



**Regulatory Independence in Theory and Practice
– a Survey of Independent Energy Regulators
in Eight European Countries**

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Preface

Market liberalisations have led to the emergence of a new type of organisation named independent regulatory authorities. The purpose of the present paper is to discuss the central dimensions of this independence within the realm of energy markets, and to describe, compare and contrast the organisational bodies in the eight European countries included in the analysis. This is relevant in order to understand to what extent this new type of regulatory bodies can be seen as independent. The paper is aimed at people with an interest in the regulation of former public utilities – within the realm of energy, gas and telecom markets – which are liberalised and made subject to competition.

The project has been supported by the Energy Research Programme (Energiforskningsprogrammet) and the Danish Research Training Council (Forskeruddannelsesrådet). The report is a midway-report, which includes the analysis of eight European countries. In the proceeding work the number of regulatory authorities will be increased in order to cover more European countries.

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Summary

The purpose of this paper is to discuss the establishment and development of independent regulatory agencies regulating the national electricity markets. In the EU legislation on the common market for electricity, the crucial requirement regarding the regulatory design is that the regulators must be independent of commercial interests in the sector (96/92/EEC). This means that in member states, like Denmark, where regulatory commissions have been built on corporatist representation, the market participants can no longer have seats in the regulatory commission. In other member states, such as France, where state-owned public monopolies have prevailed, the liberalisation necessitates a clear separation of the state as a regulator and the state as the owner of public utilities, either through privatisation or through the establishment of independent regulators or both. In the EEC directive creating sectoral regulators is no requirement, but all EU member states except Germany do have such agencies.

The aim of the paper is threefold: The empirical aim is to describe and compare fairly detailed information on the design of the actual regulatory authorities in order to describe similarities and variations. The methodologically aim is to develop a framework for the measurement of regulatory bodies. The theoretical aim is to inform the discussion on independent regulators with the complexity of the empirical world.

The empirical investigation is based on a survey of the regulatory independence of eight European electricity regulators. The population of the survey has been limited to the members of the Council of European Energy Regulators (CEER). However, only eight out of 16 members have responded. Thus the participating countries are: Austria, Denmark, Greece,

Ireland, Italy, Luxembourg, Northern Ireland and Spain. The data have been collected through an e-mail questionnaire. In the questionnaire emphasis is put on independence in formal, legal/organisational terms rather than in behavioural terms. Thus the paper does not examine how the formal rules etc. are operated in practice.

The theoretical literature on regulatory independence mainly contains normative approaches which generally recommend the employment of independent regulators, and rational approaches which attempt to specify why and under what circumstances politicians would want to delegate power to independent regulators. The last question has been analysed from two theoretical perspectives: The first perspective is normative, in that it asks why – from a societal point of view – independent regulatory authorities can be beneficial. The other perspective draws on insights from rational choice and principal-agent analysis. Here the question raised is: Why and under which circumstances can it be in the self-interest of the legislature to delegate powers to independent regulatory authorities? While the creation of independent regulators is defended as a necessary condition for the realisation of a credible liberalisation and privatisation process by some authors (Majone, 1996), others state that their independence makes the regulators too powerful and jeopardizes the democratic accountability of the regulatory process (Graham, 1998). The industry-specific independent regulators are sometimes criticised for being particularly vulnerable to agency capture (Mitnick, 1980), whereas others find that they are better fit to overcome the problems of asymmetric information between the regulator and the regulated industry than general regulators (Gonenc, Maher and Nicoletti, 2000). Still others suggest that the legislature delegates regulatory powers to independent agencies, because in this way, they can actually maximize their own influence, given uncertainties, limited time resources etc. (Horn, 1995; Moe, 1990). Thus, whether regulatory independence is beneficial or problematic and why regulatory independence has become fashionable is still a matter of dispute.

