Chapter 5

Administrative regulation and supervision

This chapter presents reforms in the area of administrative regulation and supervision. Administrative regulation refers to regulation by ministerial divisions or agencies, as opposed to the legislature, the government or ministers. Supervision refers to the monitoring of compliance with regulations and sanctioning of non-compliance. The chapter makes a distinction between economic regulation, which concerns market accessibility, prices and quantities, and social regulation which concerns the quality of goods and services that are sold on markets or provided by the government.

This chapter describes three reforms that correspond to broad recent trends in the area of administrative regulation and supervision. These trends are: 1) maximising the use of economy-wide and cross-sectoral regulation, in preference to sector-specific approaches, 2) broadening the use of independent and/or arm's length regulators, in preference to carrying out regulatory tasks within government ministries, and 3) adopting risk based approaches to regulatory inspection and auditing activities.

Introduction

Reform trends

This chapter discusses three major changes in the organisation of administrative regulation and supervision in OECD Member countries. In each case, the changes described constitute long-term trends, albeit that the rate of dissemination among the OECD Membership and beyond has varied significantly. The three reforms are:

- maximising the use of economy-wide and cross-sectoral regulation, in preference to sector-specific approaches;
- broadening the use of independent and/or arms-length regulators, in preference to carrying out regulatory tasks within government ministries per se; and
- adopting risk-based approaches to regulatory inspection and auditing activities.

In this context, *economy-wide regulation* refers in particular to the general competition law, which has increasingly been relied upon in many countries in place of industry-specific regulation. Similarly *cross-sectoral regulation* refers to laws that establish common regulatory arrangements for two or more industry sectors (e.g. electricity and gas), as distinct from *sector-specific regulation* which applies to only one industry, or a particular industry-segment.

Administrative regulation and supervision refers to regulation and supervision by ministerial divisions and agencies, as opposed to government or ministers. *Arm's length regulatory agencies* are those that remain under full ministerial control[1] but in the regulatory area tend to be distinguished from ministries in that they have a separate formal structure and a specified role and responsibilities. By contrast, *independent regulatory agencies* are those that are not subject to ministerial or governmental direction[2], except in limited forms, usually specified in legislation or some other formal instrument.

Finally *risk-based approaches* to inspection are those that imply that the past performance of regulated entities, and/or the relative level of risk posed by their operations, are taken into account by the regulator in determining which businesses will be inspected, how frequently inspections will occur and/or how detailed this inspection will be.

Each of the reforms identified can be seen as favouring both improved regulatory effectiveness and efficiency, although the balance of these two benefits differs between reforms. In the case of moves toward cross-sectoral and economy-wide approaches to regulation, at the expense of sector-specific regulation, the key driver of the reform trend is that of improved regulatory effectiveness. Similarly, the trend toward the use of arms-length and fully independent regulators is one which results primarily from the pursuit of more effective and credible regulatory outcomes. By contrast, where moves to risk-based regulatory supervision have been implemented, a key driver of the reform appears to have been the potential to maintain effective supervision while reaping substantial savings in regulatory resource costs.

The broad context within which the three reform trends identified have arisen is one in which substantial new areas of regulation had been developed over time as a result of the move away from government monopoly service provision in a range of network-based industries, such as electricity and gas, telecommunications, port services and the like. The creation of contestable markets in industries previously characterised by public

monopoly has given rise to the need for substantial new areas of regulation and, in the majority of cases, has led to the establishment of new regulators. Detailed and explicit technical regulation has had to be developed, in many cases replacing internal rules adopted by former government monopolists. At the same time, Governments have inevitably gone through a learning process in developing high quality economic regulation suited to the context of network based industries which, necessarily, have natural monopoly elements. Indeed, the core of the regulatory challenge faced by governments in this context has been on developing a body of economic regulation that will create the conditions for the development of efficient markets, particularly by facilitating the emergence of effective upstream and downstream competition.

Cross-sectoral regulation and regulatory agencies

The fact that few governments have had substantial prior experience in regulating in these contexts has inevitably meant that there has been rapid development and change over time in regulatory policies and structures, as well as in regulatory institutions, as experience and understanding of the requirements and dynamics of these new regulatory environments has developed. A fundamental and widely observed trend in terms of this regulatory evolution has been the move away from sector-specific regulation and toward cross-sectoral approaches. This trend has encompassed moves toward greater reliance on the general competition law, albeit that sector specific legislation has continued to be required in most cases.

These trends toward greater use of cross-sectoral regulation have necessarily also entailed institutional change: a widely observed change is the progressive increase in the relative importance of cross-sectoral regulatory agencies, at the expense of those that are sector-specific. This is the result of both a tendency for new regulatory agencies to be established on a cross-sectoral basis and a tendency for existing agencies to have their regulatory remit broadened when they are subject to review and restructuring.

Despite the fact that these trends have been observable since the 1990s, a substantial proportion of regulation continues to be conducted by sector-specific agencies, while it is most common for cross-sectoral agencies to regulate in closely related spheres, rather than across disparate industries. Thus, the identified trend is relatively slow-moving and incomplete. This may reflect, at least in part, the fact that at the policy level there is a clear divergence in approaches to these two aspects of the issue of reforming regulatory structures: While numerous governments have explicitly endorsed the view that the use of general and/or cross sectoral regulation should be maximised, there is no equivalent policy consensus in relation to the use of multi-sectoral regulatory agencies. Indeed, survey data from this project indicates that most countries argue in favour of a "case by case" approach to determining which form of regulatory agency should be used in any given case. The fact that there has been a long-term and widely observed trend toward the use of multi-sectoral regulators in the absence of widely adopted policy positions favouring this model is particularly notable and suggests that the trend is the result of an accumulation of pragmatic choices.

Independent regulatory agencies

A second, long-term trend in terms of the structure of regulatory agencies is that of movement away from a position in which regulation is undertaken primarily within Ministries to one in which the use of more independent models are favoured - whether that of the "arms-length agency" or the fully independent regulator. This trend is visible

in respect of both social and economic regulation, suggesting that the drivers of the trend are multiple and partly reflect broader trends in regulatory governance. However, the above-mentioned development of new areas of regulation focused on supporting effective competition in important network based industries has been an important factor. In this context, the predictability and credibility of regulatory decision-making are likely to be paramount, thus favouring the use of independent regulators. The trend toward the use of more independent regulators has apparently reached significantly further than the shift toward the use of cross-sectoral regulators, with fewer than 20% of all regulatory bodies identified in seven OECD countries responding to a survey conducted for this report being located within core Ministries.

