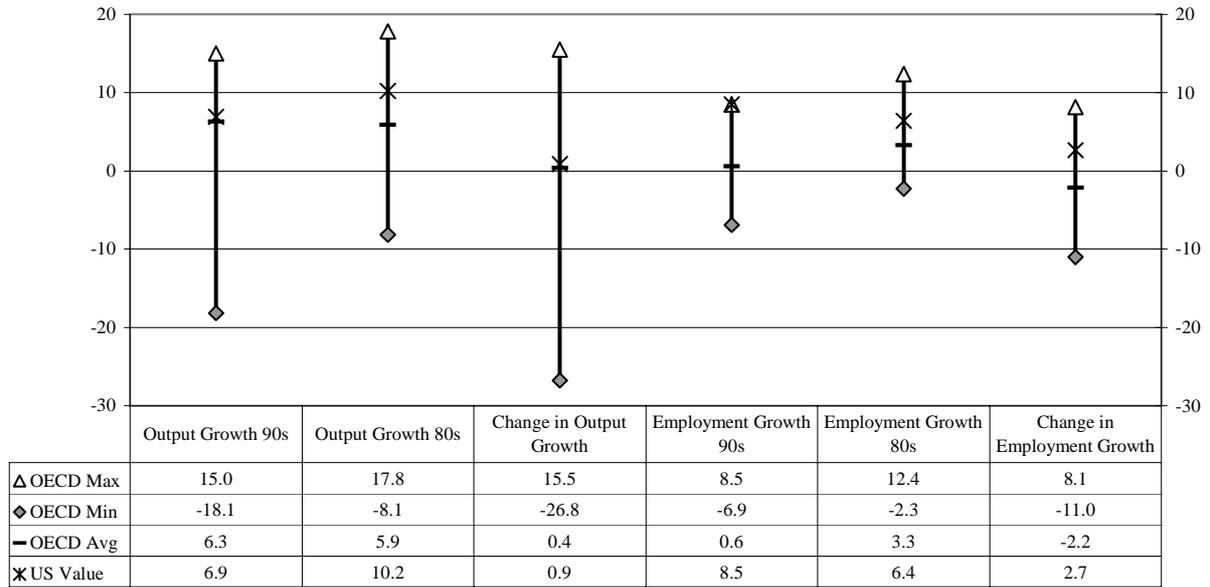
Employment = total employment

Labour productivity (LP) = passengers-km/employment

Total factor productivity (TFP)= passengers-km as output, employment and number of locomotives as inputs (the labour share is set to 0.6, which is the OECD average for transport)

Source: European Conference of Ministries of Transportation (ECMT), United Nations.

Figure 1.7 United States growth performance in air transport VS OECD countries



Notes :

For each figure the vertical line covers the range of all values from the maximum to the minimum of the relevant group of countries.

Output = transported passenger-km (TPK)

Employment = total employment

Labour productivity (LP) = TPK/employment

Total factor productivity (TFP) = output is TPK and capital is total seating capacity (the labour share is set to 0.6, which is the OECD average for transport)

Source: European Conference of Ministries of Transportation (ECMT), United Nations.

