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**INTERACTIONS BETWEEN COMPETITION AUTHORITIES AND SECTOR REGULATORS –
Contribution from Consumers International**

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Interactions between Competition Authorities and Sector Regulators

– Contribution from Consumers International–

1. Introduction

1. This paper sets an analytical basis as background for considering the topic of interactions between competition and sector regulators.
2. It is based on an earlier paper by Allan Fels (the author of this note) and Henry Ergas¹ on the institutional design of competition authorities. A major focus of that paper was on the question of whether and how much to integrate the work of competition law and of economic regulation. A further issue not discussed in this note but of some relevance to the current topic is the relationship of consumer protection to these two matters.
3. Whilst this paper has an emphasis on institutional design, it is considered relevant to analysing the interaction between competition law agencies and regulators as well as to interaction within agencies which combine the roles of competition law and regulation.

2. Overview

4. That economic regulation and competition policy are largely interdependent instruments of economic policy, each aimed at serving a common purpose of enhancing the efficiency with which markets work, has been stated on many occasions and is widely accepted. It is also widely recognised that there can be, and at times are, tensions between those policies. Moreover, as a practical matter, there are differences in how those policies work, and in the nature of the process by which decisions are taken and implemented. Recognition of these interdependencies and of the differences leads naturally to a consideration of the institutional arrangements for these policies and specifically, of how they should be coordinated.
5. This paper explores these themes, setting out the main issues as a basis for discussion without seeking to be comprehensive in their treatment. It makes the following main points:
6. Competition policy and economic regulation share a common purpose while relying on differing instruments to achieve that purpose. Usually, they should reinforce one another; however, it is not uncommon for them to clash, for example, when economic regulation is used in ways that unnecessarily restrict competition. Also, the introduction of competition may occur without sufficient regard to consequential economic regulatory issues. This naturally raises the issue of how that coordination is best achieved:
 - While there can be benefits to integrating responsibility for the enforcement of competition policy and economic regulation within a single institution, the reality is that there will always be limits to the extent and effectiveness of that integration;

¹ *Institutional Design of Competition Authorities'* background note by Allan Fels and Henry Ergas for Roundtable on Changes in Institutional Design on Competition Authorities, OECD Competition Committee December 2014

- Thus, the nature of these tasks associated with these policy areas differs in important respects; moreover, economic regulation inherently involves a very wide range of instruments, many of which are sector- or industry-specific, and which are not readily brought under a single umbrella;
- As a result, whatever view is taken of the appropriate degree, if any, of institutional integration of competition and economic regulation, an important goal should be as a minimum to ensure that the competition policy authority has the expertise required to monitor developments in the design and administration of economic regulation and to act as an advocate for competition in the economic regulatory process; similarly, economic regulation agencies should arguably have the skills to monitor and assess competition issues. Moreover it is important that processes for communication, coordination, cooperation be optimized.
- It is also likely to be important to ensure that there is within government an entity that has whole of government oversight of competition policy and economic regulation, and that exercises that oversight in a manner mindful of competition and regulation concerns. That entity may also need to keep an eye on turf wars.
- Periodic surveys of particular instruments - such as regulation regarding access to “essential facilities” - aimed at reviewing whether they were consistent with efficient competition, may play a useful and important role in giving structure to this coordination process.

7. This paper does not seek to nest the relevant issues in a unified conceptual framework. Rather, it proceeds by examining the interaction of competition policy with economic regulation. The paper seeks to explain the nature of the relevant policy area; and on that basis, analyse whether there are ‘economies of scope’ between the instruments and processes it involves and those of competition policy. It is in the light of those economies (and diseconomies) of scope that the paper considers the institutional linkages that might be defined between economic regulation and competition policy and sets the scene for analysis of day to day interactions between the relevant institutions.

3. Regulation and Competition

8. It is obvious that there are some activities in which it is efficient for only a single supplier to serve an entire market. These activities, which are generally referred to as natural monopolies, are normally characterised by significant economies of scale and scope in at least some of the functions required for supply. To the extent to which realising these economies of scale and scope involves substantial sunk investments - that is investments in assets that, once dedicated to a particular use, have little or no value in alternative uses - an incumbent firm supplying the service will not face effective competitive disciplines.