Risk-based supervision

The third reform trend identified is that of a move toward risk-based supervision; that is, using risk assessment in relation to the regulated population in order to direct inspection and auditing resources and thus contribute to maximising the effectiveness of the regulatory implementation process. This approach originates as an asset management strategy in the private sector, particularly in relation to major hazard facilities and has, in relatively recent times, been increasingly widely adopted as policy in specific areas of legislation.

Risk based supervision seems to be more widely used in some regulatory contexts than others. In some cases, it is generally accepted as a best practice and promoted by some key international organisations. In others, however, it is almost unknown. Perhaps reflecting the historically greater focus of regulatory reform on regulatory design and development, rather than implementation, very few countries appear to have adopted a broad commitment to implementing risk based inspection strategies throughout their regulatory systems. The major exception is the United Kingdom, which implemented a comprehensive strategy in response to the Hampton Report of 2005. This programme appears to have achieved its goal of enabling a substantial reduction in inspection costs, of around one third, without compromising regulatory effectiveness. This appears to be an area in which whole of government policy initiatives could enable significant resource savings to be achieved by improving the dissemination of a relatively widely used good practice.

Reform 5.1. Reforming economic regulation: maximising the use of general and cross-sectoral regulation and regulators

Characteristics of the reform

A majority of OECD countries have undertaken substantial reform of network-based industries over the past two decades, moving from government monopoly to competitive (and largely private) service provision. This has given rise to whole new fields of economic regulation. The regulatory approaches adopted have in most, though not all, countries tended to favour the use of sector specific regulation and regulatory authorities. However, the accumulation of regulatory experience has led to further reforms, with a clear move toward a greater emphasis on using economy-wide and cross-sectoral regulation as far as possible now being apparent. This move reflects a new focus on ensuring consistent, best practice regulatory approaches across different industries. An inevitable accompanying trend has been toward the creation or expansion of cross-sectoral regulators and toward an expansion of the power of competition authorities.

Where did it occur?

Within the European context, only Germany[3], Latvia and Luxembourg have established wider-ranging multi-sectoral agencies that are responsible for regulating a number of unconnected industries. However, this model is found more frequently at sub-national government level in Canada, Australia and the US, while New Zealand's Commerce Commission is both the competition authority and a multi-sectoral regulator. Interestingly, Sommer (2001) suggests that multi-sector regulators with broader remits may be more common in the developing country context.

Analysis

Regulatory reforms in the European Union

Major reform in this area has been undertaken within the European Union. In 1999, the EU commenced a review intended, *inter alia*, to maximise the scope of application of the general European competition law. By implication, this would tend to minimise the use of sector-specific economic regulation. The regulation of telecommunications provides a clear example of rapid and substantial movement in this area. According to Knieps and Zenhausern (2010):

"The Commission's Recommendation (2003/311/EC) started with eighteen relevant markets, in need of sector specific regulation (European Commission, 2003a). Four years later, the Commission's Recommendation (2007/879/EC) cancelled after all eleven of these markets."

Thus, the number of markets within this sector identified as potentially requiring sector-specific rules was more than halved within four years. While changes in competitive conditions may well have played a role[4], a significant aspect of Recommendation 2007/879 is the identification of three criteria that should all be met before sector-specific rules are applied. These are:

- the presence of high and non-transitory barriers to entry, whether these may be of a structural, legal or regulatory nature;
- a market structure which does not tend towards effective competition within the relevant time horizon[5];
- the insufficiency of competition law alone to adequately address the market failure(s) concerned.

Moreover, the 2007 Recommendation argues "The fact that this Recommendation identifies those product and service markets in which *ex ante* regulation may be warranted does not mean that regulation is always warranted."[6]

Kerf et al (2005) argue, on the basis of a review of the evolution of telecoms regulation in five countries, that the general competition law has largely been successful in dealing with abuses of dominant position and merger proposals, with the necessary role of sector-specific regulation being essentially limited to dealing with a range of predominantly network related issues. Specifically, they highlight the need to use sector-specific regulation to:

- Specify interconnection prices and conditions;

- Set the prices of resale services and perhaps the conditions under which the incumbent should provide unbundled access to the local loop;
- Allow number portability, carrier pre-selection and roaming;
- Control end-user prices in market segments where competitive pressures remain weak;
- Impose certain types of structural remedies, such as vertical separation between different market segments; and
- Define and fund universal service objectives and allocate rights to use spectrum.

Regulatory reform in New Zealand

New Zealand provides a rare example of convergence toward a similar regulatory position from the opposite direction. It was one of few countries that initially relied totally on the general competition law to regulate the newly privatised network industries, but has subsequently moved to supplement this approach with some sector-specific regulation. However, while New Zealand's experience showed that the general competition law was insufficient in itself to provide an effective regulatory framework for the sector, the move toward sector-specific regulation has sought only to supplement its application in specific areas in which shortcomings have been identified, rather than seeking to supplant it. Key problems with the use of the general competition law were:

- Delays in obtaining regulatory results, due to reliance on courts, arbitration or self-regulation, with associated high cost levels;
- Lack of a clear access framework, together with inability to ensure that access pricing was cost-based;
- Lack of transparency as to the element of Universal Service Obligations included in network interconnection prices; and
- Cross-subsidisation of contestable services by vertically integrated companies (Rebstock, 2004).

The bulk of these deficiencies relate to network-based market power, indicating that the New Zealand experience ultimately supports the EU view that these are the key areas which are likely to require sector-specific legislation, with the general competition law being the appropriate vehicle to deal with the remaining regulatory issues. Patterson (2004) notes that the New Zealand government highlighted from the outset, its willingness to go down the path of sector-specific legislation should the general competition law prove inadequate to the task.

A third approach to this issue - arguably constituting a "middle path" - was taken in Australia, which added new provisions to its general competition law that were designed specifically to deal with access issues in the context of the restructuring and privatisation of network-based industries[7]. This approach appears to have been designed to ensure that access issues were seen within the general competition law context and, institutionally, provided for the competition authority to be the decision-making body on these issues, while also providing specific mechanisms adapted to the context of the network based industries.

While EU countries have moved to reduce the use of industry-specific legislation in favour of greater use of both cross-sectoral legislation and the general competition law, countries such as New Zealand whose regulatory starting point was one of complete reliance on the competition law have moved to supplement this with an element of sector specific legislation. This suggests that reform may be leading toward a point of convergence, involving an optimal combination of reliance on the general competition law and use of specific regulation.

However, the pace of reform has been relatively slow economic and technological factors driving market realities (particular as they affect the locus and extent of market power) have been very significant drivers of change. As noted, the use of sector-specific regulation is primarily required where network-based sources of market power continue to exist.