Table 1.3 **Primary strengths of United States macroeconomic performance**

	Total employment growth (per cent)				Unemployment rate (per cent)				Non-employment rate (to working age population)				Capital output ratio				Growth rate of exports of goods and services, volume (per cent)							
	1969-79		1979-89		1989-96		1990s less 1970s		Avg. 1969-79		Avg. 1979-89		Avg. 1989-96		Avg. 1990s less 1970s		Avg. 1969-79		Avg. 1979-89		Avg. 1989-96		Avg. 1990s less 1970s	
	1969-79	1979-89	1989-96	1990s less 1970s	1969-79	1979-89	1989-96	1990s less 1970s	Avg. 1969-79	Avg. 1979-89	Avg. 1989-96	Avg. 1990s less 1970s	1969-79	1979-89	1989-96	1990s less 1970s	1969-79	1979-89	1989-96	1990s less 1970s	1969-79	1979-89	1989-96	1990s less 1970s
USA	2,4	1,7	1,1	-1,3	6,0	7,1	6,2	0,2	36,8	32,5	28,2	-8,6	1,3	1,4	1,4	0,0	7,7	5,7	7,4	-0,3				
Japan	0,8	1,1	0,8	0,0	1,6	2,5	2,6	0,9	29,8	29,3	26,5	-3,3	1,6	2,1	2,5	0,8	9,5	6,2	4,5	-4,9				
Germany	0,1	0,4	3,2	3,0	2,2	6,4	8,2	6,0	32,9	36,4	35,8	2,9	2,5	2,8	2,8	0,3	5,4	4,6	2,3	-3,1				
France	0,6	0,2	0,0	-0,6	3,7	8,7	10,7	7,1	34,5	38,7	40,4	5,9	2,6	2,8	2,9	0,3	8,4	3,7	4,5	-3,9				
Italy	0,6	0,2	-0,5	-1,1	4,6	8,2	10,3	5,7	44,2	45,6	46,8	2,7	2,6	2,6	2,7	0,1	7,6	3,2	6,1	-1,5				
UK	0,2	0,6	-0,3	-0,5	3,5	9,1	8,3	4,9	29,3	32,4	30,5	1,2	3,3	3,4	3,4	0,1	5,1	2,9	5,1	0,0				
Canada	2,9	2,0	0,6	-2,3	6,5	9,2	9,8	3,3	36,0	32,1	30,8	-5,2	1,0	1,5	2,0	1,0	5,6	5,3	7,6	2,0				
Non-US G7 median	0,6	0,5	0,3	-0,6	3,6	8,4	9,1	5,3	33,7	34,4	33,3	1,9	2,5	2,7	2,8	0,3	6,6	4,1	4,8	-2,3				
Non-US G7 average	0,9	0,7	0,6	-0,2	3,7	7,4	8,3	4,6	34,5	35,7	35,2	0,7	2,3	2,5	2,7	0,4	6,9	4,3	5,0	-1,9				
USA less Non-US G7																								
Average	1,5	1,0	0,5	-1,1	2,3	-0,2	-2,2	-4,4	2,3	-3,3	-7,0	-9,3	-0,9	-1,1	-1,4	-0,4	0,8	1,4	2,4	1,6				
Median	1,8	1,2	0,8	-0,7	2,4	-1,3	-2,9	-5,1	3,0	-1,9	-5,2	-10,6	-1,2	-1,3	-1,4	-0,3	1,1	1,6	2,6	2,0				
Rank	2	2	2	6	2	5	6	7	2	4	6	7	6	7	7	7	3	2	2	3				

Source: OECD Secretariat

Table 1.4 Secondary strengths of United States macroeconomic performance

	Government budget balance to GDP				Growth rate of private Non-residential investment				Growth of Real consumption per capita				Growth of real GDP per capita				Consumer inflation			
	Avg. 1969-79	Avg. 1979-89	Avg. 1989-96	1990s less 1970s	1969-79	1979-89	1989-96	1990s less 1970s	1969-79	1979-89	1989-96	1990s less 1970s	Avg. 1969-79	Avg. 1979-89	Avg. 1989-96	1990s less 1970s	Avg. 1969-79	Avg. 1979-89	Avg. 1989-96	1990s less 1970s
USA	-1,0	-2,4	-2,4	-1,3	5,0	2,4	5,4	0,4	2,4	2,0	1,1	-1,3	3,2	2,7	1,9	-1,2	6,5	5,3	3,2	-3,3
Japan	-2,4	-1,0	-0,9	1,5	2,6	8,0	-0,3	-2,9	4,0	2,8	2,0	-2,0	5,2	3,8	2,3	-2,9	8,8	2,5	1,2	-7,6
Germany	-1,9	-1,6	-3,2	-1,3	1,5	3,1	2,2	0,7	3,8	1,5	0,3	-3,4	3,1	1,8	3,6	0,5	4,8	2,9	3,1	-1,7
France	-1,0	-1,7	-3,4	-2,3	2,4	3,0	-0,9	-3,3	3,2	1,9	1,0	-2,1	3,7	2,3	1,4	-2,4	9,0	7,2	2,3	-6,7
Italy	-8,1	-11,0	-8,1	0,0	2,5	2,1	-0,5	-3,0	3,9	2,7	1,1	-2,8	3,7	2,4	1,2	-2,5	13,0	11,4	5,5	-7,5
UK	-4,7	-2,3	-4,3	0,4	1,9	6,4	-0,1	-2,0	2,4	3,2	0,9	-1,5	2,4	2,4	1,3	-1,1	12,2	7,0	4,1	-8,1
Canada	-2,1	-4,5	-3,7	-1,5	8,8	3,9	1,3	-7,6	3,0	1,7	0,2	-2,8	4,4	2,9	1,3	-3,1	7,3	6,2	2,3	-5,0
Non-US G7 median	-2,3	-2,0	-3,5	-0,7	2,5	3,5	-0,2	-3,0	3,5	2,3	1,0	-2,5	3,7	2,4	1,3	-2,4	8,9	6,6	2,7	-7,1
Non-US G7 average	-3,4	-3,7	-3,9	-0,6	3,3	4,4	0,3	-3,0	3,4	2,3	0,9	-2,4	3,8	2,6	1,8	-1,9	9,2	6,2	3,1	-6,1
USA less Non-US G7																				
Average	2,3	1,3	1,5	-0,8	1,7	-2,0	5,2	3,5	-1,0	-0,3	0,2	1,2	-0,6	0,1	0,1	0,7	-2,7	-0,9	0,1	2,8
Median	1,2	-0,4	1,1	-0,7	2,6	-1,1	5,7	3,4	-1,1	-0,3	0,1	1,2	-0,6	0,3	0,6	1,2	-2,4	-1,3	0,5	3,8
Rank	2	5	2	5	2	6	1	2	7	4	3	1	5	3	3	3	6	5	3	2

