THE AGE OF REGULATORY REFORM

EDITED BY

KENNETH BUTTON AND DENNIS SWANN



THE AGE OF REGULATORY REFORM

EDITED BY

KENNETH BUTTON
and
DENNIS SWANN

CLARENDON PRESS · OXFORD 1989 Oxford University Press, Walton Street, Oxford Ox2 6DP
Oxford New York Toronto
Delhi Bombay Calcutta Madras Karachi
Petaling Jaya Singapore Hong Kong Tokyo
Nairobi Dar es Salaam Cape Town
Melbourne Auckland
and associated companies in
Berlin Ibadan Nicosia

Oxford is a trade mark of Oxford University Press Published in the United States by Oxford University Press, New York

© Oxford University Press, 1989

All rights reserved. No partof this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of Oxford University Press

British Library Cataloguing in Publication Data
The Age of regulatory reform.

1. Western world. Industries. Regulation.
I. Button, K. J. (Kenneth John), 1948—
II. Swan. Dennis, 1932—
338.9'009181'2
ISBN 0-19-828601-5

Library of Congress Cataloging in Publication Data

Data available

Typset by Cotswold Typesetting Ltd, Gloucester
Printed and bound in
Great Britain by Biddles Ltd,
Guildford and King's Lynn

TO GOPHER AND MOG

PREFACE

DURING recent years, in various parts of the free enterprise world, governments have been rethinking their attitudes towards the regulation of industry and commerce. That reconsideration has been assisted by the work of academics in various disciplines and has also been accompanied by significantly changed attitudes on the part of regulators themselves. This in turn has led to significant acts of regulatory reform in some countries, including instances where, except for matters such as safety, a process of total deregulation has been instituted. In other countries, while the process of regulatory reform has not proceeded very far, it is nevertheless high on the agendas of policy-makers. It seemed appropriate, therefore, that experts from various parts of the world should be invited to present a broad view of regulatory changes within their own countries and that this should be complemented by specialists, from various backgrounds, discussing developments in their own particular fields. What follows are the responses to those invitations. We are extremely grateful to our contributors, some of whom are members of the Applied Microeconomics Research Group at Loughborough, who have delivered their manuscripts promptly and have responded speedily and co-operatively to what we hope were our helpful comments. We are also grateful to Oxford University Press for affording us an opportunity to bring these findings to the attention of a wider audience.

> K.B. D.S.

CONTRIBUTORS

KENNETH BUTTON, Director, Applied Microeconomics Research Group, Loughborough University, England.

RICHARD DALE, Professor of International Banking and Finance, Heriot-Watt University, Scotland.

RIGAS DOGANIS, Professor of Transport Studies, Polytechnic of Central London, England.

MICHAEL FLEMING, Professor of Economics, Loughborough University, England.

JOHN HALEY, Associate Dean and Professor of Law, University of Washington, USA.

HUDSON N. JANISCH, Professor of Law, University of Toronto, Canada.

DAVID T. LLEWELLYN, Professor of Money and Banking, Loughborough University, England.

JAMES W. McKie, E. E. Hale Centennial Professor of Economics, University of Texas at Austin, USA.

STEVEN A. MORRISON, Associate Professor of Economics, Northeastern University, USA.

MICHAEL W. PUSTAY, Associate Professor of Management, Texas A. & M. University, USA.

WILLIAM T. STANBURY, UPS Foundation Professor of Regulation and Competition Policy, University of British Columbia, Canada.

DAVID STARKIE, Chairman, TM Economics, England.

Dennis Swann, Professor of Economics, Loughborough University, England.

WAYNE K. TALLEY, Research Professor in Economics, Old Dominion University, USA.

THOMAS WEYMAN-JONES, Lecturer in Economics, Loughborough University, England.