9. Were society fortunate enough to be able to turn to an omniscient and omni benevolent social planner to direct economic activity, the control of natural monopoly would pose little problem. In reality, society is not so blessed and difficult choices must be made about the extent and nature of the controls placed on natural monopoly suppliers.

10. These choices are difficult because all known means of control are imperfect. Historically, in most economies outside the United States, control was primarily effected by means of government ownership, that ownership then bringing with it a greater or lesser

degree of direct supervision, most often by a Ministerial department.² Since the 1980s, however, government ownership of commercial operations has fallen out of favour and government-owned utilities have been privatised in a wide range of countries. Even where privatisation has not occurred, or been incomplete, direct control by Ministerial department has been viewed as problematic, with a preference for control structures that impose greater separation from the political process. That raises the question of how those control structures should interact with competition authorities.

11. Inevitably, there are many points of overlap between the regulation of what might broadly be called the former public utilities and competition authorities. Those interactions will be most acute where regulation raises competition issues, as it does at the boundaries between natural monopoly activities and potentially competitive activities. Interactions of this kind also arise when market structures change in regulated industries, for instance through mergers. In every country, regulatory and competition authorities have had to develop processes and protocols for managing these interactions.

12. Given those interactions, it is natural to think there could be economies of scope between the regulation of natural monopolies and the work of competition authorities. After all, both involve a mix of economic and legal analysis and the forensic skills each of those requires; both seek to promote economic efficiency and the long term interest of end-users; and they may at times be alternative ways of pursuing those goals, creating potential benefits where the choice between these instruments can be internalised in a single decision-making process.

13. However, it is also important to consider the differences between these domains of activity, and those differences' implications for institutional design.

14. At the highest level of abstraction, which necessarily involves some simplification, the difference between competition policy and regulation is that while competition policy tells firms what not to do, regulation involves telling them what they are to do. Competition policy sets bounds on acceptable behaviour; in practice, these bounds are likely to be very broad indeed. Regulation typically, though not inevitably, selects a much narrower range of points, and directs the regulated entity to seek to attain that range. Regulation therefore prescribes, while competition policy proscribes. Moreover, it follows that while regulation is inherently *ex ante* in its approach, competition policy is largely *ex post*, or at the very least, inherently reactive.

15. Put in such stark terms, the distinction is a caricature. But it has merit in highlighting a difference in social function, which then has implications for the characteristics of the institutions by means of which regulation and competition policy are respectively implemented.

4. Regulation

16. Whatever the most desirable relation between a competition authority and monopoly regulators may be, what is clear is that there is a long-accepted case for some form of monopoly regulator.³ That case has four key elements.

17. First, left to their own devices, natural monopoly suppliers will have and exploit market power. Given that they will not be in a position to exactly match the price they

² See for example José A. Gómez-Ibáñez (2009) *Regulating Infrastructure: Monopoly, Contracts, and Discretion*, Harvard University Press, Cambridge, Mass

³ Richard Schmalensee (1979) *The Control of Natural Monopoly*, Lexington, Mass

charge each consumer with that consumer's willingness to pay, some inefficiency will result.

18. Second and related, consumers themselves cannot contract with natural monopoly suppliers for efficient supply. They cannot, in other words, form a coalition that collectively imposes on the supplier efficient terms and conditions, as might occur in a purely hypothetical 'Coase' bargain. As a result, a 'buyer's agent' is needed to contract with the monopoly supplier on society's behalf.

19. Third, in most circumstances, the buyer's agent referred to above cannot contract with the monopoly supplier once and for all, and then vacate the field (as might happen in a pure concession contract). To begin with, future events are too uncertain for a once and for all contract to be efficient for any of the parties - such a contract would almost inevitably involve an unacceptable level of risk. Additionally, the task of devising a contract that covered all conceivable eventualities probably exceeds human problem-solving abilities, but even if feasible, would involve great costs. Finally, even if a comprehensive contract could be devised, a specialised enforcement agent would likely be needed. This is because each individual consumer is likely to have too little at stake to bear the costs involved in securing contract compliance. As a result, the buyer's agent must be able to establish, review and revise the terms and conditions of supply, and monitor and enforce compliance.

20. Fourth, specialised expertise is required to discharge these tasks efficiently, and there are fixed costs and associated scale economies involved in establishing and maintaining that expertise. This is all the more the case as effectiveness in these activities involves significant 'learning by doing.' An arrangement in which responsibility for these tasks is assigned to a standing pool of specialists will be more efficient than one in which the fixed costs need to be periodically re-incurred.

