2

Why Regulate?

Motives for regulating can be distinguished from technical justifications for regulating. Governments may regulate for a number of motives—for example they may be influenced by the economically powerful and may act in the interests of the regulated industry or they may see a particular regulatory stance as a means to re-election. Different commentators may analyse such motives in different ways and a variety of approaches to such analysis will be discussed in Chapter 3. To begin, though, we should consider the technical justifications for regulating that may be given by a government that is assumed to be acting in pursuit of the public interest.[1]

Many of the rationales for regulating can be described as instances of 'market failure'. Regulation in such cases is argued to be justified because the uncontrolled market place will, for some reason, fail to produce behaviour or results in accordance with the public interest.[2] In some sectors or circumstances there may also be 'market absence'—there may be no effective market—because, for example, households cannot buy clean air or peace and quiet in their localities.

1. Monopolies and Natural Monopolies

Monopoly describes the position in which one seller produces for the entire industry or market. Monopoly pricing and output is likely to occur and be sustained where three factors obtain:[3]

[1] For detailed reviews of public interest reasons for regulating see S. Breyer, *Regulation and Its Reform* (Cambridge, Mass., 1982), ch. 1; A. Ogus, *Regulation: Legal Form and Economic Theory* (Oxford, 1994), ch. 3; E. Gellhorn and R. J. Pierce, *Regulated Industries* (St Paul, Minn., 1982), ch. 2; J. Kay and J. Vickers, 'Regulatory Reform: An Appraisal', in G. Majone (ed.), *De-Regulation or Re-Regulation?* (London, 1989); B. Mitnick, *The Political Economy of Regulation* (New York, 1980), ch. 5; C. Sunstein, *After the Rights Revolution* (Cambridge, Mass., 1990), ch. 2; C. Hood, *Explaining Economic Policy Reversals* (Buckingham, 1995).

[2] See also J. Francis, *The Politics of Regulation* (Oxford, 1993), ch. 1.

[3] See Gellhorn and Pierce, *Regulated Industries*, 36–7 and Chapter 15 below. On regulating monopolies generally see C. Foster, *Privatisation, Public Ownership and the Regulation of Natural Monopoly* (Oxford, 1992), ch. 6; Ogus, *Regulation*, 30–3; Breyer, *Regulation and Its Reform*, 15–19; Francis, *Politics of Regulation*, ch. 3; E. Gellhorn and W. Kovacic, *Antitrust Law and Economics* (St Paul, Minn., 1994), chs. 3 and 4.

- a single seller occupies the entire market;
- the product sold is unique in the sense that there is no substitute sufficiently close for consumers to turn to;
- substantial barriers restrict entry by other firms into the industry and exit is difficult.

Where monopoly occurs, the market 'fails' because competition is deficient. From the public interest perspective, the problem with a firm occupying a monopolistic position is that in maximizing profits it will restrict its output and set price above marginal cost. It will do this because if it charges a single price for its product, additional sales will only be achieved by lowering the price on the entire output. The monopolist will forgo sales to the extent that lost revenue from fewer sales will be compensated for by higher revenue derived from increased price on the units still sold. The effects of monopoly, as compared to perfect competition, are reduced output, higher prices, and transfer of income from consumers to producers.

One response to potential monopolies is to use competition (or anti-trust) laws so as to create a business environment conducive to competition. Where a 'natural monopoly' exists, however, the use of competition law may be undesirable.[4] A natural monopoly occurs when economies of scale available in the production process are so large that the relevant market can be served at the least cost by a single firm. It is accordingly less costly to society to have production carried out by one firm than by many. Thus, rather than have three railway or electricity companies laying separate networks of rails or cables where one would do, it may be more efficient to give one firm a monopoly subject to regulation of such matters as prices and access to the network. Determining whether a natural monopoly exists requires a comparison of demand for the product with the extent of the economies of scale available in production. If a firm is in a position of natural monopoly then, like any monopoly, it will present problems of reduced output, higher prices, and transfers of wealth from consumers to the firm. Restoration of competition by use of competition law is not, however, an appropriate response since competition may be socially costly and thus regulation of prices, quality, and output as well as access may be called for. The regulator will try to set price near incremental cost (the cost of producing an additional unit) in order to encourage the natural monopolist to expand its output to the level that competitive conditions would have induced.

Not all aspects of a supply process may be naturally monopolistic. As Ogus points out,[5] the economies of scale phenomenon may affect only one part of a given process—for instance the *transmission* of, say,

[4] On natural monopolies see M. Waterson, *Regulation of the Firm and Natural Monopoly* (Oxford, 1988), ch. 2; Foster, *Privatisation*, ch. 6.2.
[5] Ogus, *Regulation*, 31.

electricity, rather than its *generation*.[6] The task of many governments and regulators (at least those committed to minimalist regulation) is to identify those parts of a process that are naturally monopolistic so that these can be regulated while other aspects are left to the influence of competitive forces.[7]

2. Windfall Profits

A firm will earn a windfall profit (sometimes called an 'economic rent' or excess profit) where it finds a source of supply significantly cheaper than that available in the market place.[8] It may do so by, say, locating a rich seam of an easily extracted mineral; by coming upon a material efficiency in a production process; or by possessing an asset that suddenly escalates in value—for example a boat in a desert town that has been flooded. Regulation may be called for when it is desired either to transfer profits to taxpayers or to allow consumers or the public to benefit from the windfall.

The rationale for regulating is strongest where the windfall is due to accident rather than planned investments of money, effort, or research. Where such investments have taken place or where society might want to create incentives to search for new efficiencies, products, or areas of demand, there is a case for allowing windfall or 'excess' profits to be retained. Even in the desert town it may be desirable to encourage some individuals to store boats in order to cope with periodic floods.

3. Externalities

The reason for regulating externalities (or 'spillovers') is that the price of a product does not reflect the true cost to society of producing that good and excessive consumption accordingly results.[9] Thus, a manufacturer of car tyres might keep costs to consumers down by dumping pollutants arising from the manufacturing process into a river. The price of the tyres will not represent the true costs that production imposes on society if clean-up costs are left out of account. The resultant process is wasteful because too many resources are attracted into polluting activities (too many tyres are made and sold) and too few resources are devoted by the

[6] G. Yarrow, 'Regulation and Competition in the Electricity Supply Industry', in J. Kay, C. Mayer, and D. Thompson, *Privatisation and Regulation* (Oxford, 1986).
[7] See Chapter 16 below, and the White Paper, *Privatising Electricity*, Cm. 322 (London, 1988).
[8] See Breyer, *Regulation and Its Reform*, 21. On the 'windfall tax' see below, pp. 233–5.
[9] See Breyer, *Regulation and Its Reform*, 23–6; Ogus, *Regulation*, 35–8.

manufacturer to pollution avoidance or adopting pollution-free production methods. The rationale for regulation is to eliminate this waste—and to protect society or third parties suffering from externalities—by compelling the internalization of spillover costs—on 'polluter pays' principles.

4. *Information Inadequacies*

Competitive markets can only function properly if consumers are sufficiently well informed to evaluate competing products.[10] The market may, however, fail to produce adequate information and may fail for a number of reasons: information may cost money to produce (e.g. because researching the effects of a product, such as a drug, may prove expensive). The producer of information, however, may not be compensated by others who use that information (e.g. other manufacturers of the drug). The incentive to produce information may accordingly be low. There may also be incentives to falsify information—where, for example, consumers of the product are ill-positioned to challenge the falsification and seek remedies for damages suffered or where they face high costs in doing so. Areas in which consumers purchase a type of product very infrequently may give rise to this problem. The information produced may, in addition, not be of sufficient assistance to the consumer—for instance because the consumer lacks the expertise required to render technical data useful. Finally, collusion in the market place, or insufficient competition, may reduce the flow of information below the levels consumers might want. Producers, as a group, may thus fail to warn consumers about the general hazards or deficiencies associated with a product. Breyer notes that until the US Government required disclosure, accurate information was unavailable to most buyers in that country concerning the durability of light bulbs, nicotine content of cigarettes, fuel economy for cars, or care requirements for textiles.[11]

Regulation, by making information more extensively accessible, accurate, and affordable, may protect consumers against information inadequacies and the consequences thereof and may encourage the operation of healthy, competitive markets.

5. *Continuity and Availability of Service*

In some circumstances the market may not provide the socially desired levels of continuity and availability of service. Thus, where demand is

[10] See F. Hayek, 'The Use of Knowledge in Society', (1945) 35 *Am. Econ. Rev.* 519; Breyer, *Regulation and Its Reform*, 26–8; Ogus, *Regulation*, 38–41.

[11] Breyer, *Regulation and Its Reform*, 28.

cyclical (for example, as with passenger air transport to a holiday island) waste may occur as firms go through the processes of closing and reopening operations.[12] Regulation may be used to sustain services through troughs—for example by setting minimum prices at levels allowing the covering of fixed costs through lean periods. This would be justified where the extra costs imposed on consumers by pricing rules are less than those caused by the processes of closing and opening services in response to the business cycle. The subsidizing of off-peak by peak travellers will, however, raise issues of equity to be considered alongside questions of social policy. In the case of some products or services—for example water services—it may be considered, as a matter of social policy, that these should be generally available at least to a certain minimum standard. In the unregulated market, however, competition may lead to 'cream-skimming'—the process in which the producer chooses to supply only the most profitable customers—and services may be withdrawn from poorer or more geographically disperse groupings of customers. Regulation may be justified in order to produce socially desirable results even though the cross-subsidizations effected may be criticizable as inefficient and unfair.