Several interesting results emerge from the survey. First, the examination of the objectives, competencies and tasks gives us an indication of the variation in the role played by independent regulatory authorities in the field of electricity regulation in the CEER member states. Although pursu-

ing objectives of economic regulation is the main purpose of the independent regulators, more than half of them are also expected to pursue social and/or environmental objectives. Furthermore, the number of areas in which the regulators are fully competent varies from six out of six (Ireland) to zero out of six (Luxembourg). Second, in five out of eight countries independence is a formal requirement for the appointment of regulators, and in seven of the eight countries regulators are not allowed to hold another office in government during their term. Denmark is the exception to the rule, in spite of the country's formal requirement for independence. Third, the examination of the rules regulating the relationship between the independent regulatory authorities and the regulated industry shows a mixed picture of how the arm's-length relationship between the two parties is interpreted in practice. There is clearly not one single model to which all countries adhere. Fourth, the investigation of the relationship between the regulatory authorities and the political authorities shows that only in two cases, Italy and Ireland, does the institutional design of the independent regulatory authorities live up to the conditions regarding financial and organisational autonomy stated in the definitions by Smith (1997) and Greve (2002). However, in most of the countries (with the exception of Spain), the independent regulatory authorities enjoy more financial, organisational and decisional autonomy than is normally granted to institutions within the traditional ministerial hierarchy. Thus, bearing the label »independent« is not completely without practical implications for the regulatory authorities, but the label is definitely no guarantee of full autonomy.

The countries' score on an independence index are described and compared. The index contains four dimensions. 1) independence of the regulators from government, 2) independence from stakeholders, 3) independence in the decision-making of the regulators, and 4) organisational autonomy. Measured on these four dimensions Italy proves to be the organisation with the largest degree of independence, second and third are Ireland and Northern Ireland. Greece and Austria constitute a middle group, and Luxembourg, Spain and Denmark are the countries with the least score on the index. However, this ranking should not be given too much status as the countries show considerable variation on each of the four dimensions measured. Furthermore, factors like administrative culture

and policy-style are outside the realm of the analysis. As the context is important to judge the meaning of specific formal criteria, this means that the independence measured may deviate from the practical working conditions of the regulatory bodies. For instance the need to specify formal objectives may be larger in countries where problems with corruption are more pronounced.

In an overall view, the data indicate that the countries converge on certain points such as holding formal objectives considering consumer protecting, competition, economic efficiency and market transparency. Furthermore, the regulatory bodies are commissions in $\frac{3}{4}$ of the cases. However, there is considerable similarity in the core objectives there is maximum variation in the means the regulators have to pursue. Thus, even if the creation of independent regulatory authorities lends legitimacy to market liberalisation the main emphasis in some cases has been on creating independent bodies rather than independent regulation. In other words the regulatory power of the independent authorities can be very weak. This can either be because the regulatory competencies are located within the realm of other authorities, or because the overall regulatory activity is not very extensive.

The regulators also share highly visible features regarding the appointment of regulators. These are being appointed for a fixed term, cannot be dismissed before the end of their term and are not allowed to hold other employment in government in the same period. Generally, they have limited obligations of accountability, and generally their decisions cannot be overturned by government. In sum, the regulatory authorities are sharing a range of defining features which holds a high signal value. However, the regulators show more variation when it comes to questions like the independence from stakeholders and actual competencies. These features are important in order to be able to regulate a market with monopolistic structures in the first place. Thus, the establishment of regulators who are independent in name has not necessarily led to independent regulation in actual fact.

1 Introduction

In recent years, the European markets for electricity are undergoing enormous changes due to the European Union's decision to create an internal market for electricity through the gradual opening of the national electricity markets. The purpose of this paper is to discuss an important aspect of this liberalisation process, namely the establishment and development of independent regulatory agencies regulating the national electricity markets. These regulatory agencies play an important role in the implementation of the directive and the establishment and development of a competitive European electricity market. To the extent that these regulatory agencies co-operate and take common positions, their role may be extended from the national implementation process to playing an active role in the formulation of new EU legislation. Recently, the creation of a common European regulator has been discussed as a means to enhance independence from vested interests at the national level.

In the EEC directive charting the course of the liberalisation of European electricity markets the crucial requirement regarding the regulatory agencies is that they must be independent of commercial interests in the sector (96/92/EEC). This means that in member states, like Denmark, where regulatory commissions have been built on corporatist representation, the market participants can no longer have seats in the regulatory commission. In other member states, like e.g. France, where state-owned public monopolies have prevailed, the liberalisation necessitates a clear separation of the state as a regulator and the state as the owner of public utilities, either through privatisation or through the establishment of independent regulators or both.

Thus, even if – in accordance with the principle of subsidiarity – the directive leaves it up to the member states to decide the details of the statute and organisation of the regulatory agencies (96/92/EEC), most member states have chosen to create sector-specific independent regulators combining the independence from commercial interests with independence from the political system – government and legislature (Miljø- og Energi- ministeriet, 1998; OECD, 2001).