CONTENTS

Lis	t of Contributors	ix
Lis	t of Illustrations	х
Lis	t of Tables	Xi
1.	The Regulatory Scene: An Overview DENNIS SWANN	1
	Part I: National Studies	
2.	US Regulatory Policy	27
	JAMES W. MCKIE	
3.	Reforming Direct Regulation in Canada	49
	WILLIAM T. STANBURY	
4.	Regulatory Reform in the UK	79
	MICHAEL FLEMING and KENNETH BUTTON	
5.	Deregulation: The Australian Experience	104
	DAVID STARKIE	
6.	The Context and Content of Regulatory Change in Japan	124
	JOHN HALEY	
	Part II: Industrial Case Studies	
7.	US Domestic Aviation	141
	STEVEN A. MORRISON	
8.	Regulatory Changes in International Air Transport	166
	RIGAS DOGANIS	
9.	The Changing Structure of Regulation in the British Financial System	189
	DAVID T. LLEWELLYN	
10.	International Financial Regulation: The Separation Issue	217
	RICHARD DALE	
11.	Deregulation and the US Trucking Industry	236
	MICHAEL W. PUSTAY	

viii Contents

12.	Regulatory Reform of the US and UK Inter-city Bus Industries	257
	WAYNE K. TALLEY	
13.	US and UK Energy Policy	279
	THOMAS WEYMAN-JONES	
14.	The North American Telecommunications Industry: From Monopoly to Competition	300
	HUDSON N. JANISCH	
15.	Regulatory Reform: The Way Forward	321
	KENNETH BUTTON and DENNIS SWANN	
Index		333

generated by competition. Privatization and deregulation have become the twin pillars of micro-disengagement.

Privatization has many facets. Basically it can be defined as the introduction into the public sector, or what was the public sector, of conditions which typify the private sector. It is therefore possible to envisage privatization taking place even though no change takes place in the ownership of public assets. For example, public enterprises may remain in existence but may be required to adopt a more commercial approach. Manifestly private ownership is a key feature of the private sector, and therefore the sale of the whole or part of a public enterprise to the general public is an undoubted act of privatization. Even the sale of only 1 per cent of shares constitutes such an act, but obviously, to the extent that the object is to improve economic performance by shifting the control of the use of the underlying assets from the state to individuals, the most effective acts of privatization are those that transfer majority control to the general public. But privatization may take other forms which are not concerned with changes in ownership. Thus the public sector may continue to finance the provision of goods or services by means of taxes, local rates, etc., but actual production may be contracted out to the private sector. It is also possible to distinguish a somewhat different form of contracting out. In the above example we have implicitly assumed that some or all of the state's productive capacity is closed down and replaced by expanded private capacity. However, state-owned capacity could remain in existence but be managed by private operators. Then again, privatization may refer to changes on the financing side. Thus the public sector may continue to produce a good or service but might seek to charge a price for it. Here the introduction of private enterprise conditions has nothing to do with changes in ownership. Instead we are drawing attention to the introduction of a key feature of the free-enterprise system, namely, price. Privatization may also take the form of load-shedding. Thus the state may totally divest itself of responsibility on both the production and financing side. For example, it might abandon the role of providing a health service. Individuals might be compelled to take out private insurance to purchase health care which would be privately supplied. There is in principle no change in the ownership of state assets, but there is a change in the locus of production and in the method of financing. A form of privatization also arises when a public enterprise joins with a private concern in order to develop some particular venture. Some commentators include in their definition of privatization the relaxation or indeed total elimination of statutory monopolies and licensing arrangements which keep private firms out of markets previously served exclusively by the public sector. This is often referred to as liberalization.

Privatization in one form or another, but notably the sale in whole or part of public enterprises together with contracting out, has in recent years featured in the economic policies of most developed countries. Even France, which in the

early 1980s embarked on a massive programme of further nationalizations. subsequently put the engine into reverse. In developing countries the drain on public exchequers arising from public enterprise, conjoined with a drying up of external financial assistance, has driven governments down the privatization path—a policy which has been encouraged by the World Bank, the IMF, and right-wing aid-donors such as the Reagan administration.

Important and interesting though these privatization processes are, the division of labour we have adopted in this book means that they are not of central concern here. Rather our primary focus will be on the other pillar of micro-disengagement: deregulation. It has to be admitted, however, that no hard and fast line can be drawn between the two. We have already seen that one way of disciplining public enterprises is to reduce or even eliminate those restrictions which protect certain lines of their business. Some commentators regard this as a form of privatization, but it is in truth a form of deregulation. We have also to recognize that the state may decide to privatize an enterprise or industry even though there may not be enough competition to exercise an effective control over its pricing and other behaviour, in which case some form of regulation, may have to be introduced. In short, the rolling back of the frontiers of the state may on occasions involve the replacement of one form of state involvement by another. But there are other connections. For example, as we shall see later, the process of economic deregulation is often designed to give scope for greater competition. But the process of competition may be frustrated by the absence of privatization. Whereas we may expect competition to drive inefficient suppliers out of particular markets, public ownership may enable them to remain in the market because they may continue to benefit from operating subsidies. If deregulation were accompanied by privatization, a more responsive system might arise, and firms would be less able to frustrate desirable structural readjustments.