6. *Anti-competitive Behaviour and Predatory Pricing*

Markets may be deficient not merely because competition is lacking; they may produce undesirable effects because firms behave in a manner not conducive to healthy competition. A principal manifestation of such behaviour is predatory pricing. This occurs when a firm prices below costs, in the hope of driving competitors from the market, achieving a degree of domination, and then using its position to recover the costs of predation and increase profits at the expense of consumers. Preconditions for a rational firm to engage in predatory pricing are: that it must be able to outlast its competitors once prices are cut below variable costs and it must be able to maintain prices well above costs for long enough to recover its prior losses. The costs of entry to and exit from the market must, accordingly, allow it this period of comfort before new competition arises. The aim for regulators is to sustain competition and protect consumers from the ill-effects of market domination by outlawing predatory or other forms of anti-competitive behaviour.

7. *Public Goods and Moral Hazard*

Some commodities, e.g. security and defence services, may bring shared benefits and be generally desired. It may, however, be very costly for those

[12] Ogus, *Regulation*, 43–6.

paying for such services to prevent non-payers ('free-riders') from enjoying the benefits of those services. As a result, the market may fail to encourage the production of such commodities and regulation may be required—often to overcome the free-rider problem by imposing taxes.

Similarly, where there is an instance of moral hazard—where someone other than the consumer pays for a service[13]—there may be excessive consumption without regard to the resource costs being imposed on society. If, for example, medical costs are not met by the patient, but by the state or an insurer, regulatory constraints may be required if excessive consumption of medical services is to be avoided.

8. Unequal Bargaining Power

One precondition for the efficient or fair allocation of resources in a market is equal bargaining power. If bargaining power is unequal, regulation may be justified in order to protect certain interests. Thus, if unemployment is prevalent it cannot be assumed that workers will be able to negotiate effectively to protect their interests (even leaving aside informational issues) and regulation may be required to safeguard such matters as the health and safety of those workers.

9. Scarcity and Rationing

Regulatory rather than market mechanisms may be justified in order to allocate certain commodities when these are in short supply. In a petrol shortage, for example, public interest objectives may take precedence over efficiency so that, instead of using pricing as an allocative instrument, the petrol is allocated with reference to democratically generated lists of priorities.

10. Distributional Justice and Social Policy

Allocative efficiency attempts to maximize welfare but is not concerned with the distribution of that welfare amongst individuals or groups within society. Regulation may be used to redistribute wealth or to transfer resources to victims of misfortune (e.g. injured parties).[14]

Distrust of individuals' rationality or wisdom may also underpin another rationale for regulation—paternalism. As a matter of policy

[13] See generally G. Calabresi, *The Cost of Accidents: A Legal and Economic Analysis* (New Haven, 1970).

[14] See Ogus, *Regulation*, 46–51.

society may decide to overrule individuals' preferences on some issues and regulate—for example by demanding that seat belts be worn in motor vehicles. In the strongest form of such paternalism, the decision is taken to regulate even where it is assumed that the citizens involved are possessed of full information concerning products.[15] On a series of other issues, governments may regulate simply in order to further social policies such as the prevention of discrimination based on race, sex, or age.

11. Rationalization and Coordination

In many situations it is extremely expensive for individuals to negotiate private contracts so as to organize behaviour or industries in an efficient manner—the transaction costs would be excessive.[16] The firms in an industry may be too small and geographically dispersed to bring themselves together to produce efficiently. (This might happen when small fishing concerns in a sparsely populated area fail to make collective marketing arrangements.) Enterprises may, moreover, have developed different and incompatible modes of production. In these circumstances regulation may be justified as a means of rationalizing production processes (perhaps standardizing equipment in order to create effective networks) and in order to coordinate the market. Centralized regulation holds the advantage over individual private law arrangements where information can be more efficiently communicated through public channels and economies of scale can be achieved by having one public agency responsible for upholding standards.[17]

It is noteworthy that this rationale for regulation is based more on the desire to *enable* effective action to take place than on the need to prohibit undesirable behaviour.

12. Planning

Markets may ensure reasonably well that individuals' consumer preferences are met but they are less able to meet the demands of future generations or to satisfy altruistic concerns (e.g. the quality of an environment not personally enjoyed).[18] There is also, as far as altruism is

[15] Ibid. 51–4.

[16] See Ogus, *Regulation*, 41–2; S. Breyer and P. MacAvoy, 'The Federal Power Commission and the Coordination Problem in the Electrical Power Industry' (1973) 46 *S. Cal. LR* 661.

[17] In the transportation sector coordination and regulation by a central agency may be needed in order to organize a route network—see S. Glaister, *Deregulation and Privatisation: British Experience* (World Bank, Washington DC, 1998).

[18] See Ogus, *Regulation*, 54; R. B. Stewart, 'Regulation in a Liberal State: The Role of Non-Commodity Values' (1983) 92 *Yale LJ* 1537; Sunstein, *After the Rights Revolution*, 57–61.

concerned, a potential free-rider problem. Many people may be prepared to give up some of their assets for altruistic purposes only if they can be assured that a large number of others will do the same. The problems and costs of coordination mean that regulation may be required in order to satisfy such desires.[19]

Conclusions: Choosing to Regulate

There are, as seen above, a number of well-recognized reasons commonly given for regulating. It should be stressed, however, that in any one sector or industry the case for regulating may well be based not on a single but on a combination of rationales. As Breyer points out,[20] health and safety regulation, for example, can be justified with reference to a number of rationales—for example externalities, information defects, unequal bargaining, and paternalism.

A second point, to be borne in mind in considering whether to regulate, is that the market and all its failings should be compared with regulation and all its failings. Any analysis of the need to regulate will be skewed if it is assumed that regulatory techniques will operate perfectly. We will see during this book that all regulatory strategies have strengths and weaknesses in relation to their implementation as well as their design. Regulatory and market solutions to problems should be considered in all their varieties and with all likely deficiencies and side-effects if true comparisons are to be effected.

[19] Ogus, *Regulation*, 54. [20] Breyer, *Regulation and Its Reform*, 34.

TABLE 1. *Rationales for regulating*

Rationale	Main aims of regulation	Example
Monopolies and natural monpolies	Counter ten'dency to raise prices and lower output.	Utilities.
	Harness benefits of scale economies.	
	Identify areas genuinely monopolistic.	
Windfall profits	Transfer benefits of windfalls from firms to consumers or taxpayers.	Firm discovers unusually cheap source of supply.
Externalities	Compel producer or consumer to bear full costs of production rather than pass on to third parties or society.	Pollution of river by factory.
Information inadequacies	Inform consumers to allow market to operate.	Pharmaceuticals. Food and drinks labelling.
Continuity and availability of service	Ensure socially desired (or protect minimal) level of 'essential' service.	Transport service to remote region.
Anti-competitive and behaviour predatory pricing	Prevent anti-competitive behaviour.	Below-cost pricing in transport.
Public goods and moral hazard	Share costs where benefits of activity are shared but free-rider problems exist.	Defence and security services. Health Services.
Unequal bargaining power	Protect vulnerable interests where market fails to do so.	Health and Safety at Work.
Scarcity and rationing	Public interest allocation of scarce commodities.	Petrol shortage.
Distribution justice and social policy	Distribute according to public interest.	Victim protection.
	Prevent undesirable behaviour or results.	Discrimination.
Rationalization and Coordination	Secure efficient production where transaction costs prevent market from obtaining network gains or efficiencies of scale.	Disparate production in agriculture and fisheries.
	Standardization.	
Planning	Protect interests of future generations.	Environment.
	Coordinate altruistic intentions.	

3

Explaining Regulation

In explaining how regulation arises, develops, and declines, a number of broad approaches can be adopted.[1] These approaches may set out merely to describe and account for regulatory developments; they may be prescriptive and offer a view on how regulation *should* be organized; or they may serve a combination of these functions. Similarly, accounts of regulation may constitute commentaries on regulatory developments that are delivered with detachment from the sidelines or, together with their proponents, they may participate on the field of play and, intentionally or otherwise, may contribute themselves to regulatory changes.

The part that ideas can play in influencing regulatory developments is itself an issue for debate. Thus, Christopher Hood sees the 'force of ideas' approach as one of four main ways of explaining policy (or regulatory) developments. The essences of the four types of explanation can be set out thus:[2]

1. Where stress is placed on the force of new *ideas* that upset the *status quo* in some way—perhaps through demonstrations of experimental evidence, logical force, or rhetorical power.
2. Where emphasis rests on the pressures of *interests* that act in pursuit of developments that suit their own purposes.
3. Where changes are seen to flow from changes in *habitat* that make old policies obsolete in the face of new conditions—thus economic changes or technological advances may be seen to be driving policy revisions.
4. Where policies are said to *destroy themselves* because of internal problems—as where bureaucratic failings or integral deficiencies of strategy defeat the initial policy and produce changes.

[1] For a detailed review of the myriad varieties of regulatory theory see B. Mitnick, *The Political Economy of Regulation* (New York, 1980), ch. 3 and for a briefer account, R. Horwitz, *The Irony of Regulatory Reform: The Deregulation of the American Telecommunications Industry* (Oxford, 1989).

[2] See C. C. Hood, *Explaining Economic Policy Reversals* (Buckingham, 1994), ch. 1 (Hood's analysis refers to 'policy reversals' but is applied here to policy developments generally).