Institutional reforms

As noted above, historical practice has been that most regulators have been established on a sector-specific basis. However, research by Jordana, Levi-Faur (2010) identifies a long-term trend toward the use of multi-sector agencies, accelerating rapidly from the late 1990s. The authors' data covers a total of 48 countries spread across Europe and Latin America. It shows that around twice as many industry sectors were regulated by sector-specific agencies as by multi-sectoral agencies in 1997, but that the numbers had almost equalised (37% vs. 35%) by 2007. This trend is more marked when only European Union countries are considered, with 45% of sectors regulated by multi-sector agencies compared with only 37% by single sector agencies. Multi-sectoral agencies are most common in the utilities, financial services and insurance sectors.

Jordana and Levi-Faur define a multi-sectoral agency as one that regulates more than one industry sector. This is arguably a relatively narrow definition, since it leads to bodies that regulate two, related sectors within a given industry as being defined as "multi-sector agencies". This definitional approach is highly significant to their reported conclusions, as the data indicate that multi-sectoral agencies tend to be responsible for two or more sectors in closely related areas - for example, having responsibility for difference sectors within the financial system, or for both gas and electricity regulation[8].

Other research also highlights the fact that regulatory agencies that have regulatory responsibility for a wider range of sectors, including sectors that are not economically related in any direct sense, are relatively uncommon. Thus:

1. While gas and electricity regulation is frequently undertaken by a single agency, virtually all of the members of the Council of European Energy Regulators are energy-specific regulators, with only a few members also including responsibility for water regulation.
2. While most EU countries have established single regulators to deal with both electricity and gas regulation, essentially as a response to recognition of the goal of creating a single European energy market, within Europe only Germany, Latvia and Luxembourg have developed regulators with broader remits (Genoud, Finger, 2002).
3. Similarly, while post and telecommunications regulation is undertaken by a single authority in around half the member agencies of the Independent Regulators Group, almost all of these regulators is communications-sector specific.

The observed trend away from sector-specific regulators is, perhaps, unsurprising given the above-discussed changes in regulatory approach. However, there is significant divergence in government policy positions on these two regulatory policy issues. While many governments have explicit policies favouring the use of generally applicable regulation, there is little evidence of policy explicitly favouring the use of multi-sectoral regulators. Indeed, most responses to the survey questionnaire completed for this study emphasised the need to assess this issue on a case-by-case basis, in the light of the specific regulatory environment. Thus, the trend toward the use of multi-sectoral regulators is apparently largely organic, reflecting the accumulation of individual policy choices, rather than being driven by conscious policy.

This lack of a clear policy position likely reflects the fact that the theoretical literature does not reach a clear conclusion as to whether regulators should be organised on a sector-specific or a multi-sectoral basis[9]. Rather, most references highlight a range of benefits and drawbacks of the two competing models and suggest that the balance between these is likely to differ in individual circumstances, while differing policy objectives are also likely to be relevant to the final choice.

The major benefits of sector-specific agencies highlighted by their proponents include superior ability to develop a critical mass of sector-specific regulatory expertise, reduced risk of the agency becoming unduly influential within the policy space and their ability to facilitate regulatory experimentation, by allowing different regulatory approaches to be adopted in different sectors. Supporters of multi-sectoral agencies, by contrast, highlight the benefits of regulatory consistency, particularly where there is technological convergence or product bundling, economies of scale and scope in regulation and reduced risk of regulatory capture.

Multi-sectoral regulators are likely to have particular advantages in relation to sectors subject to technological or commercial convergence[10] and other cases where there is a need for a co-ordinated regulatory approach to different sectors (e.g. where companies from a number of sectors all need the same right of way for their networks). In practice, even where multi-sectoral agencies with broader scope are used, the focus appears largely to be on the regulation of network-based industries. Thus, for example, Germany's multi-sectoral regulator is the Federal Network Agency, responsible for Electricity, Gas, Telecoms, Post and Railways, while Latvia's is the Public Utilities Commission. Most Canadian provinces have "public utilities" boards[11]. This may suggest recognition of the commonalities involved in terms of the task of regulating network industries, notably the need to determine the terms of access to essential network infrastructure. Jordana and Levi-Faur (2010), argue that:

"...the option to concentrate regulatory activities in a multi-sector agency, covering different sectors in a process of convergence, becomes an opportunity to pursue an institutional reform aiming, arguably, to promote efficient markets. Sectors such as electricity and gas, financial services, transportation or information and communication technology have since the 1990s been susceptible to these convergence processes."

While most multi-sectoral agencies regulate only a few, closely related sectors, there does seem to be some evidence of these bodies having their remit expanded over time, possibly as a result of governments, when faced with regulatory problems in a particular sector, opting to use the services of bodies that have established a track record as an effective regulator in a range of fields. An example of this expansion is given by the Essential Services Commission in Victoria (Australia), which has seen its original responsibilities for energy, water and ports expanded to include conduct of *ad hoc*

inquiries on pricing and related issues in relation to a range of transport modes (e.g. taxis) and the insurance industry, as well as taking on a role in reviewing local government bodies[12].

Unsurprisingly, the broadening of the remit of an existing regulatory agency seems to be particularly common in circumstances in which more than one regulator has been involved in the regulation of different parts of a single industry sector. For example, Thatcher (2006) highlights the example of the finance industry in the UK, with the establishment of the Financial Services Agency as the industry-wide successor to several previous regulators. Similarly in Australia, the Australian Prudential Regulatory Authority (APRA) was founded in 1998 as the first regulator to have responsibility for the whole of the financial sector[13]. More broadly, Thatcher notes that where existing independent regulators are replaced or reconstituted, there is a trend toward broadening of their remit.

Jordana and Levi-Faur (2010) show that, while agencies do tend to broaden their remit over time, this is most commonly via expansion of an existing agency into an area not previously subject to regulation by an agency, rather than via merger of existing regulatory agencies. Thus, only 18% of the MSA identified were created via such mergers, compared with 43% becoming MSA via the expansion of a sector-specific agency into a new area and 39% being created *de novo* to regulate areas not previously subject to regulation.

The above has highlighted the expectation of performance gains as a driver of the trend toward the remit of regulatory agencies being broadened over time. The expectation of regulatory cost savings is likely also to be a factor however though it is not clear how significant this factor has been in practice.

The trend toward maximising the use of the general competition law as the basis for regulating network based industries will necessarily also have implications for the structure of regulatory institutions. Specifically, it will tend to expand the remit of the competition authority itself, while it is also logical to expect an accompanying trend away from the use of sector-specific economic regulatory agencies, for four reasons.