5. The problem with regulation

21. Although not always correct, these arguments are certainly plausible in a wide range of cases. Having said that, however, the same arguments also point to some weaknesses of the regulatory solution.

22. Economists have extensively analysed these problems in terms of the difficulties a beneficent regulator has in acquiring the information needed to identify and hence impose on the firm an efficient solution. But while these difficulties are real, there are also economic costs that arise from the nature of the regulatory solution itself. Three points are especially important in this respect.

23. The first arises from the necessarily incomplete nature of the regulatory contract. Society cannot specify to its agent - the regulator - exactly how it is to behave in all conceivable eventualities, just as society cannot enter into a complete, in the sense of comprehensive and exhaustive, contract with the service supplier. There is consequently a degree of discretion that is inevitably afforded to the regulator.

24. The greater the resources accessible to the regulator - in terms of on-going funding and expertise- the greater the scope the regulator has to use that discretion. While securing economies of scale in regulation may make for strong, well-resourced regulators, it also gives regulators a larger armoury on which to draw.

25. Second, it cannot be assumed that the regulator, in exercising its discretion, will do so in a way consistent with the interests of consumers. The assumption of beneficence, at least in so far as it assumes that there is no difference between the preferences of regulators and those of society as a whole, is necessarily suspect.

26. Third, it is costly for society to monitor quite how the regulator makes use of its discretion, and on that basis to seek to influence the regulator's behaviour. However, the extent of these monitoring costs will differ as between different elements in society - a point with important implications that are discussed below.

27. In short, regulation involves a grant of power by society to an entity which it cannot completely control and which, as a result, may pursue interests other than those it is intended to represent.

28. Economists refer to situations in which one party vests control over resources in another, without being fully able to specify and monitor their use, as involving 'principal agent problems.' In these situations, the principal - whose resources are being deployed - is not in a position to enter into a complete contract with the agent, to whom control over the resource is being transferred; nor can the principal completely monitor the agent's performance; finally, the agent's interests differ, at least in part, from those of the principal.

29. In a commercial setting, principal-agent problems reduce output, as the principal gets less value from reliance on the agent than it otherwise would. Equally, in the regulatory setting, principal-agent problems mean that the social costs associated with natural monopoly are less efficiently tackled than they would be, were perfect contracting possible. In other words, because of principal-agent problems, regulation imposes costs of its own.

6. The extent and nature of regulatory costs: the capture model

30. The extent and nature of the costs regulation imposes depends on how, and with what economic consequences, regulatory discretion is exercised.

31. At an abstract level, regulatory decision-making can be modelled as a situation in which regulators, like all other agents, maximise their utility - that is, the net benefit they obtain from the activity they carry out. However, they do so subject to the constraints imposed by the environment in which they operate. More specifically, it seems reasonable to suppose that regulators incur 'costs' (not necessarily in the form of a financial penalty, but of a reduction in welfare) when they antagonise those who exercise the most effective surveillance of their activities, and secure 'revenues' (again, not necessarily in the form of a financial gain, but of an increase in welfare) when their conduct meets the expectations of those most effectively monitoring them.

32. Obviously, these are a considerable simplification of the myriad factors shaping regulatory decision-making but they are helpful in defining an analytical approach to the issues. They particularly highlight the fact that the behaviour of regulators is shaped, at least in part, by the nature of the monitoring to which they are subjected.

33. In the 1960's, it was noted that this feature of the regulatory process can lead to some powerful inferences about how regulators will behave. The logic underpinning these inferences can be summarised in the following terms.

34. As a general matter, it is clear that the extent of investment that parties will make in monitoring (and then seeking to influence) decision-making processes is a function of (1) how much they have at stake in those processes, (2) how continuously they are affected by those processes and (3) the opportunities they have to use (or more generally 'trade') resources they control in exchange for information about those processes. There is, in each of these respects, a marked asymmetry between the regulated firm on the one hand, and the consumers regulation is intended to benefit on the other.

35. Regulatory decision-making is a high stakes process for the regulated firm. As a result, it has the incentive and ability to incur the fixed costs that monitoring and seeking to influence the regulator involves.