It can be seen that the first three approaches focus on 'external' influences on regimes, the fourth looks to internally generated factors. Of course, accounts of changes in regulation may not fall always neatly into the above categories since, as Hood acknowledges,[3] overlaps and combinations are inevitable (as where, for instance, powerful interests are seen to produce changes by pressing certain ideas against a background of technological advances). In looking at explanations of regulation, however, the above categorization does assist in teasing apart the elements within different approaches and in clarifying the roles played by those approaches in regulatory developments. We may, for instance, consider not only the relative emphases that particular explanations or schools of thought place on the role of ideas, interests, habitats, or internal factors but also the political and practical influence of those explanations or schools and the nature and origins of the forces that drive such explanations.

Most theories of regulatory origin and development can be seen as types of interest theory, though the force that can be exerted by ideas and arguments is recognized in a number of accounts. Among interest theories a broad distinction can be drawn between 'public', 'group', and 'private' versions.

1. Public Interest Theories

Public interest theories centre on the idea that those seeking to institute or develop regulation do so in pursuit of public interest related objectives (rather than group, sector, or individual self-interests). Proponents of regulation thus act as agents for the public interest.[4] Regulation's purpose is to achieve certain publicly desired results in circumstances where, for instance, the market would fail to yield these. (The grounds given for such action are likely to involve reference to one or more of the reasons for regulating outlined in Chapter 2.)[5]

Consistent with such a vision is an emphasis on the trustworthiness and disinterestedness of expert regulators in whose public-spiritedness

[3] Ibid. 36.

[4] See e.g. J. M. Landis, *The Administrative Process* (New Haven, 1938); R. E. Cushman, *The Independent Regulatory Commissions* (New York, 1941). For a British public interest account see I. McLean and C. Foster, 'The Political Economy of Regulation: Interests, Ideology, Voters and the UK Regulation of Railways Act 1844' (1992) 70 *Pub. Admin.* 313 at 329: 'Our test of seven hypotheses about the origins of regulation has shown that the best-supported is that both Gladstone and the MPs who voted on his bill were moved by their perceptions of the public interest.'

[5] Public interest visions of regulation may complement 'functionalist' accounts of regulatory origins and developments in so far as functionalism sees regulation as largely driven by the nature of the task at hand (as identified in terms of public needs and interests) rather than by private, individual, or self-interests.

and efficiency the public can have confidence.[6] The public interest approach is still defended by some commentators who argue for the development rather than abandonment of this vision.[7]

A number of problems, theoretical, practical, and political, however, beset the public interest view. A first difficulty is that an agreed conception of the public interest may be hard to identify. Instead, many might contend, regulation generally takes place amidst a clashing of images of the public interest. Public interest theories are said to fail to take into account such clashes.[8]

A further problem stems from doubts concerning the disinterestedness, expertise, and efficiency that the public interest approach attributes to regulators.[9] Thus, it has been argued that regulators may succumb to venality and be corrupted by opportunities for personal profit so that regulation is biased by the pursuit of personal interests.[10] Doubts may also be cast on the competence of regulators, which, it may be alleged, may not be sufficiently high to yield public interest ends—perhaps because rewards and career structures may lack the requisite attractiveness or because training needs and disciplinary emphases are poorly attended to.[11] Finally, capture theorists may suggest that public interest theory understates the degree to which economic and political power influences regulation. Thus, it is argued that regulatory polices and institutions often become (or, in some versions, begin life) subject to the influence of powerful regulated parties, or even politicians or sectors of consumers, so that regulation serves the interests of these parties or sectors rather than those of the wider public.[12]

Even for those capture theorists who are prepared to concede that regulatory regimes are sometimes established in pursuit of public interest objectives, the public interest vision may only be persuasive in relation to the earliest stages of the life-cycle of regulatory affairs.[13]

With regard to results,[14] the public interest perspective is prone to attack on the basis that regulation often seems to fail to deliver public interest

[6] See Landis, *Administrative Process*.
[7] See C. Sunstein, *After the Rights Revolution* (Cambridge, Mass., 1990).
[8] See J. G. Francis, *The Politics of Regulation: A Comparative Perspective* (Oxford, 1993), 8. On the public interest as a balancing of different interests; as a compromising approach or a trade-off concept; or as national, social, or particularistic goals see Mitnick, *Political Economy of Regulation*, 92–3.
[9] See G. Stigler, 'The Theory of Economic Regulation' (1971) 2 *Bell J. of Econ.* 3; G. Kolko, *Railroads and Regulation* (Princeton, 1965); Mitnick, *Political Economy of Regulation*, 111–20.
[10] Mitnick, *Political Economy of Regulation*, 94.
[11] See Landis, *Administrative Process*, 66.
[12] See E. S. Redford, *Administration of National Economic Control* (London, 1952), 251–2.
[13] See M. H. Bernstein, *Regulatory Business by Independent Commission* (New York, 1955) (life-cycle theory is discussed below at p. 25).
[14] On which the most telling comment is perhaps that of newly appointed football manager John Bond, who said: 'I promise results, not promises'. Quoted, B. Fantoni, *Private Eye's Colemanballs* (London, 1982).

outcomes. Some observers see this as an indication that appropriate lessons must be learned from failures so that better regulatory regimes can be designed.[15] The message for others is that regulation is doomed to failure and that policies of deregulation should be looked to.

2. Interest Group Theories

Interest group theorists see regulatory developments as the products of relationships between different groups and between such groups and the state. Such theorists generally differ from proponents of public interest accounts in not seeing regulatory behaviour as imbued with public-spiritedness but as a competition for power. Some accounts ('Group Public Interest Approaches')[16] do, however, offer explanations of the public interest that take on board competitions between different versions of that interest. Thus, Bernstein points to the role of regulators in carrying out missions that legislators have negotiated between interest groups, consumers, businesses, and other affected parties—missions that effect compromises but are seen by participants, nevertheless, to be endeavours in pursuit of the public interest.[17] Such visions bridge public interest and group interest approaches.

Versions of interest group theories range from open-ended pluralism to corporatism.[18] Pluralists see competing groups as struggling for power and elections as won by coalitions of groups who use their power to shape regulatory regimes. In contrast, corporatists emphasize the extent to which successful groups are taken into partnership with the state and produce regulatory regimes that exclude non-participating interests.[19] A recent variation on interest group theory is that offered by Leigh Hancher and Michael Moran, who employ the concept of 'regulatory space' within which there is an interplaying of interests concerning regulation.[20]

3. Private Interest Theories

A third broad approach to regulation stresses the extent to which regulatory developments are driven by the pursuit not of public or group but

[15] See C. R. Sunstein, 'Paradoxes of the Regulatory State' (1990) 57 *Univ. of Chicago LR* 407.
[16] See Mitnick, *Political Economy of Regulation*, 100.
[17] See M. H. Bernstein, *Regulating Business by Independent Commission* (New York, 1955), 76.
[18] Francis, *Politics of Regulation*; G. Wilson, *Interest Groups* (Oxford, 1990); for a pluralist analysis of government see P. Self, *Political Theories of Modern Government* (London, 1985), 79–107.
[19] See O. Newman, *The Challenge of Corporatism* (London, 1980).
[20] L. Hancher and M. Moran (eds.), *Capitalism, Culture and Regulation* (Oxford, 1989).

of private interests. This general approach thus encompasses theories going under a number of names, notably 'economic', 'Chicago', 'private interest', 'public choice', 'special interest', and 'capture'.

Some economic theories hover between group and private interest approaches. Thus, Kolko argued that US regulation originated in self-interested pressure exerted by business groups who sought such governmental action in order to maximize their profits and stabilize markets.[21] There was no diversion or capture from a public interest mission because regulation was established to serve private business interests in the first place.

The 'Chicago' theory as seen in the writings of George Stigler and Sam Peltzman[22] suggested that where there was a failure of competition, or the existence of monopoly, there would be monopoly profit which the legislature would give the regulator the power to dispose of. The regulated industry thus would have an incentive to influence the regulator so as to benefit from a 'regulatory rent' and there would be a market for regulation. This meant that the regulator would be captured by the industry since industry would have more to lose or gain than the regulator and, more generally, that in political contests, compact, organized interests (say, solicitors) would usually win at the expense of a diffused group (say, users of legal services). The commodity of regulation would go to those who valued it most and producers would thus tend to be better served by regulation than the (more diffused, less organized) masses of consumers. This economic approach assumed that all parties involved in regulation are income maximizers (politicians, for instance, seeking votes to maximize their cash incomes); it assumed that all parties are as well informed as possible and learn from experience; and it also assumed that regulation is costless (hence overall efficiency will not be affected by levels of regulation).[23]

The economic approach, as outlined, is thus consistent with public choice theories that stress the extent to which governmental behaviour can be understood by viewing all actors as rational individual maximizers of their own welfare.[24] Organizations and bureaucracies thus fall to be analysed with reference to the competing preferences of the individuals involved.

[21] G. Kolko, *The Triumph of Conservatism* (New York, 1977).

[22] Stigler loc. cit. n. 9 above; S. Peltzman, 'Towards a More General Theory of Regulation' (1976) 19 *J. Law and Econ.* 211. See also R. Posner, 'Natural Monopoly and Regulation' (1969) 21 *Stanford LR.* 548; id., 'Theories of Economic Regulation' (1974) 5 *Bell. J. of Econ.* 335. W. A. Jordan, 'Producer Protection, Prior Market Structure and the Effects of Government Regulation' (1992) 15 *J. Law and Econ.* 151. G. Becker, 'A Theory of Competition among Pressure Groups for Political Influence' (1983) 98 *Quarterly J. of Economics* 371.

[23] Cf. Peltzman loc. cit. n. 22 above.

[24] Public choice theories thus emphasize the force of *private* interests and preferences in governmental decisions, in stark contrast to public interest accounts; see A. Ogus, *Regulation: Legal Form and Economic Theory* (Oxford, 1994), 58–71.