The concept and role of independent regulators are discussed in the literature on liberalisation processes – and the existence of independent regulators is by many authors regarded as a necessary prerequisite for the creation of a truly competitive market in formerly monopolised sectors. However, much of this literature is based on normative considerations of what such independent regulators should be like, not how they actually are, and generally very little attention is given to actual design of independent regulators.

In this report, I will examine the organisational and institutional design of independent regulatory authorities in the field of energy regulation in eight European countries. The aim is threefold: Empirically, the aim is to describe and compare fairly detailed information on the design of the actual regulatory authorities in order to describe similarities and variations. This is important as the eight countries in the survey rarely are described in the literature on independent regulators. Methodologically, the aim is to develop a framework for the measurement of regulatory bodies. One of the main obstacles to a theoretical development within the realm of institutional theory is that institutions rarely are measured in quantitative and comparable measures. This methodological problem is seen as one of the reasons why the study of institutional change is making little progress. Theoretically, the aim is to add on to the discussion on independent regulators – which has a normative and rationalistic tinge – with the complexity of the empirical world. If the theoretical discussion focuses on ideal types that are very far from the actual regulators of the empirical world there is a need for the theoretical discussion to reformulate the questions asked in order to address the present challenges of the liberalised markets.

The outline of the report is as follows: In chapter 2 I will discuss the theoretical considerations on independent regulatory agencies. The litera-

ture mainly contains normative approaches which generally recommend the employment of independent regulators, and rational approaches which attempt to specify why and under what circumstances politicians would want to delegate power to independent regulators. Furthermore, the literature in general discusses how independence can be secured. Chapter 3 contains the methodology behind the investigation that is how regulatory independence can be measured in a survey design. In chapter 4 the results from the survey are analysed, and in chapter 5 an index of regulatory independence is constructed. Chapter 6 contains the main conclusions.

2 **Regulatory Independence in Theory: Why Create Independent Regulatory Authorities – and How?**

In theory, independent regulators differ from other regulatory institutions with regard to their tasks, their basis of legitimacy, the way they are held accountable to the public and how their relations with both the regulated industry and government are organised. Therefore, an understanding of the particular characteristics of independent regulators is important to understand their role in the regulation of liberalised markets. In this chapter, we will examine how independent regulators have been described and analysed in the literature. First, in section 2.1 we examine a number of normative explanations for the emergence of a large number of independent regulatory authorities in Europe. These explanations are challenged by rational choice-based analyses of the so-called delegation problem which we discuss in section 2.2. Then, in section 2.3 we take a look at different definitions of regulatory independence, and discuss how different organisational and institutional arrangements may support the independence of regulatory authorities. Finally, in section 2.4 we summarize the academic debate on the consequences of delegation to independent regulators – the pros and cons of regulatory independence.

2.1 **Why independent regulators? Normative explanations**

In the academic literature on independent regulatory authority a crucial question is why government and legislatures choose to delegate decision-

making power to independent regulators. The question has been analysed from two theoretical perspectives: The first perspective is normative, in that it asks why – from a social point of view – independent regulatory authorities can be beneficial. The other perspective draws on insights from rational choice and principal-agent analysis. Here the question raised is: Why and under which circumstances can it be in the self-interest of the legislature to delegate powers to independent regulatory authorities? In the following we shall take a closer look at these two perspectives. First, we present the general arguments of the normative perspective. Then we present the rational perspective and some of the criticism this perspective has met.

The institution of independent regulators in the form of commissions or agencies is not a new phenomenon. For almost a century, independent regulatory agencies have played an important role in the regulation of network industries in the US. In Europe, independent regulators have been important in the regulation of such diverse areas like the media, competition, the protection of civic rights etc., whereas they have been less dominant in the regulation of network industries as public ownership has prevailed in these sectors (Colliard and Timsit, 1988; Majone, 1993, 1996). However, in the past two decades the beginning liberalisation of the European network industries has led to the emergence of numerous independent regulatory agencies, most remarkably in the UK, but also in many other European countries (Thatcher, 1998; Stern, 1997; Majone, 1996).

The liberalisation of the European electricity markets began about ten years ago when the British and Norwegian electricity markets were liberalised. In recent years the liberalisation process gathers momentum within all of the European Union due to the implementation of the obligations stated in the directive on common rules for the internal electricity market (96/92/EEC). The overall purpose of the liberalisation is to achieve lower prices and increased efficiency in the electricity supply sector through competition.