Source: OECD Secretariat

Table 1.5 Weaknesses in United States macroeconomic performance

(percentages)

	Growth rate of real wages				Growth of labour productivity in the total business sector				Private sector savings ratio				Growth rate of the capital stock				Current account balance to GDP			
	1969-79	1979-89	1989-96	1990s less 1970s	1969-79	1979-89	1989-96	1990s less 1970s	Avg. 1969-79	Avg. 1979-89	Avg. 1989-96	1990s less 1970s	1969-79	1979-89	1989-96	1990s less 1970s	Avg. 1969-79	Avg. 1979-89	Avg. 1989-96	1990s less 1970s
USA	0,1	0,1	0,2	0,1	1,0	1,0	0,6	-0,4	23,7	22,8	20,3	-3,3	3,6	3,0	2,3	-1,4	0,0	-1,7	-1,4	-1,5
Japan	4,4	0,8	0,8	-3,5	4,5	2,7	1,6	-2,9	36,0	31,4	30,5	-5,5	9,3	5,9	4,5	-4,8	0,8	1,8	2,3	1,5
Germany	3,7	1,0	-0,4	-4,0	3,4	1,6	0,8	-2,6	28,9	28,7	29,3	0,4	4,2	2,7	4,1	0,0	0,9	1,9	0,4	-0,6
France	3,2	0,8	1,0	-2,2	3,7	2,5	1,8	-1,9	27,9	24,4	26,3	-1,6	4,6	2,6	2,3	-2,3	0,2	-0,5	0,3	0,1
Italy	5,1	0,4	-0,4	-5,6	3,4	2,0	2,0	-1,4	32,3	30,5	28,4	-3,8	3,8	2,7	2,6	-1,2	0,3	-0,8	0,0	-0,2
UK	2,2	2,5	0,6	-1,6	2,7	2,2	1,1	-1,6	20,8	21,5	21,0	0,3	3,1	2,4	2,5	-0,7	-0,2	-0,1	-1,7	-1,5
Canada	1,4	0,7	0,1	-1,3	1,8	1,1	0,7	-1,1	31,3	34,4	31,0	-0,3	6,7	7,1	5,1	-1,6	-2,6	-2,3	-2,7	-0,1
Non-US G7 median	3,4	0,8	0,3	-2,9	3,4	2,1	1,3	-1,7	30,1	29,6	28,9	-1,0	4,4	2,7	3,4	-1,4	0,2	-0,3	0,1	-0,2
Non-US G7 average	3,3	1,0	0,3	-3,1	3,2	2,0	1,3	-1,9	29,5	28,5	27,8	-1,8	5,3	3,9	3,5	-1,8	-0,1	0,0	-0,2	-0,1
USA less Non-US G7																				
Average	-3,2	-1,0	-0,1	3,2	-2,3	-1,0	-0,7	1,5	-5,8	-5,7	-7,4	-1,6	-1,7	-0,9	-1,3	0,4	0,1	-1,7	-1,2	-1,3
Median	-3,3	-0,7	-0,1	3,0	-2,4	-1,1	-0,8	1,3	-6,4	-6,8	-8,5	-2,4	-0,8	0,3	-1,1	0,0	-0,2	-1,4	-1,6	-1,3
Rank	7	7	4	1	7	7	7	1	6	6	7	5	6	3	7	4	5	6	5	6