Emphasis is placed on the propensity of such actors to circumvent official regulatory goals and substitute ends that are self-serving and to act in pursuit of such ends as job retention, aggrandizement, re-election, or the accumulation of personal wealth. The public interest is thus relegated to a small role in the establishment, operation, and development of regulatory regimes. Policies are put into effect so as to enhance wealth or utility positions.[25]

Such approaches have been open to question on a number of fronts.[26] Thus, explaining the nature and origins of preferences in the posited 'markets' for regulation proves difficult. Parties may lack determinate preferences on political or regulatory issues and individuals may behave altruistically in certain important respects. They may, for instance, identify with legislative, group, agency, or bureaucratic objectives and may behave in different ways according to the roles they adopt as, say, consumers of services, career strategists, or professional designers of regulatory policies. Regulators or bureaucrats may, moreover, be prevented from acting in rational, self-serving ways by lack of information, expertise, or commitment. Interest groups' activities may affect regulation in a manner that interferes with the realization of private preferences and regulatory bureaucracies may have lives beyond the sums of their parts. Public choice theories, moreover, ignore or underrate such important motives as ideologies, policy goals, emotional identifications, personality limits, prejudices, and moral stances.[27]

Experience, furthermore, seems to pose as many problems for private interest theories as it does for public interest accounts. Deregulatory developments thus seem difficult to account for in terms of the economic theory. Why, for instance, was there a strong deregulation movement in the 1970s if concentrated business interests were in control of regulatory developments?

On this point, one explanation might be that ideas, rather than pure interests, played a crucial role in moves to deregulate—a contention to be returned to in the next section. Private interest theorists, however, have not given up without a fight. Sam Peltzman himself has sought to rethink the economic approach and assess its power to explain regulatory developments, particularly in the period between the mid-1970s and mid-1980s.[28] He argues that regulation tends to produce incentives for firms to dissipate their wealth (e.g. when faced with controlled prices at

[25] See A. Downs, *An Economic Theory of Democracy* (New York, 1957).

[26] See Hood, *Explaining Economic Policy Reversals*, 24 and, generally, P. Dunleavy, *Democracy, Bureaucracy and Public Choice* (London, 1991); P. Self, *Government by the Market?* (Basingstoke, 1993).

[27] Self, *Government by the Market?*, 46.

[28] S. Peltzman, 'The Economic Theory of Regulation after a Decade of Regulation' (1989) *Brookings Papers in Macroeconomics* 1.

a time when costs increase) and that regulatory rents can be eradicated by regulation itself. A point can thus arrive when a return to the position prior to regulation becomes more attractive to regulated parties than continued regulation. Peltzman concludes that although the Chicago theory can tell a coherent story about most of the examples of deregulation (the latter being explicable in terms of the *disruption* of regulatory rents) it does, nevertheless, leave some important questions unanswered—for instance about 'the design of institutions and their adaptability'.[29]

Others have sought to refine the economic approach by considering in more detail the circumstances in which those seeking the profits extractable from monopolistic or protected positions in the market would be most likely to press for, and obtain, favourable regulation. Thus, Wilson has built on the Stiglerian vision to argue that regulation is most likely to be set up to serve the interests of the regulated where a concentrated group with high stakes is able to secure regulation and favourable wealth transfers at the expense of a diffused group with low per capita stakes.[30] In this scenario, the concentrated, high-stake group has incentives to influence regulation that are unmatched by those of the diffused, low-stake population. Lobbying for favourable regulation might, however, be expected to be far less pronounced when both the benefits and costs of public regulation are either concentrated or diffused. In the former instance, opponents of regulation might organize as easily as those seeking regulation and, in the case of generally diffused interests, both the opponents and proponents of regulation find it difficult to organize. Finally, where the benefits of regulation are diffused and costs are concentrated, opponents of regulation might be expected to be better organized and more forceful than those pressing for regulation.[31]

Such refinements of the economic approach fail, nevertheless, to come to grips with one of the core problems mentioned by Peltzman—the lack of any account of the role played by institutional arrangements in the shaping of regulation. Examining this role is essential, say a number of commentators, as an antidote to the idea of parties as rational wealth and vote maximizers. Such institutional positions will be returned to shortly.

The economic approach offers one view of regulatory capture but the diversion of regulation away from public interest objectives may be explained quite differently from the perspectives encountered in other disciplines. Motives can be seen in less simple terms than mere wealth maximization—to include, for instance, ideological, bureaucratic, or social

[29] S. Peltzman, 'The Economic Theory of Regulation after a Decade of Regulation' (1989) *Brookings Papers Macroeconomics in* 40.

[30] J. Q. Wilson, *The Politics of Regulation* (New York, 1980), 357–94. See also M. Olson, *The Logic of Collective Action* (Cambridge, Mass., 1965) and Hood, *Explaining Economic Policy Reversals*, 24–6.

[31] See Hood, *Explaining Economic Policy Reversals*, 25–6.

objectives. Stress, thus, can be placed on the propensity of bureaucrats to seek to maximize agency budgets,[32] or to engage in 'bureau-shaping' so as to create job satisfaction[33] or to maximize the political influence and scope of competencies of the agency.[34]

Contrasts have been drawn between the assumptions of the Chicago school of law and economics—that legislators and regulators seek to maximize their personal wealth—and the position of the 'Virginian' school of political economy which sees legislators and regulators as pursuers of expected votes or ideological ends as well as cash and which gives greater prominence to the interplay of pressure groups.[35] The problem of moving beyond wealth maximization and seeing utility maximization in broader terms is, however, that a loss of predictive power results and it is difficult to attribute relative weights to the various factors (money, votes, ideologies, and other preferences) that are all alleged to be being sought.[36]

Perhaps the best-known capture theory of all does not focus principally on economic interests. Marver H. Bernstein's 'life-cycle' theory makes reference to a variety of forces (internal and external) in accounting for regulatory declines.[37] Writing in 1955, Bernstein described an ageing process in which public interest regulation gave way to capture. Regulation typically begins, on this view, as a policy response to a political call to protect the public from undesirable activity. In the first of four stages of life—termed *gestation*—concerns about a problem result in the creation of a regulatory body. Second there follows *youth* in which the inexperienced regulatory body is outmanœuvred by the regulatees but operates with a crusading zeal. As the first flush of political support for agency objectives dies away, *maturity* follows and devitalization sets in. Regulation becomes more expert and settled but as the agency moves out of the political mainstream it begins to pay increasing attention to the needs of industry. As vitality declines, the agency relies more and more upon precedent when taking decisions and adopts a reactive stance. Finally, *old age*, the fourth stage, arrives to be charactized by debility and decline, resort to ever more judicialized procedures, and the agency giving priority to industrial rather than public interests.

[32] See W. A. Niskanen, *Bureaucracy and Representative Government* (Chicago, 1971).

[33] See Dunleavy, *Democracy, Bureaucracy and Public Choice*, 174–209.

[34] See G. Majone, *Regulating Europe* (London, 1996), 65; id., 'Cross-National Sources of Regulatory Policymaking in Europe and the United States' (1991) 11 *J. Publ. Pol.* 76, 94–7.

[35] See C. D. Foster, *Privatisation, Public Ownership and the Regulation of Natural Monopoly* (Oxford, 1992), 386–8; M. A. Crew (ed.), *Deregulation and Diversification of Utilities* (Dordrecht, 1989), 5–20.

[36] Foster, *Privatisation*, 387.

[37] Bernstein, *Regulating Business*. For criticism of the life-cycle theory see e.g. L. L. Jaffe, 'The Independent Agency—A New Scapegoat' (1956) 65 *Yale LJ* 1068; see also P. Quirk, *Industry Influence in Federal Regulatory Agencies* (Princeton, 1981).

4. Force of Ideas Explanations

The deregulatory programmes of the Reagan and Thatcher administrations prompted some commentators to argue that certain changes in regulation did not stem so much from the pressing of private interests as from the force of ideas.[38] (In such contexts 'ideas' are taken to refer to intellectual conceptions 'which express how and why the government ought to control business'.)[39] Ideas might be distorted by political considerations when being applied but: 'they provide the essential basis of assumed social realities whereby political leaders explain and justify their policies to the public, backed by a media which keeps the range of "realistic" options within narrow limits'.[40]

It has been contended that deregulation, as seen in the United States in the Reagan era, was driven not by interest group pressures but by an intellectually guided process of economic rationalism that managed to benefit dispersed consumer groups at the expense of concentrated producer interests.[41] (Residential consumers, the evidence was said to indicate, benefited from the deregulation.) This argument might itself have difficulty in explaining why certain ideas take root, how ideas can be separated conceptually from interests, or in accounting for the patchiness of deregulation,[42] but in so far as it is conceded that ideas possess a force of their own, the force of ideas approach does usefully qualify economists' emphasis on the market as the key factor in understanding regulatory progressions.[43]

[38] Hood, *Explaining Economic Policy Reversals*, 29; see R. A. Harris and S. M. Milkis, *The Politics of Regulatory Change* (2nd edn., New York, 1996), esp. ch. 1; on the influence of public choice ideology see Self, *Government by the Market?*, ch. 3, esp pp. 65–7. On ideas and policy processes generally see P. A. Hall, 'Policy Paradigms, Social Learning and the State: The Case of Economic Policy-making in Britain' (1993) 25 *Comparative Politics* 275; J. Goldstein and R. Keshane (eds.), *Ideas and Foreign Policy: Benefits, Institutions and Political Change* (Ithaca, NY, 1993).