1.2. REGULATION DEFINED

While our ultimate destination in this chapter is deregulation, it is first necessary to identify the arrangement which precedes it: regulation. What is regulation? Dictionary definitions of regulation emphasize the imposition of controls and restraints and the application of rules. In other words, freedom of individual action is curtailed.

In terms of the source of control, regulation can be divided into two basic forms: self-regulation and external regulation. As the word suggests, pure selfregulation involves the parties (e.g. firms) regulating themselves. External regulation on the other hand, arises when control is exercised by a body which is outside the regulated group. A wide variety of bodies discharge that function. Sometimes it is performed by government departments, but often it is in the hands of agencies which enjoy some degree of independence from government and operate under titles such as commission, board, corporation, executive, and of course court.

In practice it is not always easy to draw a hard and fast line between these two systems. Although it is possible to identify situations where there is no external authority, in many cases what we encounter is a mixture of the two. In the professions, for example, standards of competence and conduct are often governed by institutions which, while they owe their existence to the state, are then left very much to themselves to devise and implement standards. A somewhat similar case arises in the UK under the Fair Trading Act 1973, whereby codes of conduct are drawn up by firms in particular trades. Section 124 (3) of that act imposes a duty on the Director General of Fair Trading to encourage trade associations to prepare such codes. These largely voluntary efforts are an alternative to the issuing of statutory orders, which would of course constitute external regulation. A similar mix has been apparent in US trucking regulation under the aegis of the Interstate Commerce Commission. While the latter had the power to intervene in the matter of rates, in practice it chose to leave them to be determined in the first instance by the truckers themselves operating within the ambit of rate bureaux. The regulation of international air passenger fares has exhibited a similar characteristic. The airlines fixed fares within the IATA traffic conferences, and governments subsequently rubber-stamped what were essentially the products of international cartel agreements.

Regulation can be broken down into three main categories. The first main form of regulation is antitrust policy, in which regulators intervene to maintain competition (perhaps we might qualify that by emphasizing the idea of fair competition). Typically, these policies address themselves to phenomena such as dominant firms, oligopolies, mergers, and restrictive business practices. In practice, national and international systems vary in at least five ways. Firstly, the range of antitrust phenomena covered by the legislation varies from country to country. Secondly, stances vary. The US tends to take a per se view of many restrictive business practices, which means they are in and of themselves illegal, and, broadly speaking, mitigating arguments will not be admitted in defence. In the UK, West Germany, and the EEC, on the other hand, the approach tends to be that agreements are contrary to the public interest or are prohibited, but exemptions are provided for. In other countries yet a different approach is adopted. The law is neither for nor against such practices, but judges them on their merits. Thirdly, even if the formal stances of national policies were all the same, they can differ in practice because such policies often grant to those who operate them a significant degree of discretion (e.g. guidelines for the reference of mergers). Fourthly, the impact of antitrust policy partly depends on the severity of its sanctions, and these vary. In the US, fines, treble damages, and incarcerations have been possible penalties for those who have transgressed the law, whereas the UK has taken a

more lenient line. Fifthly, some antitrust systems are largely concerned with the economic implications of structures and practices, whereas others also attempt to take account of political values, such as the desirability of preserving the freedom to compete and the need to prevent the emergence of unchecked sources of power.