The market opening process changes the regulatory task as the prices set by power generators are no longer subject to the approval by a regulatory body and as consumers are given the possibility to choose their own

electricity suppliers. But in spite of the liberalisation there is still a need to regulate the electricity supply sector.

A number of classic economic justifications for regulatory interventions can be applied to the regulation of the liberalised power market. The justifications typically regard market failure (Breyer, 1998). The most important market failure in the network industries, such as the electricity supply sector, is the existence of natural monopolies. In order to allow new generators, wholesale and retail companies to enter into the market and create competition, access to the grid and the transmission net on fair and equal terms is a necessity. As the supply sector is often vertically integrated – with companies covering both monopolistic activities (grid, transmission net and system operation) and competitive activities (generation, wholesale and retail) – some degree of unbundling is necessary to avoid cross-subsidization. In order to provide the monopolist companies with incentives to keep their cost low and operate the utilities in an efficient way, regulations of their rate of return, permitted income or similar regulations are also put in place (Olsen, 1993; Crew, 1991; Olsen et al., 2000).

But natural monopolies are not the only reason why regulation persists after liberalisation. The security of supply, e.g. by preventing that excessive competition in one period of time leads to a situation with insufficient supply later on, is an important concern. Shortage of supply is an important risk because private investors require a high degree of certainty that there is sufficient demand for them to sell their power at prices exceeding the costs of generation due to the fact that most utilities are heavily capital intensive, have very long-life assets and are highly specific and non-redeployable (Stern, 1997). The protection of small consumers against price discrimination, i.e. regulation motivated in concern for social fairness and redistribution, may also be an important regulatory task, just like interventions motivated in externalities – typically environmental problems – or in insufficient information and transparency in the market (Stern, 1997; Olsen et al., 2000; Olsen 1993).

Although correcting market failure is often the most important task for independent regulators, the main reason why they are given independence is their role in limiting government failure. In a European context, the independent regulators have often replaced public ownership as a means of

control, and the separation of the state as owner or potential seller of utilities and the state as regulator is extremely important for the liberalisation process to be credible (Majone, 1996). Thus, those in favour of independent regulators often stress that such regulators can limit political interference in business decisions and regulatory risks.

According to European adherents, their particular advantages over other kinds of regulatory institutions include enhanced expertise and flexibility due to the combination of rule-making and rule-application in a particular field, a combination which would be inappropriate for courts or an executive department. But they are also expected to stimulate debate and handle hearings and other relations to the public with more ease than other institutions, as they are not dependent on appealing to the electorate. This is also the reason why they are said to promote stability and continuity (Majone, 1993; Demarigny, 1996). Thus, the independent regulator is expected to increase the credibility of the regulation, and that credibility is crucial for a successful liberalisation process (Majone, 1996).¹

2.2 **Why independent regulators? Rational explanations**

Horn (1995) can be seen as a representative of the rational choice approach to the delegation problem. The starting point of Horn's analysis is a situation where the legislator decides to initiate a certain policy. The legislators are assumed to be rational actors who seek to favour certain interest groups in order to gain their support when they are up for re-election. However, the legislators are aware that making decisions is not enough; the legislators must also make sure that it is implemented according to the plan. However, since there are costs related to decision-making, the legislators have to make general rules which can be administered by an agent acting on behalf of the legislature. If the legislation is to be applied in a complex field undergoing rapid changes, the legislators must also make sure that the rules are sufficiently flexible to be applied to each case and in changing circumstances without having to adjust the law continuously. Furthermore, the legislator must try to protect his decision against misinterpretation and

misapplication by the implementing agent and against the regulated parties' use of private information as well as legislative successors with other constituencies to please.

In his analysis of which factors determine the legislature's decisions regarding delegation to independent regulators, Horn takes four kinds of cost into consideration:² decision costs (costs in terms of time and other resources used when participating in decision-making processes), commitment costs (related to limiting the risk that the decision is reversed or misapplied by subsequent legislators), agency costs (the costs related to leaving the interpretation and implementation of one's decisions to agents over whom one does not have full control), and uncertainty costs (the costs related to uncertainties regarding the effect of the decision and the costs related to the implementation). Different combinations of the cost factors determine whether it is in the self-interest of the legislators to delegate competencies to independent regulators.