36. At the same time, the regulated firm interacts on a repeated, indeed likely nearly continuous basis, with the regulator. For the regulator and the regulated, the situation is, in other words, a repeated game. As a result, just as the regulator ‘learns by doing’ about the firm, so the firm ‘learns by doing’ about the regulator. Repeated interaction thereby reduces the regulated firm’s monitoring costs.

37. Last but not least, most regulators, to do their job, require substantial input from the regulated firm. Coercive mechanisms will only go so far in securing this input. There is consequently a situation of mutual exchange. Ongoing interdependence (the repeated game nature of the relationship) then translates into an ability by each of the parties to ‘reward’ cooperative behaviour and ‘punish’ uncooperative behaviour, allowing the regulated firm to secure information and influence.

38. In contrast, end-consumers typically have relatively little at stake in regulatory decision-making. Moreover, very few consumers have on-going contact, or are in a position to trade information, with regulators. As a result, it would not make sense for any individual consumer to invest substantial resources in monitoring and seeking to influence regulatory outcomes.

39. Additionally, given the sheer number of end-consumers, high costs would be required to organise and sustain a collective investment in monitoring and influencing effort. The likelihood of any single consumer contributing to these costs is all more reduced as the vast bulk of the gain associated with this investment would flow to other consumers - in technical terms, there would be a ‘spill-over’ or ‘externality.’ Each individual consumer will then be tempted to ‘free ride’ or at least ‘cheap ride’ on the effort of other consumers, making it difficult to initiate and maintain collective action. There is no such spill-over or externality, or more generally collective action problem, for the regulated firm, as any benefits it can obtain by influencing the regulator are captured entirely by it.

40. In short, regulated firms have the means and motive to invest in closely observing and trying to alter regulatory outcomes. In contrast, end-consumers individually are unlikely to have the expertise and access needed to credibly monitor and seek to influence the regulator, and will face substantial organising costs if they try to do so collectively.

41. From this can be derived the hypothesis that by and large, regulators are likely to favour the interests of the regulated firm relative to those of end-consumers. In the extreme, regulators, to use a phrase once common in the economic literature, will be ‘captured’ by the regulated firm.

42. To the extent to which such ‘capture’ occurs, society will suffer two sets of costs: first, the direct inefficiencies resulting from excessive prices for regulated goods; and second, the waste of resources associated with investment in seeking to influence regulatory processes. The second of these is usually referred to as ‘rent seeking’, with the costs of rent seeking being a pure loss to social income.

7. What’s wrong with the capture model?

43. The ‘capture’ story seems somewhat less plausible viewed from a contemporary perspective. To begin with, it ignores the fact that consumers are heterogeneous, and that some consumers do have a great deal at stake in individual regulatory decisions. This is most obviously the case for those consumers for whom the goods at issue are intermediate

inputs - for example, providers of long distance telephony service buying access to the local telephone network (the 'local loop') from a regulated incumbent supplier. Consumers such as these can both monitor and seek to influence regulatory outcomes themselves and form coalitions aimed at so doing.

44. Additionally, even for end-consumers, the simple story probably over-states the costs involved in monitoring, and seeking to influence, the regulatory process. Most obviously, the media, at least in those countries which have a free press, has proved remarkably effective in following and giving wide publicity to, regulatory decision-making. Moreover, though individual end-consumers may have little at stake in individual regulatory decisions, it may well be that these consumers are especially aware of, and potentially resentful of, price increases for goods whose prices are politically controlled and for which there are no alternative sources of supply. The fact that these goods are consumed, and billed for, on a repeated basis, may further increase the attention consumers' pay to their prices.

45. Reflecting these factors, the political system, which controls regulators' access to resources, is likely to be far more sensitive to consumers' perceptions of regulatory outcomes than the simple capture story suggests.

46. Concerns about the legitimacy of the privatisation process, which in many jurisdictions is controversial, will further heighten the political system's sensitivity to consumer views. So too will the controversy that still surrounds those activities which have been opened to competition - such as telecommunications - but where regulatory controls remain in place over incumbent providers. In both of these cases, there seem likely to be strong political pressures for tangible and highly visible consumer benefits to be realised from regulated entities, even if these benefits are not sustainable.

47. On the other hand, governments seek to maximise revenues from privatization. One way of doing this is to arrange for weak regulation.