Source: OECD Secretariat

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NOTES

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1. A summary of these estimates is given in US Office of Information and Regulatory Affairs, Office of Management and Budget (1998) Draft Report to Congress on the Costs and Benefits of Federal Regulations, 17 August.
 2. US Office of Information and Regulatory Affairs, OMB (1994), Report to the President on Executive Order No. 12866, 1 May.
 3. US Office of Information and Regulatory Affairs, Office of Management and Budget (1997) Report to Congress on the Costs and Benefits of Federal Regulations, September 30, p. 44.
 4. Katzen, Sally (1999), Statement made at the Global Forum on Reinventing Government, 14-15 January, Washington, D.C.
 5. Many of the economists who were responsible for reform moved from agency to agency, leading to continuity of personnel as well as of ideas.
 6. This was reinforced by the decline of the dollar after the collapse of the Smithsonian Agreements which tried to re-establish a new stable fixed exchange rate system.
 7. Labour productivity for France, Germany, Japan and the United Kingdom grew at an annual rate of 5.3 per cent between 1961 and 1973, versus 2.4 per cent in the United States. The UK growth rate was 3.6 per cent.
 8. In the non-US G7, it fell 5.4 per cent to 3.2 per cent. The decline in percentage points of 1.9 per cent was lower than that of Japan and Italy, which fell from very high levels, but it was as large or larger than the other G7 countries. Cross-country comparisons of labour productivity growth must be done with caution; productivity growth in many countries may be considered as “too high” if it results from labour shedding and closing productive capacity rather than improvement in underlying productive performance.
 9. See the OECD Survey (1977), pp. 23-24 and the references cited therein; and the OECD Survey (1979), p. 47.
 10. Demographics and regulation were estimated as accounting for about 0.3 percentage points each of the 1.1 per cent decline in productivity growth. Other factors listed in the Survey included a decline in R&D expenditures, slower rates of investment leading to a decline in the growth of the capital/labour ratio, and the smaller share of high productivity sectors in the economy, such as agriculture (p. 22-23).
 11. The OECD Economic Survey (1980) noted on p. 44, “[I]t is uncertain how much economic slack must be created in order to reduce inflation to acceptable levels, and how long any given degree of slack must be maintained. ... Another serious shortcoming in relying mainly on prolonged demand restraint is that price shocks can overwhelm any gradual policy-induced deceleration.”
 12. See OECD Economic Survey (1980), pp. 31-35.
 13. “... there is no reason why ... demand restraint should not be complemented by other measures ... capable of exerting an independent influence on inflationary expectations and pressures.”
 14. This eventually led to the Federal bailout of the Chrysler Motor Corporation in 1981.

15. See the discussions in Friedlander (1969) and MacAvoy and Snow (1977), among others.
16. Policy makers were concerned about the declining share of financial assets intermediated by banks for several reasons, among which were the implications for effective monetary control. Political pressure from banks also played an important role.
17. Wage and price guidelines under the Kennedy Administration (1962-66) and Nixon-era wage-price controls.
18. The administration also considered using tax-based incomes policies (TIP's) which are tax incentives for individuals and businesses to pursue smaller wage and price increases.
19. In retrospect, policy appears somewhat incoherent here, as the Administration, through the Council on Wage and Price Stability, was increasing the use of wage and price guidelines in some respects while simultaneously supporting price deregulation in others.
20. Summarised in OECD (1979), p. 70. These were: monitoring the impact of proposed social regulations on inflation, which included Inflation Impact Statements drafted by the Council on Wage and Price Stability and the threat of vetoes of proposed legislation which would raise prices, such as farm price supports; use of Federal procurement policies to reduce inflation; deregulation of road transport and airlines; voluntary guidelines on the setting of wages, benefits and prices and ongoing consultation with interest groups involved in wage and price setting; and decontrol of oil prices (after the initial price shock, this was expected to induce a reduction in demand).
21. The budget package was initially stimulating, but nominal spending targets were not altered as inflation accelerated and in the event the high employment deficit ended up in balance. In regards to monetary policy, during the last years of the decade the Fed moved away from its traditional policy of targeting interest rates to targeting monetary and credit aggregates as an anti-inflationary weapon. In 1979 monetary growth repeatedly exceeded targets. Monetary growth was reduced and as a result short-term interest rates quickly climbed to high double-digit levels with an accompanying increase in their variance.
22. Irrespective of their ideological orientation, the two Reagan administrations were characterised by substantial fiscal stimulus leading to growing structural budget deficits.
23. This section covers reforms of economic regulations only.
24. Air carriers can engage in peak load pricing by changing the number of low cost versus full fare seats available on flights depending on the hour of departure, so that seats at peak times (early morning and evening weekday flights) effectively cost more. While consumers often complain of the multiplication of air fares and restrictions on low fares, the value of being able to change reservations has now been priced and peak load pricing has been adopted.
25. This was compounded by the fact that airlines misforecast demand growth in the face of the business cycle swings.
26. Winston (1994, 1996) argues that competition per route is the relevant measure of contestability. This measure increased substantially through the late 1980s and has remained roughly at those levels, though the net increase in route competition was concentrated almost entirely on high density long haul routes, where the greatest price drops have been. However competition on routes from hubs where a dominant carrier has emerged may have declined from levels reached in the mid-1980s, and increasing consolidation within the industry has also been a countervailing force, though the impact of the new system of alliance between major carriers is too recent to be measured. Concern over declining competition in air transport was stimulated not just by the emergence of dominant carriers at certain hubs but also the effects of frequent