1. First, if enforcement action under the general competition law is generally undertaken by the competition authority, the scope of action of sector-specific regulators may tend to decline over time[14], making the maintenance of a "critical mass" in terms of human resources and expertise a progressively more difficult task.
2. Second, given that moves toward the use of the general competition law are substantially predicated on seeking to maximise consistency of approach to interpretation and implementation, the same pressures will tend to promote the case for multi-sectoral regulators to be used in preference to sector-specific regulators to the extent that the competition authority does not, itself, take on the regulatory role.
3. Third, cross sectoral regulators generally provide a more attractive working environment for special staff, including greater career development opportunities, and are thereby better placed to attract and retain high-quality staff, with apparent benefits for regulatory effectiveness, in comparison with sector-specific regulators.

4. Fourth, as argued by Sommer (2001), technological convergence between some sectors, as well as the commercially driven development of multi-sectoral utility companies, would require, at a minimum, effective co-ordination between sectoral regulators and may thereby create pressure toward the further development of multi-sectoral regulators.

Within the context of the objectives of the OECD Value for Money study, it appears that the multi-sectoral regulator model has significant potential to yield both regulatory cost savings and improvements in regulatory effectiveness. That said, the survey responses of the lead countries in the current study have provided little specific data on this subject.

Feasibility of the reform

As indicated above, this is an area in which EU level regulation is in place, while movement toward the same broad regulatory approach is also visible in a number of countries beyond the EU.

The reform is principles based and appears to be broadly applicable, though precise implementation details may vary across countries.

A significant contextual issue is that of the quality of the general competition law. A move toward greater reliance on the general law in preference to sector-specific legislation presupposes that the competition law is itself of high quality therefore capable of dealing with the issues formerly regulated through sector-specific legislation. In addition, Australia provides an example of a country which has added some sector-specific provisions to the general competition law. This arguably constitutes a variant of the identified reform which may broaden its potential scope.

As discussed above, the experience of the EU in implementing this reform suggests strongly that the specific boundary between the use of the competition law and sector-specific regulation will tend to shift over time. These shifts appear to reflect both technological factors and competitive conditions in the relevant industries, on the one hand, and the development of regulatory knowledge and understanding and changes in regulatory institutions, on the other.

This implies that the balance between general and specific legislation must be kept under review and adjustments made periodically in response to changes in the regulatory environment.

Reform 5.2. The use of independent regulatory agencies

Characteristics of the reform

Much of the recent, substantial expansion in the use of independent regulators has occurred in the context of restructuring former government monopolies, particularly in relation to network based industries. In this context, a key objective is to ensure market stability and a positive investment climate, leading to the achievement of long-term economic objectives. This was to be achieved by shielding regulatory decisions from the potential for political interventions to be made in pursuit of short-term political objectives. However, several OECD countries have a long history of using independent regulators and arm's-length agencies in fields of social regulation, while the use of these organisational forms in this context has also increased substantially. In this area too, the

desire for regulatory decisions to be consistent, predictable and apolitical appears to be the major explanation for the increasing preference for this organisational form.

Where did it occur?

There has been a steady trend toward the use of independent regulators visible across a wide range of countries since the 1990s, both within the OECD membership and beyond. However, movement in this area has been relatively gradual, while the extent of the use of independent regulators varies significantly across different areas of regulation. As suggested above, independent regulators are particularly widely used in OECD countries where network based industries are concerned. For example, Genoud and Finger (2002) found in 2002 that there were 11 European countries with independent regulatory agencies regulating the electricity sector, compared with only five administrative bodies and one quasi-judicial body.

Moreover, in the majority of cases in which the gas industry has been restructured and opened to competition, the electricity regulator is also responsible for regulating the gas industry. This appears to reflect, at least in part, the European focus on creating a single energy market. Independent regulators are almost universal in the telecommunications industry: the Independent Regulators Group counts 34 members, including all 27 EU member states, 4 EFTA countries and 3 EU candidate countries. The importance of European level regulatory structures in the single market context presumably constitutes a factor leading toward convergence in institutional structures. However, the virtual consensus on the use of independent regulators in these network-related industries extends beyond Europe to other countries such as the United States and Australia.

As the above suggests, these independent regulators were usually established on a sector-specific basis; that is, each regulator was responsible for one industry or even for only parts of one industry. However, as discussed under Reform 5.1, there is evidence of aggregation of independent regulators within individual industries (e.g. financial services), while regulators covering closely related industries (notably electricity and gas, post and telecommunications) are also becoming relatively common.

The increase in the use of independent regulators and arm's length agencies in preference to core ministries is observable in relation to both economic and social regulation, although it appears to be more pronounced in the former sphere. Table 5.1 provides an overview of the current status of social and economic regulators in seven countries that have participated in the Value for Money study and completed questionnaire responses on this issue[15].

Table 5.1. Number of supervisory/regulatory authorities by status

		Australia	Austria	Denmark	Netherlands	Norway	Spain	Sweden	Total*
Social	CM	5	4	0	14	0	n.a.	0	23 (22.1%)
	ALA	3	1	30	3	19	n.a.	7	65 (62.5%)
	IA	6	0	0	6	4	n.a.	0	16 (15.4%)
Economic	CM	3	1	0	2	0	0	0	6 (7.9%)
	ALA	8	1	5	1	7	0	23	45 (59.2%)
	IA	12	2	0	3	2	6	0	25 (32.9%)
Total		**37**	**9**	**35**	**29**	**32**	**n.a.**	**30**	**172**

Note: * Percentages given within each area of regulation - i.e. social or economic.

Key: CM: Core Ministry; ALA: Arm's Length Agency; IA: Independent Agency; *n.a.*: Not Applicable

On the basis of the data for the seven Value for Money countries presented in this table it is clear that regulation via the agency model, rather than core ministries, is preponderant in both social and economic sectors. However, the use of core ministries as regulators is much less common in the economic sphere than the social sphere (7.9% vs 22.1%). Conversely, the use of independent agencies is substantially more widespread in the economic regulatory context (i.e. 32.9% of the total vs. 15.4% in social regulation). Arm's length agencies are about equally used in the two areas.

Analysis

Significant differences between countries

The establishment of independent regulators is seen as a means of minimising the risk of regulatory capture by creating a buffer between political lobbying and regulatory decision-making, thereby ensuring that decisions consistently favoured efficient market outcomes and the interests of consumers.[16]

In a small number of OECD countries there is a long history of the use of independent regulators (e.g. the United States) or of arms-length regulatory agencies (e.g. Sweden). However, the restructuring and (frequently) privatisation of a range of network-based industries that were formerly government monopolies in most countries has been the catalyst for a substantial expansion in the use of independent regulators across a wide range of countries both within the OECD Membership and beyond. Moreover, while this expansion apparently began with the network sectors, it has since spread to other economic regulators, in areas such as the finance industry, and into the field of social regulation.