Different kinds of functional pressures can give self-interested politicians increased incentives to delegate decision-making power to independent regulators because they make the benefits of delegation exceed the agency costs related to delegation. Thatcher (2001) mentions the problem of credible commitment as one such functional pressure. In order to handle the problem of credible commitment politicians can delegate decision-making power to show that they are so committed to the policy that they are willing to prevent both others and themselves from intervening and obstructing the implementation of it. In addition to this version of the credibility thesis, Thatcher mentions three typical kinds of functional pressure:

1. Blame shifting
2. The technical nature of regulation
3. Regulation as the implementation of EU policies.

The first kind of functional pressure, blame shifting, arises when it is politically convenient for the legislators to delegate competencies because it allows them to shift the blame for unpopular decisions or unsuccessful implementation processes to the independent regulator. This point is also mentioned by Dupuis (1988: 16-17), who notes that politicians can use the

delegation to wash their hands either by giving the regulatory authority the blame for what happens – or for what does not happen.

The technical nature of a regulatory field can also act as a pressure for delegation in at least two ways: Firstly, because there are real problems with asymmetric information which demand great expertise of the regulator, and secondly, because when politicians delegate, they get rid of complicated and boring tasks without much appeal to the public.

The same argument goes for regulatory tasks which are part of the implementation of EU policies as the implementation of EU policies is often rather complex and rarely gives the politicians an opportunity to produce clear benefits for their voters.

Based on empirical evidence from four countries and several policy domains Thatcher (2001) discusses the empirical relevance of the above analysis. He argues that the principal-agent analysis cannot explain all the differences in the empirical patterns of delegation. *Contextual factors* must be taken into account if we are to understand why politicians delegate.

Thatcher argues that his cross-national comparison indicates that policy learning or isomorphic dissemination processes are important for the legislator's choice of regulatory design. Prevalence of independent regulators internationally in the policy domain and past experience with delegation to independent regulators in other policy domains increase the probability that politicians will choose to delegate competencies to an independent regulator in a new field. Also, once some competencies in one policy domain are delegated to an independent regulator, the independent regulator is likely to be given more competencies in the same or other policy domains. Furthermore, independent regulators are often established in relation to privatisation and liberalisation processes, and therefore, countries with strong New Public Management policies (emphasising the separation of politics and administration) and strong political leadership are more likely to have many independent regulators.

Thatcher's study indicates that both functional pressures and contextual factors can contribute to explaining the variation in both the decision to delegate competencies to independent regulators, the extent of competencies delegated to them and the degree of autonomy that they enjoy. Thus, decisions about delegation to independent regulatory authorities ap-

pear to be the result of interactions between self-interested actors and institutions mediating functional pressures.

2.3 **What makes an independent regulator independent?**

There are many different definitions of independent regulators and regulatory independence. Fesler's definition captures what most authors seem to understand by regulatory independence in the field of utility regulation. He states that regulatory independence is often used in the meaning »independence of control by the governor and legislature, independence of control by utility companies, and independence in the sense of integrity and impartiality« (Fesler quoted in Mitnick, 1980:69).

Fesler's definition stresses the independence not only from government, but also from the regulated parties, ruling out traditional corporatist arrangements. The emphasis on intangible qualities such as integrity and impartiality is quite in line with other scholars like Stern (1997) and Teitgen-Colly (1988: 26-27) who point to the role of independent regulators in balancing interests and making all parties understand the rules of the game.

In the literature, many authors stress the distinction between regulatory agencies that are truly regulatory and possess actual decision-making powers and agencies that are merely consultative (Colliard and Timsit, 1988; Demarigny, 1996; Dupuis, 1988). Thus, according to this position, the independent regulators must hold exclusive decision-making powers in order to be truly regulatory authorities. Ideally, independent regulatory authorities do not produce services or perform ordinary administrative tasks nor do they engage in policy-making. Instead, they are given the power to lay down rules, regarding, for instance, the calculation of the permitted income of network companies, in order to attain the goals set out in the legislation Teitgen-Colly (1988:26). In addition to this task, the independent regulators often function as a board of complaints and settle disputes between the regulated parties. Thus, the independent regulators may combine three functions that are normally separated: rule-making, rule application and litigation (Demarigny, 1996). However, as we shall see in chapter 3, not all

independent regulatory authorities of the real world have such extensive tasks and competencies.