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- flyer programmes, ownership of computer reservation systems, and special arrangements with travel agents. A national commission which studied the problem in 1993 concluded the impact at that time was small.
27. Historically long-haul high volume routes, which benefit from higher load factors, subsidised short-haul and low volume routes. After deregulation prices on high volume long distance routes such as New York-Los Angeles dropped substantially in real terms, whereas prices on short-haul low volume flights (i.e. regional flights to or from small cities) have been flat or even increased.
 28. This can only be indirectly attributed to deregulation, as the primary causes have been safety-inspired slower airspeeds and greater airport congestion. By contrast, deregulation has helped reduce connection times and lost baggage problems as most passengers fly the entire trip on the same airline.
 29. Prohibitions on re-routing in the mid and late 1970s actually created and exacerbated gas shortages.
 30. Comparable figures for labour and total factor productivity are available for telecommunications, where the United States ranked fourth among the G7, and electricity, where it ranked first (labour) and second (total factor). X-efficiency measures show the US ranked first in air and rail transport, fifth in electricity and seventh in telecommunications. Efficiency in retail distribution is more difficult to measure, but US performance indicated high levels of productivity per employee and per establishment.
 31. OECD Survey (1997), see the special chapter on entrepreneurialism.
 32. US private savings rates have been historically less than half the G7 average, and they have remained low in the 1990s despite substantial capital market liberalisation and innovations. Investment in the US during the 1990s expansion has been unusually strong compared to previous cycles. Leading the OECD countries, real US annual investment growth rates have been close to nine per cent since 1992.
 33. Productivity growth in the business sector remained the slowest of all comparable countries, though this is largely attributable to the rapid growth of employment in the lower productivity service sector, though measurement problems may understate productivity gains in services. The U.S. has the largest service sector as a share of employment of any OECD country. As was noted in the 1993 OECD Survey (p. 56 and footnotes 43 and 44) the Commerce Department arbitrarily sets productivity growth in government and financial services to zero. Financial services and community, social and personal services (largely government) accounted for 11.2 and 34.6 per cent of total employment in 1996, respectively, about two-thirds of total service sector employment. The Performance Indicators database shows negative LP and TFP growth in both sectors throughout the 1982-95 period, and productivity growth in construction as near zero.
 34. For a summary of the literature on relative price flexibility, see Van Bergeijk, Peter A.G. and Robert C.G. Haffner, (1996) *Privatisation, Deregulation and the Macroeconomy*. Cheltenham, UK: Edward Elgar.
 35. Slifman and Corrado (19XX), however, provide some evidence suggesting that the level of output and hence productivity in the non-farm non-corporate sector is understated. Nearly half of this sector's income is counted as services, suggesting measured productivity in the service sector may be too low. See, Slifman, L. and C. Corrado (19XX), "Decomposition of Productivity and Unit Costs", Occasional Staff Studies, Board of Governors of the Federal Reserve System.
 36. Indicators of household or family income distribution and poverty widened over the decade from the mid-1970s to the mid-1980s. There was probably some further widening in the income distribution from the mid-1980s to the mid-1990s as well, although changes in data definitions make it more difficult to gauge the degree of this increase.