The second main form of regulation is economic regulation, which is indeed the central focus of this book. This has been introduced when free competition has not been deemed appropriate. The reasoning which has led to that conclusion will be outlined in the next section. Such regulation typically involves a control of price. The nature of that control varies from case to case. Fixed prices may be prescribed by the regulator. Alternatively prices may be allowed to vary within prescribed upper and lower limits or may simply be the subject of recommendation, i.e. reference prices. Both these types of control have, for example, been applied under the EEC Common Transport Policy (Button, 1984). Prices may not be prescribed, but may emerge from the process of collusion under the watchful eye of the regulator. Criteria for the determination of regulated price levels vary considerably. They may be designed to produce a fair rate of return on a rate base, as in the US electricity industry. Alternatively, as in the case of US trucking, they may involve setting a limit on profits as a percentage of sales. Pricing formulas may relate to the capital and running costs of particular firms (as in the US electricity industry) or may be related to the capital and running costs of the whole industry (as in US airlines and railways). Occasionally revenue derived from supplying a particular market may be pooled and then shared on some predetermined basis; this kind of arrangement has been operated by European airlines flying between particular pairs of cities. In economic regulation, controls are typically imposed on entry through the agency of licensing. Licences may be quantitative or qualitative, the latter referring to such matters as financial standing and technical competence. Even if a firm is allowed to enter an industry, it may be restricted to the particular markets it may serve. Thus, the number of airlines allowed to fly a particular route may be limited, and financial institutions may be constrained to certain markets in which they can borrow and lend and the kind of operations in which they can engage simultaneously. An example of the latter would be the refusal of permission for commercial banks to engage in investment banking activity. Control may also be placed on departure from a market, as, for instance, in closing a railway line. Output may also be controlled-for example, the number of flights permitted on a particular route may be limited. It is not unusual for firms subject to regulation to be exempted in some degree from normal antitrust rules. In respect of some antitrust phenomena, such as mergers, jurisdiction may be assumed by the regulatory agency.

The third main form of regulation is often referred to as social regulation. It is concerned with externalities such as pollution, the difficulties faced by

consumers in respect of information and safety, the possibility of injury or death at the workplace, and the problem of discrimination in access to jobs. This gives rise to regulation concerned with environmental protection, consumer protection, occupational health and safety, and affirmative action. Typically it takes the form of the provision of information (e.g. unit pricing, product content labelling), prescription of standards (e.g. work safety, permitted levels of pollution, permitted contents, product testing), and rights of redress (e.g. consumer rights in relation to deception, defective goods, and product-related injury and workers' rights in relation to discrimination).

In the US, economic regulation is often referred to as old style regulation, since it goes back to the first half of the nineteenth century. In the early days the regulatory agencies were sometimes 'sunshine' bodies which relied for their effectiveness on powers of investigation and on the force of publicity (McCraw, 1984, ch. 2). Later however they developed teeth. By contrast, social regulation is often referred to as new style regulation. While US regulatory activity concerned with matters such as consumer protection is not new, much social regulation is relatively recent, deriving from the years of President Johnson's Great Society. However, much of that regulation has since been criticized for its lack of effectiveness and for the burden it has imposed on the American economy. It should be added that although it is possible to point to certain common elements in economic regulation, the actual scheme of control tends to vary from industry to industry. By contrast, antitrust and certain elements of social regulation, such as consumer protection, tend to apply to the economy as a whole or to large sections of it.

In organizational terms regulation is complicated by the variety of political contexts within which it takes place. The system is simplest when it is domestic in scope and operates within a unitary state, such as the UK. In such a circumstance there is one set of laws, one regulatory agency, and one policy. In federal-type systems-e.g. the US, Canada, and Australia-matters are more complicated. The US is a good example of the complexities which can arise. Given the constitutional restriction on federal authority, which tends to restrict the latter jurisdiction to matters relating to trade among the several states (in other words inter-state trade), it follows that there will not merely be a federal system of regulation but also parallel state systems. Moreover, there is no necessity for state systems to be the same as the federal system or for state systems to agree with each other. These complications can occasionally prove to be advantageous. Thus, in the case of airline regulation, the superior performance observed in states which did not choose to regulate, or to regulate only lightly, intra-state operations provided powerful evidence in favour of the abolition of the more interventionist federal system. In some cases regulation has to be international, and the freedom of action of individual governments is correspondingly circumscribed. An obvious example is afforded by the system of bilateral air services agreements, which govern scheduled services between pairs of countries. In some cases regulation has been internationalized by treaty. The most obvious examples are provided by economic integration exercises such as those that have given rise to the European Community. The regulation of surface transport modes (road, rail, and inland waterway) is governed by the Common Transport Policy, while the price support arrangement of agriculture derives from the notorious Common Agricultural Policy—both products of the Rome Treaty. Under these arrangements the jurisdictional reach of the regulator is not constrained, whereas the antitrust regulation under the same treaty restricts the EC Commission and the Court of Justice to a control over those practices and abuses which affect or may affect inter-state trade. There is a close parallel here with the formal restriction which applies to the activities of US federal authorities. It should be added that bilateral air services agreements and other associated restrictions entered into by member states of the EEC are potentially vulnerable under these Rome Treaty antitrust powers, a point which is dealt with by Doganis (Chapter 8). The regulatory powers conferred under the Paris Treaty in respect of the coal and steel industries are, like those in respect of transport and agriculture under the Rome Treaty, not constrained by an inter-state commerce clause. The coal and steel industries as a whole, and not just their inter-state sales, are in principle subject to the controlling powers provided in the Paris Treaty.