8. Time inconsistency

48. Even if capital does not occur, it does not mean, however, that the regulatory process will operate without economic cost. Rather, the nature of the regulatory distortions will differ from those that the capture model points to. In particular, the circumstances set out above create a risk of 'time inconsistent' behaviour by regulators.⁴

49. "Time inconsistency" is a term that originated in economic research about monetary policy, and more specifically, about the behaviour of central banks. Loosely, it refers to situations in which the central bank has an incentive before the fact to commit to a low inflation policy, thus promoting investment. However, once that investment has occurred, if the economy experiences slower growth, the central bank can gain by breaching its commitment and adopting a more inflationary stance - after all, the investment, once made, will remain in place, and the bank's expansionary policies will allow an increase in output, albeit at the expense of those who financed the investment. The bank's incentives before the fact (ex ante) therefore differ from those after the fact (ex

⁴ The foundational paper on time consistency is Kyland, F. and E. Prescott, (1977), 'Rules Rather than Discretion: The Inconsistency of Optimal Plans', *Journal of Political Economy*, 85, pp. 473-92. For applications to regulation see Levine, P., J. Stern and F. Trillas, (2005), 'Utility Price Regulation and Time Inconsistency: Comparisons with Monetary Policy', *Oxford Economic Papers*, 57(4), pp. 447-478 and Ergas, H. (2009) 'Time Consistency in Regulatory Price Setting: An Australian Case Study', *The Review of Network Economics*, vol 8, Issue 2, pp. 153-163.

post). Knowing this, investors will be more cautious about the value they place on the central bank's statement of intentions, and so the bank, if it is to attain a high level of investment, will need to establish its credibility - including by being more contractionary than it would otherwise choose to be.

50. Equally, in a regulatory context such as that set out above, time inconsistency may appear likely, especially to investors in the regulated entity. These investors may well fear that once the assets required by the regulated entity are sunk, the regulator - despite any commitments to allow a reasonable return on the underlying investments - will reduce prices below economic levels, effectively expropriating the investors at issue. By thus acting opportunistically, the regulator can maximise its utility, at least for some time. The fact that (1) regulated assets typically have very long lives, (2) operating costs are usually very low relative to capital costs (so the assets continue to be operated even if price is forced far below full cost recovery), and (3) for many utilities, the bulk of required investment is already in place, may mean that it takes a long time before the social costs of regulatory opportunism become manifest.

51. Even if regulators do not act in a manner that is time inconsistent, the social costs of the risk of time inconsistency will still be felt. In particular, investors that are vulnerable to the risk of opportunistic regulatory behaviour will require a premium before they commit funds to sunk assets. Equivalently, investors will wait to invest until the demand/supply balance is especially stressed (in the sense of demand being high relative to supply). Society will thereby obtain less, and more costly, service.

52. Clearly, if regulators could enter into complete and credible contracts with the regulated entity, the issue of time inconsistency would not arise - just as capture would not occur. In this sense, time inconsistency is simply another side of the problem of regulatory discretion: that economically efficient regulation seems difficult if not impossible without some, perhaps very substantial regulatory discretion, but no less difficult with it.

9. The implications for institutional design

53. In short, the design of regulatory institutions has to balance a number of factors. Central among these are the gains and losses from institutional specialisation.⁵

54. The more narrowly specialised an institution is, the greater the extent to which it can benefit by having clearly defined tasks. These benefits include those that arise from attracting and retaining specialist skills; having senior management entirely focused on the area of specialisation; narrow but potentially effective monitoring by those being regulated; and enhanced accountability if the having a more limited range of responsibilities facilitates the assessment of performance.

55. There are, however, four sets of costs that arise from narrow specialisation.

56. To begin with, specialisation may increase the resource costs involved in regulation as it prevents economies of scope from being realised. For example, an industry-specific regulator may not be able to fully utilise the specialist skills involved in determining the cost of capital; it will therefore either incur the transactions costs of contracting for these

⁵ See generally Komesar, N. K. (1997), *Imperfect Alternatives: Choosing Institutions in Law, Economics and Public Policy*, University of Chicago Press, Chicago and for applications to the design of regulatory institutions Ergas H. (2009) 'Error and Design: Economics in (and some Economics of) the Australian Competition Tribunal', *Agenda: A Journal of Policy Analysis and Reform*, vol 16, no 3..

skills on an episodic basis or (should it choose to bring those capabilities in-house) those of less than full capacity utilisation.