Nonetheless, the data set out under Reform 5.1 for the Value for Money countries highlights the continued existence of some significant differences between countries. For example, Austria and the Netherlands continue to use a majority of core ministries among social supervisors/regulators. Of the remaining five countries only Australia makes any use of core ministries as social regulators. Within the context of economic regulation there is a clear divergence between the three Nordic countries, which strongly favour arms-length agencies[17] and the remaining four countries, which strongly favour independent agencies. A similar, though less pronounced trend is visible in social

regulation, where the Nordic countries again favour arms-length agencies while the other countries using the agency model (Australia and the Netherlands) favour independent agencies. The responses to the Value for Money questionnaire indicate that a number of these differences are the result of historical factors, based on constitutional or other constraints, as discussed below.

Jordana and Levi-Faur's (2010) larger dataset, covering 48 European and Latin American countries, also supports the conclusion that "agencification" is widespread in relation to both economic and social regulation, but is more extensive in the former area. Thus, while 74% of all sectors studied were regulated by independent agencies, only 55% of sectors subject to social regulation are conducted by these bodies. That said, the difference is less marked in EU Countries (82% vs. 68%) than in Latin American countries (68% vs 38%)[18]. Notably, the authors also find that the overall extent of agencification (i.e. the use of arm's length or independent agencies, rather than core ministries) is positively correlated with the use of multi-sectoral agencies. Thus, for example, they find that the finance sector shows both the highest level of agencification and the highest level of multi-sectoral agencification, while the utilities sector scores slightly lower in both cases.

Importantly, Jordana and Levi-Faur also identify "clear evidence of the importance of path dependence in the establishment of multi-sector agencies", noting that the establishment of a multi-sector agency comes about far more frequently via the expansion of the scope of an existing agency into an unregulated sector than as a result of the merger of existing agencies. Indeed, they find the latter outcome to be uncommon. This leads the authors to speculate that:

"The costs involved in merger processes may rise after the creation of agencies, because of the organisational sunk costs involved and the institutions' and actors' constellations already created around the agency. In this sense, institutional path dependence of already existing agencies may represent an obstacle to new waves of agency merger in the future."

Resistance to change from existing agencies is also suggested as another factor that may inhibit further movement toward the multi-sectoral approach. These observations have clear relevance for policy-makers.

Both the responses to the Value for Money survey and the research literature suggest that countries' experiences with the more widespread use of independent regulators and arms-length agencies have been generally positive. Research by Thatcher (2006) finds that independent regulators have largely been free from overt political influence in the European context. Moreover, Ministers have rarely made partisan appointments to the regulatory agencies and rarely dismissed incumbents, who generally serve long terms. The budgets and staff of independent regulators, though relatively small, have tended to grow over time. Independent regulators have rarely been abolished, rather, where changes have been made these have usually been in the direction of broadening their remit -- a finding that is clearly consistent with the results of Jordana and Levi-Faur's research. The independence of these bodies from direct political intervention has often been cited as helping to build trust among investors in newly liberalised and privatised sectors.

Policy position

While experience to date with the use of arm's length or independent agency model is generally regarded as being positive, almost all OECD countries retain a mix of

regulatory models embracing some level of regulation by ministries, as well as these other organisational forms. Importantly, the current mixed model appears to reflect the current policy position of governments, rather than being an indicator of an incomplete reform process.

Most countries that responded to the survey questionnaire administered as part of this project stated that regulatory models are determined on a "case by case" basis, depending on the requirements of the specific regulatory environment. Moreover, few identified a generally applicable policy to guide this choice and ensure optimal approaches. This implies that future changes in this area of the organisational structure of regulators are likely to be driven, not by a conscious and generally applicable policy but, rather, by an *ad hoc* approach.

Relatively little information was provided as to the considerations weighed in making these *ad hoc* judgments. However, it appears that key factors weighed in favour of independent regulators, consistent with the literature on this issue, are ensuring the credibility of the regulatory structure by demonstrating its independence from political interference and its transparency, thus providing a guarantee of consistent regulatory decisions serving clearly articulated (usually in legislation) regulatory goals and priorities. Responses also tended to indicate a clear preference for the use of independent or arm's length agencies in the context of regulatory tasks requiring high levels of specific, technical skills.

On the other hand, regulation by ministries is seen as desirable where policy related roles constitute a significant element of the task. This applies in particular to "inspectorates" which are common in various European countries in the area of social regulation. Inspectorates have tasks in the sphere of monitoring and sanctioning, but not of regulation (rule making) per se. They are sometimes seen as the "ears and eyes" of the ministry and they can have important tasks in policy development by advising the minister about new policies or legislation. These tasks are sometimes seen as incompatible with an independent position.

Spain was one of few countries to identify a clear trend in terms of the structure of regulators in its questionnaire response. It highlighted a sustained move toward the creation of a range of arms-length agencies constituted under its 2006 Agencies Act, with all regulatory bodies expected to be transformed into agencies in the near future. A number of objectives of this move have been highlighted. In relation to recently liberalised industries, the need to maximise competition and ensure its fairness, by making decisions independent of both political interference and lobbying from market participants, was highlighted. Objectives of maximising transparency and accountability were also noted, including the need for the objectives of each agency to be apparent to citizens and for managers to be accountable for their achievement. Achievement of these goals is, in turn, seen to be crucial to ensuring public confidence in the regulatory arrangements. Financial independence was seen as crucial for independent regulators, with the budgets of both the energy and telecoms regulators deriving from a levy payable by all market participants.

Canada highlighted its "pragmatic and incremental" approach to changing organisational forms and states that, rather than there being a discernible trend in any particular direction, a "form follows function" approach is adopted. This approach sees the need for different balances to be struck between the basic objectives of autonomy and accountability in different contexts. Thus, the issue of whether the organisation requires an arms-length status in order to meet its objectives or whether the responsible Minister

needs powers to direct or influence the organisation in order to ensure the policy direction followed is consistent with government objectives and cohesive in relation to other government policies and entities will be weighed. In general terms, in Canada there has been a tendency for specialised operational functions to be housed in agencies, in addition to those with quasi-judicial roles or quasi-commercial mandates.

Sweden stated that all regulatory authorities are constituted as arm's length agencies as this is a longstanding constitutional requirement, incorporating a ban on government interference in a regulatory agency's interpretation or application.

At a fundamental level, the questionnaire responses suggest that OECD countries have had a largely positive experience in this regard: certainly, there is no suggestion of any retreat from the use of independent regulators. Conversely, only Spain among the survey respondents highlighted a conscious policy (backed by generally applicable legislation) of broadening the use of the agency model.

The emphasis of the remaining countries on pragmatic "case by case" decision-making on further agencification can be seen as surprising in the context of the clear evidence found by Jordana and Levi-Faur and others of a quite strong trend in this direction. That is, it appears surprising that such a clear trend is apparently not being driven by a strong policy position being taken by governments. That said, the authors' indicate a clear slowing in this trend from around 2002 to 2007 (the most recent year of their data collection).