Two further organizational points are worthy of note. Firstly, a distinction needs to be drawn between de facto and de jure regulation. Regulatory statutes tend to be capable of considerable flexibility of interpretation, and their actual impact in particular cases is very much in the hands of the regulatory agency, together with the courts in those systems where judicial review is possible. Because of this, de facto regulation may change even though the regulatory statute (the de jure element) may not have been modified. It will, for example, become apparent when US airline and trucking regulation is discussed later in this book that the actual process of deregulation preceded the enactment of deregulatory statutes. Indeed deregulatory laws were in significant measure mere codifications of policy changes which had already been introduced. The second point relates to accountability. This tends to differ from system to system. US regulation operates within a tight procedural framework. Those who are regulated have a right to be heard. Those who regulate must account for their actions. Those who are disadvantaged have a right of appeal through the courts. All this is in stark contrast to the UK system for example. In the case of UK broadcasting it has been pointed out that the regulator makes the decisions but offers little by way of explanation or justification. Thus those who are adversely affected do not have the advantage of the rights of appeal enjoyed by their American counterparts.

1.3. REGULATION: MOTIVATING FORCES AND INFLUENCES

We now briefly consider why regulation has been introduced. Antitrust regulation owes its origins to the generally held belief that competition is capable of conferring significant welfare benefits (although there are qualifications to that argument) and that a policy of laissez-faire would almost certainly lead to the force of competition being severely undermined. We are, of course, drawing attention to Adam Smith's well-known dictum concerning the propensity of businessmen to turn any festive occasion into an opportunity for profitable collusion. In short, we cannot rely on businessmen to compete. Competition has to be maintained, as the title of Corwin Edwards's famous book (1948) reminds us. Economists defend this line of policy by arguing that market power gives rise to welfare losses; specifically these have been identified as allocative inefficiency (the well-known concept of dead-weight welfare loss) and production inefficiency (the now well-known concept of X-inefficiency). Market power also gives rise to arguably adverse distributional consequences. Whether we can explain the emergence of antitrust policy by reference to such theoretical notions is, however, debatable. It is highly improbable that politicians have been moved to legislate by arcane arguments such as that concerning dead-weight welfare loss. It is equally unlikely that they have been moved by considerations of X-inefficiency, not least because that term is a relatively new one. However, the idea that monopoly encourages slackness in organizations is not new; indeed it was trenchantly employed by Adam Smith in 1776 (p. 241). Perhaps the major reason for legislation against the abuse of market power has been the age-old propensity of monopolists to line their pockets at the public's expense. In addition there have been a number of quasipolitical considerations such as the need to maintain the freedom to compete, the desirability of checking undue concentrations of economic power, and the avoidance of socially divisive discriminations.

The origins of economic regulation are indeed multifarious; there are general themes, but also alleged special cases. The public-interest argument tends to explain its emergence by reference to market failure. Thus economies of scale and scope give rise to conditions of natural monopoly. The minimization of unit costs may dictate the need for a monopoly, but the monopolist cannot be allowed freely to exploit his market position—hence regulation designed to control price, profitability, service, etc. Then there are natural features such as the electromagnetic spectrum, which imply, in activities such as broadcasting, a limitation on the number of suppliers. This is accomplished by licensing. Quite often licences are allocated to those who meet certain social criteria rather than to those who tender the highest price. Frequently, other elements are grafted on to the regulatory system. These include standards governing programme content and antitrust type rules