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37. The economy-wide effects of economy reform can be separated into direct or “first-round” effects in the specific sector under reform, “second-round” effects on other sectors, and macroeconomic effects, including intangible effects like spill-overs or changes in the structure and functioning of labour markets.
 38. See Vol. II, Chapter 1: “The Economy-wide Effects of Regulatory Reform” and “The Economy-wide Effects of Regulatory Reform: Country Notes”.
 39. For the private sector, rising health insurance premiums were a major source of rising compensation costs for key industries and were perceived as a major source of competitive disadvantage vis-à-vis other countries. For the public sector, which now represents nearly half of all health expenditures, rising prices and an expansion in services led to a surge in the share of total government expenditures. Federal spending on Medicare and Medicaid grew from 2.8 per cent of total outlays in 1967 to 19.0 per cent in 1997.
 40. No other OECD country spent more than 10 per cent of GDP on health care in 1994, and US spending remains several percentage points of GDP higher than can be explained by per capita income and medical out-turns (Oxley and MacFarlan, 1994). Per capita spending on health in the United States measured at purchasing power parity exchange rates is about twice as high as the OECD average and 50 per cent higher than the next highest country (OECD Health Data, 1998).
 41. There is evidence that managed care providers generate savings (Cutler and Sheiner, 1997; Newhouse, 1992; CBO, 1997b; Baker and Shankarkumar, 1997), and surveys show that employers view them as an effective means to control costs (CBO, 1997a).
 42. Many of these services are of dubious value, but testimony before Congress has demonstrated that in specific cases, HMOs have gone too far. Currently, Congress is developing a number of proposals to regulate the industry to ensure consumer protection, minimum service and quality standards and more transparency regarding service provision. The Administration has developed a “consumers’ bill of rights” that encompasses many of these proposals, while it has mandated many of them in the Medicare system.
 43. For instance, even though they may be unpopular, requiring a referral from a general practitioner before a patient can see a specialist lowers costs (Oxley and MacFarlan, 1994). One way to balance cost reductions and consumer protection would be to mandate the provision of denial rates and other statistics so that consumers when purchasing a health plan can make an informed choice. Federal and state governments can help by standardising and publishing such information, as the state of Maryland has with its “report cards” on managed care providers (National Governors Association, 1998). This would increase competition on quality of service among providers.
 44. Much of this discussion is adapted from US Office of Management and Budget (1988), Introduction to The Regulatory Program of the United States Government, April 1, 1987 -- March 31, 1988
 45. Moreover, there are significant methodological problems. For example, the estimates mix different data sources.
 46. See the reference to Jaffe *et al* cited by Landy and Cass (1997).
 47. In the case of productivity, a study by Robinson found that U.S. manufacturing productivity levels in 1986 were 11 percentage points lower than otherwise because of environmental and occupational health regulations and the impact on specific sectors such as chemicals, petrochemicals, paper products, mining and primary metals was much greater. Robinson’s study covered 445 manufacturing industries for the period 1975-86. He found much higher effects in specific sectors of paper products, chemicals, coal and petroleum products and primary metals: these averaged around 30 per cent. See James C. Robinson, (1995) “The Impact of Environmental and Occupational Health Regulation on Productivity Growth in U.S. Manufacturing”, Yale Journal of Regulation.