57. Second, the narrower a regulator's remit, the greater the risk of arbitrary distortions to resource allocation. For example, if (say) the telecommunications regulator sets regulatory parameters differently from the electricity regulator, the allocation of fungible capital as between these will be distorted, imposing efficiency losses.

58. Third, the more narrowly specialised a regulatory authority is, the more likely it is to encounter boundary issues and hence have to engage possibly costly coordination processes. The costs of those processes, including the authority's own loss of control over the decision, may induce an excess reliance on the instruments the authority itself controls, compared to those instruments which have been vested in other entities.

59. Fourth, the greater the extent to which an entity is specialised, and the narrower the area over which it has a direct impact, the more limited will be the range of external parties that monitor its behaviour. This may forego scale economies in the monitoring function itself (as the costs of monitoring have a fixed component, and may not rise proportionately with the decision-making scope of the regulator). Even more importantly, it may increase the risk of pathologies such as capture (in which the consumers' agent colludes with the supplier at consumers' expense) and of empire-building and goal displacement (in which the entity's leadership maximises its own preferences, rather than seeking to protect those of consumers).

60. In very large economies, it may be that these costs are viewed as manageable, and insufficient to outweigh the benefits of specialisation. However, that is less likely to be the case in smaller economies.

61. For those smaller economies, at least two options could be relevant. A first combines several, possibly all, regulated industries, vesting their regulation in one or more 'networks regulator', as in Germany. A second, as in Australia and New Zealand, places responsibility for regulating the former public utilities in the competition regulator, albeit with some limitations and exclusions.

62. The advantage of the first approach is that it secures economies of scale and scope in network regulation, potentially largely addressing the four concerns set out above. In practice, however, much depends on the legislative and administrative context. For example, if the relevant legislation specifies quite different approaches to the regulation of (say) rail access charges from (say) access charges for electricity networks, at least some of the potential economies of scale and scope will not be realised. On the other hand, even in those instances, there may be gains nonetheless, for instance, in terms of the scope to manage specialist resources as an integrated, cross-sector, pool. Additionally, the authority may benefit from 'spillovers' between sectors in establishing and maintaining a reputation - for example, for avoiding time-inconsistent behaviour. Last but not least, a wider coalition of interests may monitor the performance of its leadership, reducing the principal-agent problems.

63. The advantage of the second approach, at least in theory, is that it extends the range of instruments that the authority can bring to bear. For example, it may be that the most efficient solution to a particular regulatory problem is to restructure the market in ways that promote competition and then more vigorously enforce the competition rules. By 'internalising' into the same authority the competition and regulatory instruments, the authority may be more inclined to efficiently mix and match problems and instruments, avoiding the 'silo mentality' that can compromise good decision-making. At the same time, there may be instances where identifying the efficient regulatory solution requires an

analysis of competition impacts, which such an integrated authority may find it easier to undertake.

64. However, those benefits can prove illusory if the sheer scale of the authority's remit means it struggles to ensure the efficient use of its own resources. In particular, senior management may be too thinly spread, if it must take both the full suite of decisions associated with the regulation of former public utilities and the day-to-day administration of the competition laws. Moreover, it may be difficult, if not impossible, for the public to assess the quality and performance of senior management, as its accountabilities are so broad and diffuse. And to make matters worse, the *ex ante*, compulsion-oriented, approach of a regulator may not sit well with the *ex post*, compliance-oriented, spirit of the competition laws, and induce a blurring in the authority's internal culture, by, for instance, giving legitimacy to 'command and control' methods.

65. As well as these drawbacks, there are some inherent gains from horizontal rivalry between competition authorities on the one hand and regulatory authorities on the other. For example, the competition authority can play a useful role as an advocate for competition in regulated industries, even in instances where the industry regulator might prefer a different approach. The separation between them encourages each to monitor the other, and can help ensure that the competition authority, in its advocacy role, articulates competition concerns when the industry regulator has not sufficiently taken them into account. The National Broadband Network in Australia could be a case in point, as - had the competition authority not been responsible for telecommunications regulation - it might have more forcefully expressed misgivings about a regulatory approach which expanded the regulator's powers at the expense of competition.

10. Implications

66. Inevitably, institutional design is a matter of trade-offs. In the absence of much rigorous discussion of its determinants, the considerations set out here are necessarily exploratory in character. Moreover, it is obvious that national factors will play a key role, including previous experience. And even then, no approach is likely to prove good for all times; rather, the choice of approach will depend partly on the expectations, ambitions and concerns of legislators.