[39] Harris and Milkis, *Politics of Regulatory Change*, 26.

[40] Self, *Government by the Market?*, p. xii; see also P. G. Hall (ed.), *The Political Power of Economic Ideas* (Princeton, 1989).

[41] See M. Derthick and P. Quirk, *The Politics of Deregulation* (Washington, 1985) and Harris and Milkis, *Politics of Regulatory Change*, who argue: 'we must appreciate the history of the underlying ideas and institutions if we are to understand deregulatory outcomes of the Reagan revolution' (p. 18). Harris and Milkis refer to 'the leadership role played by intellectual and political elites in establishing a new regulatory regime' (p. 25); on the role of ideas in European integration and regulation see H. Wallace and W. Wallace (eds.), *Policy-Making in the European Union* (3rd edn., Oxford, 1996), 22–4.

[42] See Hood, *Explaining Economic Policy Reversals*, 29; J. K. Jacobsen, 'Much Ado about Ideas' (1995) 47 *World Politics* 283; P. Quirk, 'In Defence of the Politics of Ideas' (1988) 50 *Journal of Politics* 31; also T. E. Keeler, 'Theories of Regulation and the Deregulation Movement' (1984) *Public Choice* 103; L. W. Weiss and M. W. Klass (eds.), *Regulatory Reform: What Actually Happened* (Boston, 1986).

[43] For counter-explanations of deregulation see Hood, *Explaining Economic Policy Reversals*, 29–33; Keeler, loc. cit. n. 42 above; Peltzman loc. cit. n. 28 above; Weiss and Klass, *Regulatory Reform*.

5. Institutional Theories

A further group of commentators has been highly sceptical of the rational actor model encountered in the economic approach. Institutionalist theorists centre on the notion that institutional structure and arrangements, as well as social processes, significantly shape regulation—that there is more driving regulatory developments than mere aggregations of individuals' preferences.[44] Individual actors are seen by institutionalists as influenced by rules as well as organizational and social settings, rather than as pure rational choice maximizers, and as having preferences that are influenced by institutional procedures, principles, expectations, and norms that are encountered in cultural and historical frameworks.[45] Regulation is thus seen as shaped not so much by notions of the public interest or competitive bargaining between different private interests but by institutional arrangements and rules (legal and other). Forces acting within regulatory bodies are thus emphasized more strongly within institutionalism than in, say, interest theories.

'New institutionalist' approaches come from a variety of disciplinary roots but share a common scepticism about atomistic accounts focusing on the individual.[46] Thus, within the socio-legal literature attention has been paid to principal-agent problems and the difficulties that elected officials encounter when they have to place the implementation of public programmes in the hands of unaccountable officials and agencies.[47] A

[44] See J. March and J. Olsen, 'The New Institutionalism: Organisational Factors in Political Life' (1984) 78 *Am. Pol. Sci. Rev.* 734; J. Meyer and B. Rowan, 'Institutionalised Organisations: Formal Structure as Myth and Ceremony' (1977) *Am. J. Sociol.* 340; W. Scott, 'The Adolescence of Institutional Theory' (1987) 32 *Admin. Sci. Qly.* 493; W. Powell and P. Di Maggio (eds.), *The New Institutionalism in Organizational Analysis* (Chicago, 1991); R. L. Jepperson, 'Institutions, Institutional Effects, and Institutionalism', ibid.; T. A. Koelble, 'The New Institutionalism in Political Science and Sociology' (1995) *Comparative Politics* 231. B. Levy and P. T. Spiller, *Regulations, Institutions and Commitment* (Cambridge, 1996). See also the discussion in J. Black, 'An Economic Analysis of Regulation: One View of the Cathedral' (1997) *OJLS* 699; 'New Institutionalism and Nationalism in Socio-Legal Analysis: Institutional Approaches to Regulatory Decision-Making' (1997) 19 *Law and Policy* 53.

[45] But for a 'transactions cost' approach to institutional choices, which does make 'rational choice' assumptions familiar in economics literature see M. J. Horn, *The Political Economy of Public Administration* (Cambridge, 1995).

[46] See W. Powell and P. Di Maggio, *New Institutionalism*, esp. ch. 1. (On the birth of 'New Institutionalism' see Powell and Di Maggio, p. 11 and March and Olsen loc. cit. n. 44 above.)

[47] See M. D. McCubbins, R. G. Noll, and B. R. Weingast, 'Administrative Procedures as Instruments of Political Control' (1987) 3 *J. Law Econ. Org.* 243; 'Structure Process Politics and Policy: Administrative Arrangements and the Political Control of Agencies' (1989) 75 *Virginia LR* 431 (McNollGast I and II respectively); R. L. Calver, M. D. McCubbins, and B. R. Weingast, 'A Theory of Political Control and Agency Discretion' (1989) 33 *Am. J. Pol. Sci.* 588. For criticism see J. L. Mashaw, 'Explaining Administrative Process: Normative, Positive and Critical Stories of Legal Development' (1990) 6 *J. Law Econ. Org.* 267; T. Moe, 'Political Institutions: The Neglected Side of the Story' (1990) 6 *J. Law Econ. Org.* 213; Levy and Spiller, *Regulations, Institutions and Commitment*. For a European view see M. Bergman and J. Lane, 'Public Policy in a Principal-Agent Framework' (1990) 2 *J. of Theoretical*

notable contribution has been made by McCubbins, Noll, and Weingast (McNollGast) on this front. McNollGast's concern is that administrative agencies and bureaucrats may tend to act in ways contrary to the objectives established in the original legislative compromise and may do so because of coalitional and bureaucratic 'drifts'. Their argument is that bureaucratic deviations from the desires of politicians and legislatures are inherently difficult to control but a solution lies in the use of the 'administrative process'. Elected officials can design procedures to solve the two central problems of political control: 'First, procedures can be used to mitigate the informational disadvantages faced by politicians in dealing with agencies. Second, procedures can be used to enfranchise important constituents in agency decision-making processes.'[48] Thus, to solve the problem of eroding legislative coalitions McNollGast hypothesize that legislators will 'stack the deck' of administrative procedures (i.e. rig these) in favour of the original winning coalition. The effect is to preserve the thrust of the original policy position (or mandate) in the face of declining cohesion in the original political alliances that produced the policy.

Other commentators have sought to add to McNollGast by arguing that problems of bureaucratic and legislative drift can be controlled not merely by using administrative procedures but also by 'stacking' organizational structures and designs. Jonathan Macey,[49] for instance, has contended that the structure and design of agencies can be manipulated 'in ways that reduce the chance that future changes in the political landscape will upset the terms of the original understanding among the relevant political actors'.[50] Regulatory outcomes are, on such a view, said to be influenced by agency structures which affect the kinds of political pressure that various groups are able to exert on the bureaucrats within the agency.

New institutional economists have, for their part, sought to qualify the standard assumptions of microeconomic theory by focusing on the transaction and arguing that individuals may seek to maximize in accordance with certain preference orderings but they do so in the face of cognitive

Politics 339. For a review of principal-agent theories in regulation see M. Barrow, 'Public Services and the Theory of Regulation' (1996) 24 *Policy and Politics* 263.

[48] See McNollGast I, 244. On bureaucratic and coalitional drifts see M. J. Horn and K. A. Shepsle, 'Commentary: Structure, Process, Politics and Policy' (1989) *Va. LR* 499.

[49] J. R. Macey, 'Organisational Design and Political Control of Administrative Agencies' (1992) 8 *J. Law Econ. Org.* 93.

[50] Ibid. On the role of institutional structures in explaining regulation in the EU see G. Majone, 'The Rise of the Regulatory State in Europe' (1993) *West European Politics*. In their comparative study of telecommunications regulation, Levy and Spiller (*Regulations, Institutions and Commitment*) emphasize that regulatory performance is affected by the political and social institutions encountered in a country. They urge (controversially) that regulation can only be efficient and satisfactory if adequate state mechanisms are in place to restrain arbitrary administrative action by regulators: see pp. 1, 120.

limits, incomplete information, and difficulties in monitoring and enforcing agreements.[51]

From the political science perspective, a special concern is the nature of collective action and the way that political structures, institutions, and decision-making processes shape political outcomes.[52] A number of writers focus on the mechanics of legislating, the way that this affects substantive results, and the efforts of different political groupings to control each other (e.g. committees of the legislature and regulatory agencies).[53]

In sociology and organization theory, the new institutionalism involves not only a rejection of rational actor models but also an interest in institutions as independent variables; in cognitive and cultural explanations; and in units of analysis that are more than aggregations of individuals' preferences, attributes, or motives. Sociologists have devoted particular attention to the nature and conceptualization of institutions and how certain forms of behaviour and understandings become institutionalized.[54] A sociological approach to capture is thus offered by Grabosky and Braithwaite, who suggest that the closer the regulatory institution is to the regulated firm in terms of experience, outlook, and class (the smaller the 'relational distance') and the greater the frequency of agency to firm contacts, the more likely it is that cooperative arrangements and capture will result.[55] Organizational theorists have tended to focus on the

[51] See Powell and Di Maggio, *New Institutionalism*, 3, and L. Putterman, *The Economic Nature of the Firm* (Cambridge, 1986); O. Williamson, *The Economic Institutions of Capitalism* (New York, 1985); D. C. North, 'Government and the Cost of Exchange in History' (1984) 44 *J. of Econ. History* 255; R. Matthews, 'The Economics of Institutions and the Services of Growth' (1986) 96 *Economic Journal* 903; Horn, *The Political Economy of Public Administration*.