Arms-length agency versus independent agency

While the above highlights the impediments to adopting the independent regulator/inspectorate model faced in some countries, there are clear reasons for favouring this approach over the arm's length agency model. Providing the ministry with information about compliance or advising the minister about new legislation is not necessarily incompatible with an independent position. There are many independent inspectorates that fulfil these roles and interlocutors from these inspectorates have confirmed that they see no intrinsic conflict of interests in this respect. However, this is different if inspectorates are tasked to monitor and enforce policies that are not anchored in formal law, but only in informal ministerial policies. An independent inspectorate may be required to refrain from openly criticising the legislation it is supposed to uphold while internally advising the minister to adjust or even abolish it, if the inspectorate sees problems in its execution or enforcement. However, such a requirement is fundamentally problematic when it concerns ministerial policies that are not in any form enacted in law. An independent inspectorate must be able to openly criticise ministerial executive policies that have no formal status and that cause problems. This important role of independent inspectorates is often not appropriately fulfilled or not fulfilled at all if the inspectorate has no independent status.

In particular, the Dutch country review (OECD, 2011) highlighted the need for independent inspectorates to be able publicly to criticise government policies and actions that are not legislatively based and the fact that arm's length agencies are often unable to effectively pursue this role. In addition, it is likely that the degree of perceived independence from government interference will be greater in the case of independent regulators, thus suggesting that the benefits cited above in terms of confidence in the regulatory structure and its impartiality will be greater when this structural option is employed.

Given these factors, countries should adopt transparent policies based on clear and consistent criteria to drive the choice of regulatory structures. These should enable all structural options to be assessed. Where legislative or other impediments to the use of independent regulators exist, their appropriateness should be reviewed as part of the formulation of these policies.

Feasibility of the reform

As discussed above the independent and arm's-length regulator models are used to greater and lesser degrees in virtually all OECD Member countries and in a wide range of non-OECD countries. Indeed, 83% of the regulatory bodies identified in the seven Value for Money countries included in Table 5.1 are either independent or arm's length, while all seven countries have more than 40% of regulatory bodies composed of one or the other of these models. As such, this is a reform that must obviously be seen as broadly applicable.

Questionnaire responses indicate that country-specific factors do affect the extent of their use and the contexts in which they are employed. In particular, these factors appear to be important in explaining the choice between independent regulators and arm's length agencies. As noted above, the Nordic countries use arm's length agencies exclusively, while most other Value for Money countries for which data are available have been more likely to favour independent agencies. Sweden notes that the choice of arm's length agencies reflects constitutional requirements, while Spain cited general legislation (the Agencies Act 2006) which requires all agencies to be constituted in this way.

Given these factors, there would clearly be impediments to the adoption of the independent regulator model in some countries. However, while arm's length agencies are in some respects an imperfect substitute for an independent regulator, specific protections provided to these bodies in the Nordic countries suggests that the difference between the models in this specific context is likely to be less than in some other environments.

Both the survey responses obtained for this project and the regulatory literature suggests that the independent regulator model has been broadly successful. Despite this, many governments have to date only moved to adopt this approach in certain areas and have been more likely to adopt this model in the context of economic regulation than in social regulation. Moreover, the rate of change observed appears to have slowed.

While governments state that they adopt pragmatic, case by case approaches to analyse what regulatory model is most appropriate in a given context, there is limited evidence of clear criteria and consistent approaches being taken. The success to date of the independent regulator model suggests that efficiency and effectiveness gains are available from adopting a programme to maximise its use, based on explicitly determined appropriateness criteria (both general and country-specific). In this context, particular consideration should be given to the scope for a wider use of the independent regulator model in relation to social regulation.

Reform 5.3. Risk based supervision

Characteristics of the reform

An important reform in the area of regulatory implementation and enforcement has been to move the practices of regulatory agencies away from the use of periodic inspections that do not differentiate among regulated entities and toward risk-based

approaches. As a corollary of this move, risk-based approaches to enforcement activity aim to ensure that sanctions adopted in particular circumstances are proportionate to the relevant risks and that a rational, programmed approach to escalation of sanctions occurs in cases of continuing non-compliance. Improving practice in these areas has the potential to improve regulatory effectiveness, to yield savings to government budgets and to reduce regulatory compliance costs.

Where did it occur?

Perhaps reflecting the historically greater focus of regulatory reform on regulatory design and development, rather than implementation, very few countries appear to have adopted a broad commitment to implementing risk based inspection strategies throughout their regulatory systems. The United Kingdom has been a pioneer of this reform.

Analysis

The risk based inspection and auditing model originates as an asset management strategy in the private sector, particularly in relation to major hazard facilities. In relatively recent times, it has been increasingly widely adopted as policy in specific areas of legislation.

International organisations have in some cases promoted this approach as regulatory best practice in particular contexts. For example, the UN's Food and Agriculture Organisation promotes risk based inspection as "a vital element of a modern food control system"(FAO, 2008). Similarly, the European Union has published its "CWA 15740:2008 - Risk-Based Inspection and Maintenance Procedures for European Industry (RIMAP)" in order to encourage a harmonisation of regulatory practices in the petrochemical, chemical, steel works and power industries around this concept within Member states.

In the UK the key driver of the reform was the Hampton Report of 2005 (Hampton, 2005). The reform was initially promoted primarily as a means of reducing administrative burdens incurred by business:

"Administrative burdens are the costs that come from enforcement activities. If regulators operate effectively, and use the best evidence to programme their work, administrative burdens on compliant businesses can be reduced while maintaining or even improving regulatory outcomes […..]".

"Risk assessment should be comprehensive, and should be the basis for all regulators' enforcement programmes. Proper analysis of risk directs regulators' efforts at areas where it is most needed, and should enable them to reduce the administrative burden of regulation, while maintaining or even improving regulatory outcomes"(Hampton, 2005:1).

The potential for improved regulatory effectiveness is also recognised here, although the potential for cost savings to be reaped by regulators is not explicitly acknowledged. Nonetheless, it follows that, if resources are freed for redeployment as a result of an efficiency gain, there is necessarily potential either to redeploy them to obtain additional regulatory benefits, to reduce overall regulatory costs, or to achieve some combination of the two outcomes.

Hampton recommended that all inspections should be based on risk analysis, arguing that "no inspection should take place without a reason". Hampton noted that the regulators reviewed for the report carried out 3 million inspections *per annum*, so that the

potential savings were considerable. Moreover, the same approach should be adopted in determining what data requirements businesses should need to meet. This was expected to lead to reduced data collection and transmission costs for many businesses.