67. For example, in Australia, the decision to vest responsibility for economic regulation of telecommunications in the ACCC was shaped by all of the following factors:

68. The expectation, which proved unfounded, that industry-specific telecommunications regulation would 'wither away', as a rapid transition to competition was envisaged. 'Internalising' telecommunications regulation in the ACCC was seen as a way of expediting this transition;

69. The perception that the previous industry-specific regulator, AUSTEL, had not worked satisfactorily, and dominated by an engineering led, command and control, culture;

70. The desire to achieve economies of scale and scope in the regulatory function itself, including by spreading its overhead costs in the ACCC, which was also absorbing the then still important functions of price surveillance.

71. This decision was somewhat moderated by the accompanying decision to rest responsibility for many technical and social issues with a separate regulator (the Australian Communication and Media Authority).

72. There was a similar debate about the vesting of responsibility for the regulation of electricity and gas, a debate complicated politically and economically by the fact that the regulation of electricity and gas was a State matter in a market that was evolving from being state-based to national based. The outcome was more complex. Most of the economic regulation is in the hands of a national regulator (the Australia Energy Regulator) and state regulators but with the competition regulator and the national regulatory body having overlapping commissioners, close staff linkages and close connection.

73. Despite the less than full integration of the competition and regulatory institutions, there still remains some critics which claim that the ACCC may have too wide a span of control and call for one national separate regulator.

74. Some recent reviews have called for the government to separate responsibility for the regulation of the former public utilities from the ACCC and vest it in a 'networks regulator'. These reviews raise the concern, among others, that the ACCC may have too wide a span of control, which impedes its effectiveness and accountability.

75. Overall, the control of natural monopolies is inevitably problematic. On the one hand, leaving these firms unregulated may allow them to impose substantial efficiency costs. On the other hand, all forms of control are themselves imperfect, and to the extent to which they undermine the efficiency of key parts of the infrastructure, can be even more costly than allowing consumers to suffer from prices that - compared to an ideal benchmark - are too high.

76. Optimising institutional design is a crucial element in trying to manage this dilemma. Without claiming to have found answers, this paper has sought to identify the right questions.

77. The identification of these issues is also considered to provide a useful background for considering the interactions between the separate regulators or within integrated bodies, and, as indicated earlier, especially points to the need for each institution, or each part of an integrated institution, to have experience in and understanding of the work of the other and some oversight arrangements at governance level. This could involve an oversight department or overlapping board membership. It is also important to optimise communication, cooperation and coordination.

11. Conclusions

78. There are on occasions a risk that the instruments of economic regulation, rather than serving the interests of consumer, will be used to restrict otherwise desirable competition. As world markets become ever more integrated, this danger also becomes more pressing. Paternalistic and public interest justifications can be deployed for many purposes, and not all of them are socially desirable.

79. This is not to suggest, however, that there should be any doubt about the importance of economic regulation. Long-standing concerns about the need to protect consumers, and especially the most vulnerable among them, not only retain their validity but are even more significant as market mechanisms are introduced into ever more parts of our economies and societies. The introduction of competition into these areas needs to be closely coordinated with the development of effective regulatory safeguards, which is a challenge which largely remains to be met. The imperative of policy coordination is therefore as pressing as ever.

80. There may, however, be no magic bullets that can fully meet that imperative. The reality is that competition policy, and economic regulation will always differ in the range

of instruments on which they rely, key features of the tasks involved in their implementation and the levels of government that they involve. This, as well as history, may limit the extent to which there can be institutional integration. As a result, what may matter most is that competition policy authorities have the expertise needed to be effective advocates in the many dimensions of regulation economic regulators likewise have competencies in competition policy; and that there is, in central government, ongoing attention to the need for consistency between these policy instruments. Periodic surveys of particular instruments - aimed at reviewing whether they are consistent with efficient competition - could play a useful and important role in this respect.

81. This paper does not seek to draw out in detail the requirements for day-to-day interaction of competition and regulation bodies or for coordination arrangements within integrated bodies. Rather it has sought to set out some key principles regarding their respective designs in order to set the scene for an analysis of their working relationships. This may help avoid an unduly limited approach to the issues.