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48. Kerwin, p. 40.
 49. US patent law has been cited as more effective than those of Japan and Germany in enforcing intellectual property rights (Kagan and Axelrad, 1997, p. 162. Similarly bankruptcy law, which is often criticised as being too favourable to debtors, may have helped encourage the entrepreneurialism which has been a hallmark of the US economy.
 50. Tengs and Graham noted: "... We find no apparent relationship between the cost-effectiveness of the 185 life-saving interventions and their implementation." They note that fire-retardance regulations on children's clothing cost \$1.5 million per lives saved yet smoke alarms are not mandatory in homes, which are estimated to cost \$200,000 per year per life saved.
 51. For comparisons of U.S. regulatory styles with other countries, see, *inter alia*, Vogel, David (1986) *National Styles of Regulation*, Cornell University Press: Ithaca; Badaracco, Joseph (1985) *Loading the Dice: A Five-Country Study of Vinyl Chloride Regulation*, Harvard Business School Press, Boston; Kelman, Steven (1981) *Regulating America, Regulating Sweden* (MIT Press: Cambridge); Heidenheimer, Arnold; Hecl, Hugh; Adams, Carolyn (1983) *Comparative Public Policy: The Politics of Social Choice in Europe and America* (St. Martin's Press: New York).
 52. *More Benefits, Fewer Burdens*, p. 18.
 53. Statement by the Vice President, *The Regulatory Plan*, 29 October 1997, FR 57003.
 54. The ECOS-EPA Regulatory Innovations Agreement.
 55. Called the Open Market Trading Program.
 56. *Northern Pacific Railway Co. v. United States*, 356 US 1, 4 (1958).
 57. *United States v. American Airlines*, 570 F. Supp. 654 (N.D. Tex. 1983), rev'd, 743 F.2d 1114, 1119 (5th Cir. 1984), cert. dismissed, 474 US 1001 (1985).
 58. *United States v. Airline Tariff Publishing Co.*, 1994-2 Trade Cas. (CCH) ¶70,687 (DDC 1994).
 59. *Southern Motor Carriers Rate Conference, Inc. v. United States*, 471 US 48 (1985); *New England Motor Rate Bureau v. FTC*, 908 F.2d 1064 (1st Cir. 1990).
 60. In 1994, the FTC settled charges brought in 1988 that Boulder Ridge Cable TV and Weststar Communications, Inc, entered into an agreement not to compete against each other as part of Boulder's acquisition of Three Palms, Ltd. The FTC alleged that the agreement was not limited to the area in which the acquisitions occurred.
 61. *American Medical Association*, 94 FTC 701 (1979), aff'd, 638 F.2d 443 (2d Cir. 1980), aff'd per curiam by an equally divided Court, 455 US 676 (1982).
 62. *United States v. AT&T*, 552 F. Supp. 131, 150, 153 (DDC 1982), aff'd sub nom. *Maryland v. United States*, 460 US 1001 (1983).
 63. See FCC 97-398, Report and Order on Reconsideration adopted on November 25, 1997.
 64. US FDI inflows increased in 1995 by more than 21 per cent over the previous year, reaching \$60 billion, twice the size of inflows to the United Kingdom, the second most important FDI recipient amongst developed countries. See *World Investment Report 1996* (UNCTAD 1996).

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65. NAFTA and the US-Israel Free Trade Agreement. The United States also grants unilateral preferences to a number of developing countries under the Andean Trade Preferences Act, the Caribbean Basin Initiative and more generally under the Generalised System of Preferences.
 66. See United States: Measures Affecting Alcoholic and Malt Beverages, Report by the Panel adopted on June 1992 in Basic Instruments and Selected Documents (39S/206).
 67. See EC Sectoral and Trade Barriers Database.
 68. According to the UN Trade Barriers to Latin American Exports in 1996 [Washington Office of the UN Economic Commission for Latin America and the Caribbean (ECLAC)] “a vast maze of standards and regulations makes exporting to the United States a daunting task. The complexity of the system can be partly attributed to the three separate tiers of regulations that exist: federal, state and local. These regulations are often inconsistent between jurisdictions, or needlessly overlap. It is estimated that more than 44,000 federal, state and local authorities enforce 89,000 standards for products within their jurisdictions. These structural barriers, although unintentional, still create major hurdles for foreign firms attempting to enter the US market..
 69. See EC Sectoral and Trade Barriers Database.
 70. Some US trading partners have objected to US reliance on third-party conformity assessments when less onerous means (such as reliance on manufacturers’ or purchasers’ declarations of conformity) could be employed. However, concerns about the safety, health, or environmental impact of some products may be too important to be left to self-assessments. This would be true of products whose failure could lead to injury, illness, property damage or loss of life. Drug safety certification provided by the FDA, for example, requires third-party assessment to verify product safety. See Standards, Conformity Assessment, and Trade into the 21st Century, National Research Council (National Academy Press, Washington, DC, 1995).
 71. See Speech of Belinda Collins, Acting Director, OSS, NIST before the Committee on Science, Space and Technology on “International Standards and US Exports: Keys to Competitiveness or Barriers to Trade”
 72. Average state prices for industrial users varied from 2.7 cents per kilowatt-hour to 10.0 cents per kilowatt-hour in 1996. [EIA 1998a] In California, the price of electric power was 30 to 50% higher than the United States average. Much of the five-fold difference in average cost among 136 vertically integrated IOUs is attributed to the degree of participation in nuclear power. Smaller factors are the degree of exposure to independent power purchase agreements under the 1978 Public Utilities Regulatory Policy Act, and exposure to exogenous regional differences in factor prices and resource endowments. [White, p. 218]
 73. Soon after the divestiture, the FCC mandated equal access in regard to inter-LATA long-distance, allowing subscribers to choose among long-distance carrier as the default carrier on an equal basis.
 74. For a more detailed explanation of the theory, see: Timothy J. Brennan, “Is the Theory Behind U.S. v. AT&T Applicable Today?” *Antitrust Bulletin*, vol. 40, no. 3, pp. 455-482.
 75. For discussion see, for example, President William J. Clinton and Vice President Albert Gore Jr., “A Framework for Global Electronic Commerce,” posted July, 1997 at <<www.iift.nist.gov/telecom/ecommerce.htm#background >>.
 76. See FCC, In the Matter of the Annual Assessment of the Status of CS Docket No. 97-141 Competition in Markets for Video Programming. In June 1997, the number of homes capable of receiving cable programming was 94.2 million, which accounts for 97.1 percent of television homes.