In addition, Hampton recommended that reforms to sanctions regimes to ensure more effective deterrence and reduce the need for inspection activity by increasing the disincentives for non-compliance. These included increasing maximum fines available to courts, enhancing sentencing guidelines to support better decisions on penalties and making administrative penalties more widely available and more severe where warranted. The underlying principle was that of addressing risk issues in determining appropriate penalties to be applied in individual cases, including issues of penalty escalation. In order to give expression to these principles, the Macrory review was commissioned, with terms of reference requiring it to articulate principles relevant to the introduction and operation of civil, administrative and criminal sanctions, clarify the relationship between these different sanctions types, identify areas in which the use of administrative or alternative sanctions may be appropriate and what limits on their use were appropriate. The findings of this review led to substantial reform being adopted, in part via the Regulatory Enforcement and Sanctions Act 2007.

The Hampton recommendations were accepted by government and a substantial programme was adopted to ensure that they were implemented across the full range of government regulatory agencies. Commencing in early 2007, "Hampton Implementation Reviews" were carried out on 36 national regulators. Reviews were conducted by external teams including staff from the Better Regulation Executive and the National Audit Office, as well as other relevant agencies. The NAO and BRE jointly published guidance for review teams in early 2007 (National Audit Office, 2007).

These reviews sought to determine the extent to which current agency practices were consistent with the recommendations of the Hampton and Macrory reviews and to encourage "continuous improvement" in this regard by identifying specific issues to be addressed[19]. Hampton's original report found that many regulators did adopt risk assessment practices in much of their work. Thus, the reform sought not to impose an entirely new paradigm but, rather, to expand the use of a currently employed tool and make its use more systematic.

The reviews were conducted over approximately a three year period and were completed in December 2009. The next step in the process is the completion of a series of "Progress Reports". These are described as:

"Additional reviews of selected regulators who have already received their Hampton Implementation Review. [...]These reviews assess the progress of regulators in implementing the recommendations made in their full Hampton Implementation Reviews".

Only one of these progress reports had been published at the time of writing.

The "Post-Hampton Implementation Review Process" generally found that most agencies had achieved significant progress in implementing risk-based approaches. However, the review also included a list of "issues to be followed up", highlighting areas in which consistency with the Hampton/Macrory recommendations could be improved. While these necessarily differ across agencies, common issues appear to include the need to conduct better data analysis to support the adoption of risk assessment based processes, implementing more critical assessment of existing data requirements to reduce regulatory burdens on firms, ensuring that decision-making is consistently outcome or output

focused and ensuring that organisational commitment to Hampton/Macrory reform concepts and rationales are effectively transmitted from agency management to staff dealing directly with regulated firms from day to day.

Moves toward the use of risk based approaches are also being made in a number of other OECD Member countries, particularly in relation to the design and implementation of regulatory inspections programmes. For example, the report of a recent inquiry into food regulation in Victoria (Australia) recommended that enforcement authorities should adopt risk-based inspection programmes in preference to current arrangements in which a large proportion of inspections are driven by statutory "triggers" such as annual renewal of registration or change of ownership.

However, the responses to this recommendation provide a challenge to aspects of the Hampton approach. Where Hampton sees inspection as part of the enforcement pyramid and ill-directed inspection activity as diverting resources that could be better allocated to advice provision, Victorian food regulators argued that these two functions were largely integrated in practice. Thus, while the general principle of risk based inspection was accepted, it was argued that annual inspections on renewal of registration should be retained as they constituted an important means by which advice was provided to regulated businesses, with the great majority of non-compliance detected being dealt with via advice provision rather than the levying of penalties or even, necessarily, rectification orders and re-inspections. Moreover, in this view, maintaining regular contact with the regulator through the annual inspection mechanism was an important means of maintaining relationships which then facilitated a more constructive approach to maintaining and improving regulatory compliance and performance standards generally[20]. Other Australian regulators have also explicitly acknowledged the dual role of inspectors in both providing advice and carrying out enforcement activity where required.[21.]

Importantly, similar observations have been made in the UK context. The post-HIR progress report for the Environment Department found that:

"Stakeholders noted that, while a reduced number of inspections had benefits, they also wanted to maintain contact with an officer, for purposes of advice." (National Audit Office, 2010:4)

The progress report highlights this "tension" between reduced inspections and firms' desire to maintain contact with regulatory officials, but does not comment on either the implications of this finding for the original Hampton recommendations or any strategic approaches that might be taken to address the tension. However, this issue appears an important one to address in the context of moves to implement the concept of risk driven inspection regimes in practice. In contexts in which the average inspection frequency is low, the scope for reorientation of inspection activity in response to risk assessments may be limited, particularly if it is accepted that there is merit in maintaining some degree of regular contact with regulators.

While the Hampton Report appears to envisage a clear division between advice services and enforcement activity (including inspections), the above suggests that such a division may increase regulatory costs and/or reduce the effectiveness of advice provision. Moreover, while some regulators have noted the conflicts inherent in their dual role as advisers and prosecutors, with firms often reluctant to seek advice for fear of opening themselves to prosecution by revealing non-compliance, this conflict would not appear to be reduced through separation of advice and "inspection" into discrete contacts. Rather, it exists as a result of the dual role of the organisation.

Feasibility of the reform

The reforms discussed above would appear to be transferable to many OECD countries. Indeed, work by the OECD's Programme on Regulatory Management and Reform documents moves toward the adoption of risk analysis as a tool for better regulation in a number of countries. Moreover, Macrory's recommendations regarding sanctions arrangements are generally consistent with the results of work on compliance and enforcement adopted by the Dutch government in the 1990s (OECD, 2002:79), while Australia has also introduced reforms along these lines in some areas.

A key implementation issue is that of ensuring that adequate data is collected and appropriately analysed to support risk-based supervisory approaches. In part, problems arising in this area reflect the fact that systemic adoption of risk-based approaches requires more thoroughgoing changes to regulatory/supervisory practices than was perhaps initially appreciated. However, some data challenges will undoubtedly remain in the long term, as in many aspects of public policy. Thus, constraints will remain on regulators' ability to act in ways that are fully directed by risk assessments.

The issue of inspection practices seems to be an area of particular challenge in this regard. Relatively low levels of detection of non-compliance can frequently mean that regulators' abilities to create risk-based profiles to guide inspection activity may be limited, while the ability to determine the expected consequences of non-compliance in different contexts may be another limiting factor. Moreover, even where these issues can be overcome, low overall inspection frequencies, the dual role of inspection as an advisory function as well as an enforcement mechanism and the asserted need to ensure a minimum level of contact with regulated parties may all restrict the potential for redirection of inspection resources along risk-based lines.