[52] See K. A. Shepsle, 'Institutional Equilibrium and Equilibrium Institutions', in H. Weisburg (ed.), *Political Science: The Science of Politics* (New York, 1986). T. Moe, 'An Assessment of the Positive Theory of Congressional Dominance' (1987) 12 *Legislative Stud. Q.* 475; id., 'Political Institutions: The Neglected Side of the Story' (1990) 6. *J. Law Econ. Org.* 213. For an economic approach to issues of political control see R. L. Calver, M. D. McCubbins, and B. R. Weingast, 'A Theory of Political Control and Agency Discretion' (1989) 33 *Am. J. Pol. Sci.* 588.

[53] See W. H. Riker, 'Implications from the Disequilibrium of Majority Rule for the Study of Institutions' (1980) 74 *Am. Pol. Sci. Rev.* 432; K. A. Shepsle and B. Weingast, 'Structure-Induced Equilibria and Legislature Choice' (1981) 37 *Public Choice* 503; Shepsle and Weingast, 'The Institutional Foundations of Committee Power' (1987) 81 *Am. Pol. Sci. Rev.* 85; B. Weingast and W. Marshall, 'The Industrial Organisation of Congress' (1988) 96 *J. Pol. Econ.* 132; E. Ostrom, 'An Agenda for the Study of Institutions' (1986) 48 *Public Choice* 3; K. A. Shepsle loc. cit. (1986) n. 52 above; T. Moe, 'Interests, Institutions and Positive Theory: The Politics of the NLRB' (1987) 2 *Studies in American Political Development* 236.

[54] See e.g. J. Meyer and B. Rowan, 'Institutionalised Organisation: Formal Structure as Myth and Ceremony' in Powell and Di Maggio, *New Institutionalism*. S. Crawford and E. Ostrum, 'A Grammar of Institutions' (1995) 89 *Am. Pol. Sci. Rev.* 582. R. L. Jepperson, 'Institutions, Institutional Effects and Institutionalism', in Powell and Di Maggio, *New Institutionalism*.

[55] P. Grabosky and J. Braithwaite, *Of Manners Gentle: Enforcement Strategies of Australian Business Regulatory Agencies* (Melbourne, 1986). On relational distance see D. Black, *The Behavior of Law* (New York, 1974), 40–8.

role of organizational structures and processes that are of industry-wide, national, or international scope and the extent to which individual choices are guided by shared organizational experiences, expectations, and understandings.[56]

One strand of regulatory theory that has socio-legal, sociological, cultural, and organizational elements is that represented by Leigh Hancher and Michael Moran,[57] who question portrayals of regulation as contests between public authorities and private interests and argue that regulation involves an intermingling of public and private characteristics that makes it more fruitful to focus on the complex and shifting relationships between and within organizations involved in regulation. Hancher and Moran thus look to understand the way that different institutions come to inhabit a shared 'regulatory space' that is marked out by a range of regulatory issues subject to public decision.

How regulatory regimes compete is a further, and distinct, focal point in explanations of regulation and attention may be paid to relations between domestic institutions as well as regulatory competition across borders.[58] In such analyses questions arise concerning the effect of regulatory competition on such matters as: the rigour of standards; the control (or encouragement) of regulatory capture; and the production of even-handed and effective regulatory regimes across national borders.[59]

Finally, mention should be made of the historical and cultural strands of institutionalism. The former tend to give weight to the influence of past decisions, practices, and procedures in explaining regulatory developments.[60] The latter look to the influence on institutions of informal

[56] See Powell and Di Maggio, *New Institutionalism*, 9–10.

[57] See L. Hancher and M. Moran (eds.), *Capitalism, Culture and Regulation* (Oxford, 1989), esp. their chapter 'Organising Regulatory Space'. See also T. Daintith, 'A Regulatory Space Agency' (1989) 9 *OJLS* 534 and C. Shearing, 'A Constitutive Conception of Regulation', in P. Grabosky and J. Braithwaite (eds.), *Business Regulation and Australia's Future* (Canberra, 1993).

[58] See Chapter 13 below; G. Majone, *Regulating Europe* (London, 1996); J. M. Sun and J. Pelkmans, 'Regulatory Competition in the Single Market' (1995) 33 *J. Common Market Studies* 67; C. Scott, 'Competition and Co-ordination in US and EC Telecommunications Regulation', in S. Picciotto, J. McCahery, C. Scott, and B. Bratton (eds.), *International Regulatory Competition and Co-ordination* (Oxford, 1996); S. Woolcock, *Competition among Rules in the Single European Market* (London, 1994); J. P. Trachtman, 'International Regulatory Competition, Externalisation and Jurisdiction' (1993) 34 *Harv. J. of Int. Law* 49; H. Siebert and M. J. Koop, 'Institutional Competition Versus Centralisation: *Quo Vadis* Europe' (1993) 9 *Oxford Rev. of Econ. Policy* 15.

[59] On *comparing* regulation across borders see R. Baldwin and T. Daintith, *Harmonisation and Hazard* (London, 1992) and below, Chapter 11.

[60] See K. Thalem and S. Steinmo, 'Historical Institutionalism in Comparative Politics', in S. Steinmo, K. Thelen, and F. Longstreth (eds.), *Structuring Politics: Historical Institutionalism in Comparative Politics* (Cambridge, 1992); I. McLean and C. Foster, 'The Political Economy of Regulation: Interests, Ideology, Voters and the UK Regulation of Railways Act 1844' (1992) 70 *Pub. Admin.* 313.

rules, procedures, conceptions, myths, ideologies, theories, shared values, beliefs, expectations, and understandings. More particular concerns are cognitive processes, the cultural frameworks of perception, and the relationships between ideas, images or symbols, and practical responses.[61] Influential within cultural approaches to institutions is Mary Douglas's distinction between two basic dimensions of organizations:[62] 'grid' (the degree to which relations are governed by externally imposed rules) and 'group' (the extent to which individuals are incorporated into broader, bounded units). Combining these two dimensions gives four basic ways of life: 'fatalist' (high grid, high group); 'hierarchist' (high grid, low group), 'individualist' (low grid, low group), and 'sectarian' or 'egalitarian' (low grid, high group). Commentators have sought to apply grid-group anlayses in accounting for developments in government and, in using such analyses, have stressed the importance of institutions and groups as well as rule systems in determining social and regulatory developments.[63]

In emphasizing the self-productive aspect of institutions such cultural approaches are consistent with systems theory and the idea that the differentiated functional systems into which society is divided are autopoietic. Each system (law, economy, politics, religion, etc.) is seen to have its own rationality yet to be able to react with its environment so as to self-generate and reproduce.[64] Regulatory developments, accordingly, come to be analysed in terms of the nature, compatibilities, and interactions of autopoietic systems.[65]

[61] See Jepperson loc. cit. n. 54 above; J. Meyer, J. Boli, and G. Thomas, 'Ontology and Rationalisation in the Western Cultural Account', in G. Thomas et al. (eds.), *Institutional Structure* (London, 1987); J. Meyer, 'Conceptions of Christendom', in M. Kohn (ed.), *Cross-National Research in Sociology* (London, 1988); id., 'Society without Culture: A Nineteenth Century Legacy', in F. O. Ramirez (ed.), *Rethinking the Nineteenth Century* (New York, 1988), G. M. Thomas, *Revivalism and Cultural Change* (Chicago, 1989); M. Douglas, *How Institutions Think* (London, 1986); M. Thompson, R. Ellis, and A. Wildavsky, *Cultural Theory* (Boulder, Colo., 1990).

[62] M. Douglas, *In the Active Voice* (London, 1982).

[63] See e.g. Thompson, Ellis, and Wildavsky, *Cultural Theory* and A. Wildavsky, 'The Logic of Public Sector Growth', in J. E. Lane (ed.), *State and Market* (London, 1985) (discussed, Hood, *Explaining Economic Policy Reversals*, 98–9).

[64] See G. Teubner (ed.), *Autopoietic Law: A New Approach to Law and Society* (Berlin, 1988); id., *Juridification of Social Spheres* (Berlin, 1987); id., *Law as an Autopoietic System* (Oxford, 1993); N. Luhmann, 'Law as a Social System' (1989) 83 *NWULR* 136; M. King, 'The Truth about Autopoiesis' (1993) 20 *J. of Law and Society* 218; W. H. Clune, 'Implementation as an Autopoietic Interaction of Autopoietic Organisations', in G. Teubner and A. Febbrajo (eds.), *State, Law and Economy as Autopoietic Systems: Regulation and Autonomy in New Perspective* (Milan, 1992); on autopoiesis and self-regulation see J. Black, (1996) 59 *MLR* 24 and for an introduction, King, 'The Truth about Autopoiesis'.

[65] See Black, loc. cit. n. 64 above and G. Teubner, 'After Legal Instrumentalism? Strategic Models of Post-Regulatory Law', in Teubner (ed.), *Dilemmas of Law in the Welfare State* (Berlin, 1985); M. Wilke, 'Societal Regulation through Law', in Teubner and Febbrajo, *State, Law and Economy*.

Conclusions

A review of major approaches to the explanation of regulation may not exhaustively account for the host of potential theories available. It serves, however, to indicate the main tensions and differences of emphasis encountered in the regulatory literature. It would be optimistic, even rash, to suggest that such theories can be synthesized so that reliable predictions can be made about all or most regulatory processes.[66] Different theories exist at differing levels of generality and have varying applications and uses as explanatory tools. For this reason it makes little sense to say whether one explanation or type of explanation carries more conviction than another without reference to a particular issue and context. What can be said is that in seeking to explain particular regulatory developments, an awareness of the variety of available explanations does help the observer to evaluate the insights offered by different theories, to develop a sense of the limitations of and assumptions underpinning those theories, and to identify the kinds of information necessary for applying and testing them.