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77. See Joel Klein, "The Race For Local Competition: A Long Distance Run, Not a Sprint," Speech before the *American Enterprise Institute*, Nov 5, 1997 and William E. Kennard, "Section 271 of the Telecommunications Act of 1996," Statement Before the Subcommittee on Communications of the Committee on Commerce, Science, and Transportation, United States Senate, March 25, 1998. In particular, Chairman Kennard stated: "I do not come here, however, to announce my satisfaction with the pace of competition. We can and must do better."
78. FCC, "Local Competition Factsheet," *supra*, note 1.
79. For detailed discussion of the impact of these technological advances see, for example, the FCC's En Banc hearing dated July 9, 1998 posted at: <<www.fcc.gov/enbanc/070998/tr070998.txt>> and the FCC's Bandwidth Forum dated January 23, 1997 posted at <<www.fcc.gov/Reports/970123.txt>>. The U.K. provides an additional example of the capacity of cable to provide telephony service. See, for example, Affidavit of Oliver E. Williamson, at p. 14 (May 31, 1994), submitted on behalf of Motion by Bell Atlantic Corporation, Bell South Corporation, Nynex Corporation and Southwestern Bell Corporation to vacate the Decree, *United States v. Western Electric Co.*, No. 82-0192 (D.D.C. filed July 6, 1994) cited in Robert W. Crandall and J. Gregory Sidak, "Competition and Regulatory Policies for interactive Broadband Networks," *Southern California Law Review*, July, 1995.
80. For example, the Communications Act of 1934 specifies as a policy objective in communications to: "make available, so far as possible, to all people of the United States a rapid, efficient, nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges."
81. As former FCC Chief Economist Michael Riordan commented: "The tension between universal service and competition is the great drama in the Telecom Act. These are like two horseshoe magnets, that, when held face-to-face, repel each other. Yet there is an abiding belief that, if one could just turn one of the magnets upside down, and look at it differently, everything would be all right." Michael Riordan, "Conundrums for Telecommunications Policy," *Mimeo.*, May 28, 1998.
82. As Lawrence White put it, "cross-subsidies are the enemy of competition because competition is the enemy of cross-subsidies." See Joseph Farrell, "Creating Local Competition," *Federal Communications Law Journal*, vol. 49;1, November, 1996.
83. Until the end of 1997, universal service programs were financed by per line monthly charges imposed on long distance carriers. Under the new rules which took effect in January 1998, the per-line charges previously paid by large long distance carriers have been discontinued. Instead, all providers of interstate telecommunications, including local exchange carriers, long-distance providers and wireless carriers, now contribute to the provision of universal service based on the amount of their telecommunications revenues.
84. Sections 401 and 402 of the 1996 Telecommunications Act provide procedures to forbear from regulation in response to specific petitions and to review its own regulations to check if they are no longer in the public interest. Importantly, these streamlining provisions do not include an explicit recognition of the costs imposed by continued regulation
85. Section 401(d) exempts sections 251(c) [*i.e.*, interconnection and unbundling requirements] and 271 [the in-region inter-LATA restraints on BOCs] from consideration under a forbearance petition.
86. "Improving Regulatory Systems," *op cit*.