In sum, the concept of risk-based supervisory practice is widely regarded as sound, while the Hampton Implementation Reviews suggest that significant gains can be made in practice through their adoption. However, a number of significant implementation issues are likely to arise in specific contexts and must be recognised and managed carefully.

Note

1. See definition in the glossary.
2. See definition in the glossary.
3. As noted by Jordana, Levi-Faur (2010), "*from the early 2000s the German government gradually established the Bundesnetzagentur, a multi-sector giant regulatory agency, nowadays responsible for electricity, gas, telecommunications, post and railways*."
4. Recommendation 2007/879 declares that the "*aim of the regulatory framework [is] to reduce ex ante sector-specific rules progressively as competition in the markets develops"*.

5. The application of this criterion involves examining the state of competition behind the barriers to entry.

6. Indeed, Knieps and Zenhausen argue that the proper application of the three criteria suggests that only two of the seven markets identified in the 2007 recommendation continue to require *ex ante* regulation under the underlying logic of the recommendation.

7. Part IIIA was added to the Trade Practices Act in 1994.

8. The following list of energy regulators indicates which have multi-sectoral responsibilities: www.iceregulators.net/appl/html/IERN_WFER_II/EnergyRegulatorsList.pdf.

9. Jordana, J., Levi-Faur, D. (2010), op cit..

10. Commercial convergence here implying that the same organisations are offering a "bundle" of services from different industries (e.g. telecoms and electricity) even though there may not be a technological link between them.

11. Though Nova Scotia has a "public utilities and review" board that has supervisory responsibilities for tramways and buses, as well as energy and water.

12. See: www.esc.vic.gov.au for information on the role of the ESC and a range of inquiry reports.

13. In the Australian context, this broadening of regulatory roles required Federal/State co-operation for its achievement, with State governments referring their powers over aspects of the financial system to the Federal government to enable the establishment of the Australian Prudential Regulatory Authority.

14. In the Australian case, in which the general competition law was expanded to include specific access rules, the competition authority itself has had responsibility for the relevant regulatory functions. However, this model has not been used in other OECD countries.

15. No list of supervisory/regulatory authorities has been provided by Canada, Finland, New Zealand.

16. See, for example, OECD (2002) "*Regulatory Policies in OECD Countries: From Interventionism to Regulatory Governance"*.

17. Note, however, that arm's length agencies in Nordic countries are not subject to ministerial responsibility for the handling of individual cases.

18. The dataset includes all OECD countries, plus 19 Latin American countries. Data for the OECD as a whole are not presented separately.

19. In 2006 Richard Macrory was asked to review regulatory sanctions to ensure they were appropriate to a risk-based regulatory environment as recommended by Hampton. Government also adopted the Macrory recommendations (Macrory, 2006).

20. See Inquiry into Food Regulation in Victoria. Inquiry reports and submissions available at www.vcec.vic.gov.au.

21. See, for example Worksafe Victoria (2005).

Bibliography

Better Regulation Executive (2010). *The Environment Department: A Review of Progress since its Hampton Implementation Review,* http://hb.betterregulation.com/external/BIS%20BEER%20The%20Environment%20Agency.pdf

Food and Agriculture Organization of the United Nations (FAO) (2008), *Risk Based Food Inspection Manual***,** Rome, www.fao.org/docrep/010/i0096e/i0096e00.htm

Genoud, C., M. Finger (2002), *Regulatory Convergence? The Example of the European Electricity Sector,* Institute des Hautes Etudes en Administration Publique, Lausanne, http://gov.ch/idheap.nsf/view/15B2A1009E1BBBE4C1256C390055AC45/$File/wp%208-2002%20mf.pdf

Hampton, P (2005), *Reducing Administrative Burdens: Effective Administration and Enforcement,* The Stationary Office, London.

Jordana, J., D. Levi-Faur (2010), "Exploring Trends and Variations in Agency Scope"**,** *Jerusalem Papers in Regulation and Governance, Working Paper No. 27*, Jerusalem, http://regulation.huji.ac.il/papers/jp27.pdf

Kerf, M., Neto, I., and Géradin, D. (2005), "Controlling Market Power: Balancing Antitrust and Sector Regulation in Telecoms"**,** *World Bank Group Public Policy for the Private Sector, No. 294*, https://openknowledge.worldbank.org/bitstream/handle/10986/11216/329430PAPER0VP294kerf.pdf?sequence=1

Knieps, G., P. Zenhäusern (2010), "Phasing Out Sector-Specific Regulation in European Telecommunications"*, Journal of Competition Law and Economics 6(4),* pp. 995-1006.

Macrory, R (2006), *Regulatory Justice: Making Sanctions Effective. Final report,* Cabinet Office, London, http://www.berr.gov.uk/files/file44593.pdf

National Audit Office/Better Regulation Executive (2007), *Hampton Implementation Reviews: Guidance for Review Teams,* www.nao.org.uk/publications/0708/hampton_guidance_for_review_t.aspx

OECD (2002), *Regulatory Policies in OECD Countries: From Interventionism to Regulatory Governance*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264177437-en

OECD (2011), *Value for Money in Government: The Netherlands 2010*, Value for Money in Government, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264096097-en

Patterson, R. (2004), "Utility Regulation in New Zealand: From Light Handed to Many Handed", Paper delivered to the Australian Competition and Consumer Commission Regulatory Conference, Gold Coast, 30 July 2004.

Rebstock, P. (2004), "The New Zealand Experience In Utility Regulation", Paper delivered to the Australian Competition and Consumer Commission Regulatory Conference, Gold Coast, 30 July 2004.

www.accc.gov.au/system/files/Session%203_New%20Zealand%20Experience%20%20Paula%20Rebstock%20(paper)%20%20The%20New%20Zealand%20Experience%20in%20Utility%20Regulation.pdf

Sommer, D. (2001), "Multi-Utilities Policy: Promotion, Tolerance or Control?", *World Bank Private Sector Infrastructure Network. Note Number 228*, http://siteresources.worldbank.org/EXTFINANCIALSECTOR/Resources/2828841303327122200/228Somme-327.pdf

Thatcher, M. (2006), "Independent Regulators in Europe. Paper prepared as part of the European Comission's New Modes of Governance Project", www.eunewgov.org/database/DELIV/D06D04_Analysis-Independent_Regulators_in_Europe.pdf

Victorian Competition and efficiency Commission, *Inquiry into Food Regulation in Victoria*, http://www.vcec.vic.gov.au

Worksafe Victoria (2005), *Worksafe Compliance and Enforcement Policy (1st ed),* http://www.worksafe.vic.gov.au/__data/assets/pdf_file/0004/10597/compliance_enforcement_policy.pdf