The study of regulation has developed in many promising ways in recent years.[67] Thus, interdisciplinary approaches have become more widespread and traditional academic boundaries have been crossed between such disciplines as law, political science, and economics.[68] Regulatory theory has come to draw from an ever wider range of sources, from legal theory[69] to political science[70] and anthropology.[71] Regulatory studies have taken on board new issues and concerns—such as attend the topic of risk[72]—and, from a British perspective, a healthy indigenous literature has developed to supplement previously dominant 'borrowings' from across the Atlantic.[73] Themes and approaches do remain to be developed within the body of regulatory studies[74] but regulation is set to grow in importance not merely as a governmental activity and as a subject for party political attention but also as a focus of academic interest.

[66] See M. E. Levine and J. L. Forrence, 'Regulatory Capture, Public Interest and the Public Agenda: Towards Synthesis' (1990) *J. Law Econ. Org.* 167.

[67] See the discussion in R. Baldwin, C. Scott, and C. Hood (eds.), *A Reader On Regulation* (Oxford, 1998), ch. 1.

[68] See e.g. D. Helm (ed.), *British Utilities Regulation* (1996).

[69] See e.g. the works of Teubner and Black at n. 64 above.

[70] See e.g. Hood, *Explaining Economic Policy Reversals*; R. A. Harris and S. M. Milkis, *The Politics of Regulatory Change* (2nd edn., New York, 1996).

[71] See e.g. M. Douglas, 'Risk as a Forensic Resource' (1990) 119 *Daedalus* 1.

[72] See below, Chapter 11 and e.g. Royal Society, *Risk: Assessment, Perception, Management* (London, 1992) (containing a useful bibliography of risk studies).

[73] See e.g. A. Ogus, *Regulation: Legal Form and Economic Theory* (Oxford, 1994); M. Armstrong, S. Cowan, and J. Vickers, *Regulatory Reform: Economic Analysis and British Experience* (London, 1994).

[74] For discussion see Baldwin, Scott, and Hood, *Regulation*, ch. 1.

TABLE 2. *Explaining regulation*

Type of Theory	Main Emphasis	Key Problems
Public Interest	Regulator acting in pursuit of public rather than private interests. Regulator disinterested and expert.	Difficult to agree a conception of public interest. Scepticism concerning disinterestedness, and public-spiritedness of regulators. Understates influence of economic power and prevalence of capture in regulation. Concern that public interest outcomes often fail to result. Understates competition for power amongst groups.
Interest Group	Regulation as product of relationships between groups and with the state.	Understates role of private economic power.
Private Interest	Role of private economic interests in driving regulation. Incentives of firms to secure benefits and regulatory rents by capturing regulator.	Assumes that parties in regulation are rational maximizers of own welfare. Difficulty of identifying preferences of parties. Possibility of altruism and public-spiritedness. Informational limitations may limit self-interestedness of actions. Role of groups and institutions may be underemphasized.
Force of Ideas	Role of ideas in steering regulatory developments.	It may be hard to separate the force of ideas from the role of economic interests. Explaining deregulation may be difficult.
Institutional	Influence of organizational rule and social setting on regulation. Actors seen not purely as individuals but as shaped in action, knowledge, and preference by organizational rule and social environments. Principal-agent issues and problems of democratic control of implementation.	How to balance institutional explanations with others in accounting for regulatory changes.

15

Price Setting in Natural Monopolies

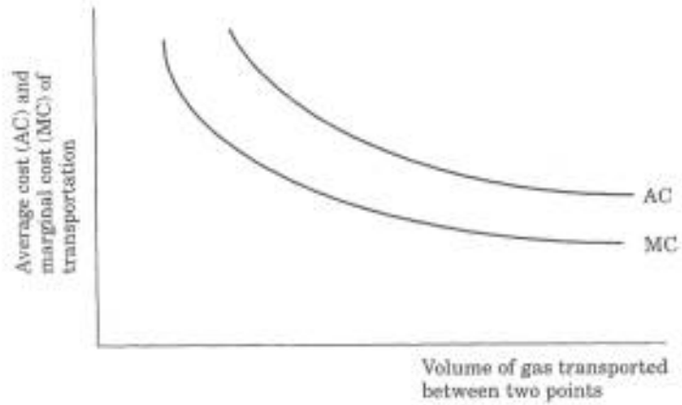
This and the following four chapters are concerned with economic regulation of the utilities sector. This chapter focuses on the nature and implications of natural monopoly—a condition that governs the costs of many activities undertaken by utilities, especially their distribution networks. Natural monopoly can be defined as a situation in which the market can most cheaply be supplied by a single firm. (A gas distribution network is a good example.) A natural monopolist, left to itself, would for reasons discussed below be likely to charge excessive prices and there is accordingly a need for some form of price regulation, and scope for debate about the kind of price regulation that is appropriate.

Not all activities undertaken by utilities are naturally monopolistic, though historically the markets may for policy reasons have been supplied by a single firm, typically a public enterprise. In such cases, decisions have to be made about where, how, and when to liberalize the market and allow competition to enter. It is therefore necessary to discuss how to manage the transition to competition and the implications for regulating entry, prices, and quality of service. These issues are tackled in the following four chapters which deal, respectively, with the complementary roles of competition and regulation (Chapter 16), methods of price control (Chapter 17), the measurement of efficiency (Chapter 18), and regulating quality of service (Chapter 19).

1. What is a Natural Monopoly?

A natural monopoly arises when the market is served most cheaply by a single firm, rather than by a multiplicity of competing firms.[1] In cases where

[1] See M. Armstrong, S. Cowan, and J. Vickers, *Regulatory Reform: Economic Analysis and British Experience* (London, 1994), chs. 2–3; S. Berg and T. Tschirhart, *Natural Monopoly Regulation* (Cambridge, 1988); W. W. Sharkey, *The Theory of Natural Monopoly* (Cambridge, 1982); C. D. Foster, *Privatisation, Public Ownership and the Regulation of Natural Monopoly* (Oxford, 1992), ch. 6.



As the volume of gas transported increases, there is a fall in the average cost (AC) of transportation —both operating costs and investment or capital costs. This implies that the cost of moving an additional unit (the marginal cost or MC) always lies below the average cost: what drags the average down is the (low) additional cost of transporting an extra or marginal unit.

FIG. 2. *Average and marginal cost in a natural monopoly*

the firm is producing a single product or service—for example, transporting gas between two points, the situation can be represented in Figure 2, which shows how average cost (*AC*) per unit transported falls as the volume transported increases.

An implication of declining average cost is that the additional cost incurred by the pipeline operator on transporting each further unit is not only falling itself but also less than the average cost. This situation is shown in Figure 2 by the marginal cost curve (*MC*).

Possible sources of declining unit costs are many.[2] In the case of pipelines, the capacity of the pipe can be increased without a commensurate increase in investment cost. Firms with a larger scale of operation may also be able to reduce costs by having proportionately lower overheads or by being able to employ more specialized and efficient personnel. A further important consideration in networks for distributing electricity, gas, telecommunications, and water services to final users is associated with what are called economies of density. Thus, it is cheaper on a per household basis for a single distribution company to deliver electricity to all the houses in an area than to have two competing networks each serving half of them. This is because the latter arrangement requires unnecessary duplication of a major part of the distribution network.

[2] See D. A. Hay and D. T. Morris, *Industrial Economics and Organization* (2nd edn., Oxford, 1991), ch. 2.

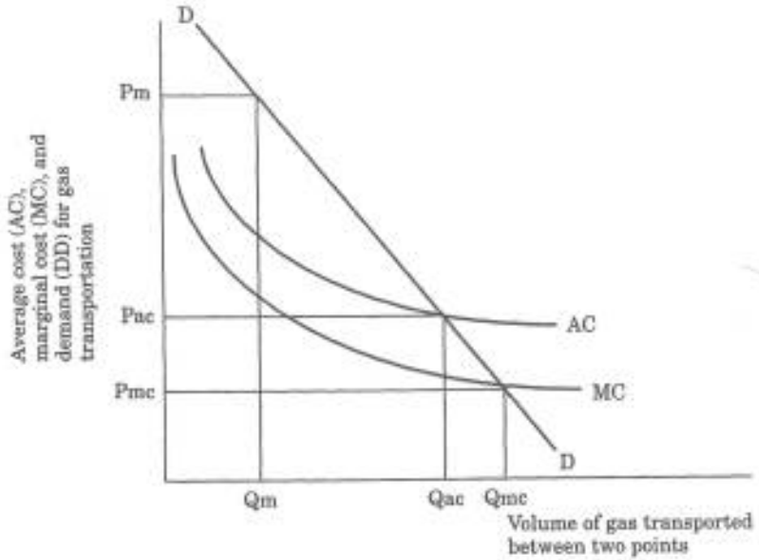
Whether an activity is a natural monopoly of this kind depends not only on engineering factors but also upon management processes and the operation of social and economic factors within the enterprise. It might theoretically be possible for a monopolist to serve a market at a lower unit cost than two or more competing firms can achieve. Incentives to efficiency under a monopoly may, however, be very weak, and as a result, it may in practice be cheaper to have the market supplied by two competitors in spite of the theoretical advantage of the monopoly.