designed to stop operators of one form of communication from owning competing modes in the same geographic market, as when over-the-air broadcasters are debarred from involvements in cabling. The market failure argument has also emerged in different guises in different industries. In transportation, notably trucking and airlines, it has taken the form of the destructive or excessive competition thesis. This, it should be added, is now increasingly regarded as a largely empty box (Brever, 1982, p. 197). One version of the argument applies in the case of industries with heavy and specialized fixed investment and relatively low operating costs. Railways are cited as a case in point. Such industries are said to be prone to price-cutting when business conditions deteriorate as a result of a recession or overcapacity. Prices will be cut to attract business, spread heavy fixed costs over a larger output, lower unit costs, and thus reduce losses or even move into a state of profitability. This is likely to provoke retaliatory cuts, and may lead to situations where price falls to marginal cost. Either to preclude such a development or to bring the rate-war to an end, firms may conclude pricefixing or market-sharing agreements. Another version of the argument envisages that in the rate-war only the firms with the greatest financial strength will survive, while the weaker ones will be forced into bankruptcy or will be absorbed by the stronger. Ultimately there emerges a monopoly which will be able to determine price without fear of being undermined by inconvenient competitors. In both these cases the consumer may enjoy a short-term benefit, but will pay for it in the long run. A third version of the argument sees excessive competition as forcing firms to economize on expenditures concerned with the safety of equipment. In transport, this gives rise to the possibility of a disbeneficial externality affecting operatives, pedestrians, and passengers (Petersen, 1985, pp. 184-5). A fourth version argues that competition in a slump will eliminate productive capacity which will be needed when demand recovers (Kahn, 1970, p. 198).

In banking, the excessive competition argument has emphasized the need to protect the community against the potential externalities or larger social costs generated by widespread bank runs. In other words, if the banking system collapsed the whole economic system would fall with it. As a result, the regulatory system in the US came to have a 'belt and braces' character since, apart from the Federal Reserve Board, which could act as lender of last resort, two other safeguards were put in place. Rules were introduced which prevented individual banks from excessive risk-taking and competition. If, despite all this, banks failed, then further protection was available in the form of deposit insurance. While the latter could be viewed as a form of consumer protection, it was also designed to reduce the likelihood of widespread bank failures as bank runs rippled through the system (Barth et al., 1985, pp. 2–3).

In other sectors of the economy even more specialized motivations have been at work. Take, for example, the case of agriculture. If we seek to account

for the emergence of the EEC's Common Agricultural Policy then the following points seem to be germane. Firstly, the member states were merely continuing at Community level a policy which had been previously implemented at national level. Secondly, political forces were at work. Those who advocated European unity sought to attract political support for the cause by appealing to the powerful farm lobby. They did so by promising to redress the income imbalance between the industrial and agricultural sectors. Since the price levels necessary to redress the balance were well above world levels, a system of external protection was essential. Thirdly, it could also be argued that agriculture was by its very nature unstable. It was at the mercy of the elements, and that, combined with low short-run price elasticities of demand and supply, was likely to produce marked instability of prices and incomes. Fourthly, and of crucial importance, was the tendency for supply to outstrip demand because of the remorseless onward march of technology in conjunction with the low income elasticity of demand for food. This gave rise to a need for a system of support-buying, whereby surpluses were bought up and stored or disposed of on the world market. By the latter device, Community producers solved their problems at the expense of outside suppliers (Swann, 1984, pp. 206-29).

Economic regulation may also be a means of dealing with structural problems. The EC policy regarding steel is a case in point. The immediate reaction to the depressed conditions which followed the first oil price hike was to assume that the problem was cyclical. Only later was it realized that it was structural—that there was excess capacity, that much steel capacity was inefficient and uncompetitive, and that the industry would have to shift up market to products where competition was less intense. That point having been realized, the EC then decided to install a system of minimum prices and voluntary (and ultimately mandatory) sales quotas, together with devices designed to reduce import competition (i.e. fast-track anti-dumping duties and Voluntary Export Restraints). The theory was that severe social shocks had to be avoided at a time when alternative employment was increasingly difficult to provide. The regulatory system was designed to offer a breathing space during which structural adjustments could take place. Subsidies would be allowed, but would have to be directed to restructuring and would eventually have to be phased out. The target date was the end of 1985 (Swann, 1983, pp. 162-76). Economic regulation in these circumstances is usually conceived of as temporary, although it is a well-known fact that once installed such systems sometimes prove difficult to terminate.

The origins of social regulation are, in substantial measure, connected with the concept of market failure. Thus, much environmental protection is a response to the disbeneficial externality arising from pollution and the fact that without the exertion of property rights a free market will behave suboptimally by reflecting the impact of private rather than social costs.