The declining unit costs associated with economies of scale of the kind described above are one aspect of natural monopolies. A second reason for cost reduction arises through economies of scope, which are encountered in many industries when it is cheaper for one firm to provide two or more related products and services together, than for each of them to be provided by a separate firm. A good example from the communications industry is provided by cable television networks which deliver both broadcast entertainment services and telecommunication services. Both telecommunications and cable TV companies utilize much of the same infrastructure—the trenches and ducts which contain the cables. If a single firm provides both services, it can do so more cheaply than two firms can when using separate distribution networks.[3] Economies of scope, which typically arise from the use of common assets to produce separate products, have the effect of reducing the number of firms in an industry.

The tendency towards natural monopoly is most pronounced when economies of scale are combined with economies of scope. The former reduce the number of firms producing each service individually, while the latter encourage each firm in the market to produce a range of services. Acting in combination, they may generate a situation in which a significant number of markets are served by the same monopolist.

Determining whether a particular area of activity is a natural monopoly is a complex process. Natural monopolies are vulnerable to technological development. Thus, the argument that telecommunications, particularly the access network or local loop which connects households and firms to the local exchange, is a natural monopoly has been significantly weakened by the development of new technologies based on wireless distribution. These give customers access to the exchange without the necessity to construct fixed link networks. The natural monopolies of energy and water distribution systems, however, appear to be well rooted.

[3] M. Cave and P. Williamson, 'Entry, Competition and Regulation in UK Telecommunications', (1996) 12 *Oxford Rev. of Econ. Policy* 100.



An unregulated monopolist would charge a high price (*Pm*), thus raising the price of gas to consumers. The ideal price would be *Pmc*, where the demand curve (DD) cuts the marginal cost curve (MC). If this price were charged, gas prices would be based on a charge for transportation which reflected the true marginal cost to the economy of transporting the last or marginal unit. However, a price equal to *Pmc* would fail to cover the firm's average cost (AC); hence the firm could not survive in the long run. The lowest price consistent with the firm breaking even is *Pac*. If the regulator must ensure that the firm breaks even, this is the best price available.

FIG. 3. *Pricing options for a natural monopolist*

2. *Implications for Pricing*

The implications for pricing of services provided by a natural monopoly can be tackled by asking two questions: what price would emerge in the absence of intervention, and what prices should regulators try to attain?

The first question can readily be answered in relation to Figure 3. This reproduces Figure 2, with the addition of a demand curve *DD*, which shows how demand for gas pipeline services varies with the price charged.

If the price of transportation is high, the implied price of gas made available to consumers will be high, and gas consumption will diminish. As gas transport prices fall, this will be reflected in lower prices at the retail level, and demand for gas and for gas transport will rise.

In these circumstances, a monopolist controlling the pipeline will maximize its profits by setting a relatively high price, *Pm*, which lies above average cost and hence delivers a monopoly profit.[4] As a result, gas prices

[4] For how that price is determined, see D. Begg, G. Fischer, and R. Dornbusch, *Economics* (4th edn., London, 1998).

paid by consumers will be high, and those consumers will suffer, to the benefit of shareholders in the monopoly who will enjoy excess profits.

This unsatisfactory state of affairs can clearly be mitigated by the regulation of prices, but what price for gas transport should the regulator set? Ideally the prices of goods and services sold in the economy should be set at their marginal costs,[5] whether they apply to final demand such as gas purchased by households or to an intermediate product such as gas transport. This is desirable because at a price where the demand curve cuts the marginal cost curve (*Pmc* in Fig. 3), output has been expanded up to the point where the buyers' willingness to pay for an additional unit of the service provided, shown by the height of the demand curve, exactly equals the marginal cost to the economy of producing that final unit of output. At a price higher than this, the buyers' willingness to pay would exceed the marginal cost of providing an extra unit. At a price lower than this, the marginal cost to the economy of providing the last unit of output is greater than the buyers' willingness to pay for it. The best price for the service is, therefore, a price equal to marginal cost.

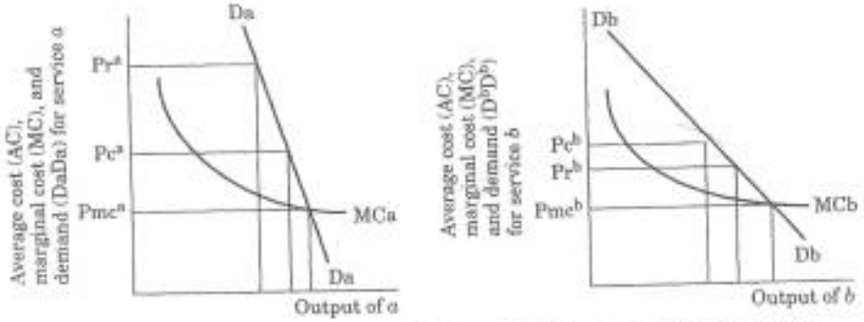
As inspection of Figure 3 demonstrates, however, if gas transport services were priced at *Pmc*, then the price charged would fail to cover the average cost of service. As a result, the firm would make a loss.

If it were a public enterprise, that loss could be made up from general taxation. A privately owned single product firm which did not receive state aid or another form of subsidy would, however, go out of business. If the firm is constrained to avoid losses and break even, then the most appropriate regulated price is shown by *Pac* in Figure 3. This is more satisfactory than the monopoly price *Pm*, but less efficient than a price equal to marginal cost, *Pmc*.

The implication is that a regulator who is setting prices for a single product firm which has to break even should seek to drive prices down to average costs. Most regulated firms, however, produce several services, and this gives more flexibility in the pricing process. It is not possible in the case of a multi-product firm to identify individual average costs for the separate services, because those services will typically have common inputs such as capital equipment, and as a result it will not be possible to attribute all costs unambiguously to individual services. It will, however, be possible to establish the marginal cost of each service, by identifying the increases in overall costs associated with increasing the output of any service when the output of other services is held constant.

As before, the most efficient price for each service occurs where the demand curve *Da Da* or *Db Db* crosses the marginal cost curve (*MCa* or *MCb*), as illustrated by Pmc^a and Pmc^b in Figure 4.

[5] See Armstrong et al., *Regulatory Reform*, 14–18.



The ideal prices are where the demand curves (Da Da and Db Db) cut the marginal cost curves (MCa and MCb). A firm charging such prices would, however, make losses as both products are produced in conditions of economies of scale. Hence the need for a mark-up over marginal costs. One possibility would be to have an equal mark-up to cover common and fixed costs; i.e. to choose Pc^a and Pc^b. Such prices, though, have different distorting effects on demand for the two services; it falls much more for b than for a. A preferred option is so-called Ramsey pricing, which involves a high proportionate mark-up on service a, where demand is unresponsive to price (Pr^a) and a low proportionate mark-up on b, where demand is more responsive to price (Pr^b).

FIG. 4. *Efficient pricing for a multi-service utility*

We face once again, however, the problem that, if the firm sells each service at a price equal to its marginal cost, the firm will incur losses. In order to break even, it must, therefore, charge a mark-up above marginal costs.

One simple way of achieving this objective would be to fix prices that contain an equal proportionate mark up on each service, of a size which just allows the firm to break even. These prices are shown in Figure 4 as Pc^a and Pc^b respectively. This is the solution consistent with average cost pricing for the single product firm. It is preferable in most circumstances, however, to set a proportionate mark-up over marginal cost for each service which varies from service in accordance with demand conditions.

These preferred prices are illustrated in Figure 4 by Pr^a and Pr^b; they are also known after their inventor as Ramsey prices.[6] The logic behind them is as follows. In the case of service a, demand is relatively unresponsive to price, and a high mark-up can be charged without that mark-up having a major effect on consumption, compared with the case where price is equal to marginal cost. Demand for service b by contrast, falls much more as price rises. A high mark-up on service b will lead to a major distortion of the amount consumed.

[6] See Armstrong et al., *Regulatory Reform*, 47–51; G. T. Brown and D. S. Sibley, *The Theory of Public Utility Pricing* (Cambridge, 1986), 39–44.

To express this principle more generally, when prices are being set for a regulated monopoly which produces a variety of services and which—because it is privately owned—is required to break even, they should embody the minimum mark-ups over marginal costs that are necessary to allow the firm to break even. Services where demand is relatively responsive to price should generally have a lower than average proportionate mark-up, while services where demand is relatively unresponsive to price should have a higher than average mark-up over their marginal costs. This enables common costs to be recovered in a way that reduces to a minimum the harmful effects of distortion in output caused by the mark-up over marginal cost.[7]

Conclusions

This chapter has defined natural monopoly, which occurs when a market is most cheaply served by a single producer. Natural monopolies arise from economies of scale, which mean that the largest firm has a cost advantage over its competitors, and is hence likely to become a monopolist. Where two or more products or services are produced more cheaply by a single firm than separately by two firms, economies of scope are in evidence. A combination of economies of scale and economies of scope is likely to lead to dominance of the market by a single multi-product firm.

Such a firm has the market power to charge prices which generate excessive profit. The natural regulatory response is to control prices. In the case of a single product firm, if the firm is required to break even, the most satisfactory regulated price which can be imposed at any point in time is equal to average cost. In the case of a multi-product firm, a break-even constraint should lead to differential mark-ups on services. Such mark-ups should be greater where demand is relatively unresponsive to price and smaller where it is relatively responsive.

This analysis has allowed us to identify what might be efficient pricing rules for a natural monopoly. Utility regulators in practice have to undertake the prior, and crucial, process of determining whether regulation of price and other aspects is in fact necessary. Our discussion has also assumed that regulators know the costs of the firms they regulate. In practice they do not, and they need to develop incentives for firms to show how they can reduce their costs and keep them down.

[7] For an implementation of Ramsey pricing to the telecommunications sector, see Brown and Sibley, *Public Utility Pricing*, ch. 7.