Greve (2002: 19-20) lists five questions regarding regulatory independence. Firstly, can the minister interfere and overrule the decisions made by the authority in specific cases? Secondly, can the minister make strategic decisions regarding the regulation? Thirdly, does the same personnel policy and management rules apply as in the central administration in general? Fourthly, can the minister formulate policy independently of the regulatory authority? Fifthly, is the regulatory authority financed by government and parliament through the ordinary state budget? If »no« is the appropriate answer to these questions, the regulatory authority has a high degree of regulatory independence.

In Greve's definition the emphasis is put on the relationship between the independent regulator and government, whereas the relationship with the regulated industry is neglected. This aspect is included in Smith's (1997:1) definition. He defines independence for regulators as consisting of three elements:

1. an arm's-length relationship with regulated firms, consumers and other interests,
2. an arm's-length relationship with political authorities,
3. the attributes of organisational autonomy – such as earmarked funding and exception from restrictive civil service salary rules – necessary to foster the requisite expertise and to underpin those arm's-length relationships.

Smith's definition has the advantage that it emphasises both the formal independence in terms of the arm's-length relations with both political authorities and stakeholders and the organisational premises for that independence, i.e. organisational autonomy. In the following we will discuss how these arm's-length relationships can be supported by organisational and institutional arrangements.

As described above, independent regulators must be independent from both the regulated party and government, but arm's-length relationships cannot be taken for granted. With regard to the regulated industry, there are at least three threats to the independence of the so-called independent regulators. Firstly, there is a risk that the regulated parties may try to »capture« the regulators, e.g. by bribing them or by promising them well-paid jobs in the future, in order to influence their decisions (Laffont and Tirole, 1993; Stigler, 1971; Peltzman 1989). Secondly, there is a risk that the industry uses asymmetric information and misinformation to manipulate the regulator (Mitnick, 1980). Finally, there is a risk that the regulator's independence is compromised by the regulator's private interest in the sector, directly or indirectly, e.g. when the regulator holds stocks in a unit trust investing in the regulated industry.

A number of safeguarding measures have been developed in the literature and in practice to limit these risks (Stern, 1997; interview with Larry Anderson, FERC, 2001; Statute of the Federal Power Commission, Elforsyningsloven, 1999; Majone, 1996, OECD, 2001). Some of these measures are closely related to standard rules regarding impartiality and disqualification. For instance, there are rules forbidding regulators to have any personal interest industry. Furthermore, formal rules prohibiting informal discussions of pending cases with any of the parties involved are often part of the general legislation regarding good governance. In some cases, there are also formal rules prohibiting the employment of regulators in the regulated industry both before, during and after their term in order to increase the relational distance between the regulator and the regulated parties and to prevent that regulators protect certain companies against strict regulation in order to get a good job in the sector afterwards.

Although many of these measures may seem quite straightforward, they may also be difficult to honour in practice. Particularly the rules concerning employment in the regulated industry before and after the term can make it very difficult to attract competent regulators as the rules deny industrial experts the possibility of serving as regulators. The rules may also function as a *Berufsverbot* denying ex-regulators the possibility of using their skills in the sector where they are most valued. Often less radical versions of the mechanism are used in order to strike the balance between the

need for expert knowledge and the risk of regulatory capture. Adequate remuneration of regulators can enhance independence both by facilitating the recruitment of persons with sufficient expertise and by limiting the temptation of accepting bribery and the like from industry.

When it comes to limiting the problem of asymmetric information, the provision of sufficient administrative support to allow the regulatory authority to carry out its own analyses, monitoring etc. is of course very important. But the problem can also be addressed in the choice of regulatory instruments: Using regulatory tools limiting the need for knowledge which can only be obtained from the regulated industry and which is difficult to verify may increase the »informational« independence of the regulatory authority.

The question of independence from government and the legislature is somewhat different from the question of independence from the regulated industry, the independent regulators being part of the state apparatus. Even if regulators are granted formal independence, government can influence the regulators in numerous ways, e.g. by cutting their budgets or dismissing unpopular regulators. However, some measures have been devised to support the arm's-length relationship with the political authorities and limit the scope for inference from the political system (Stern, 1997; Stern and Holder, 1998; Majone, 1996; Statute of the Federal Electricity Commission, OECD, 2001; Greve 2002).

Two measures mainly regard the independent regulators' formal right to make independent decisions. These measures are the exception from the minister's discretionary powers and clearly defined and exclusive competencies including the right to impose sanctions. Other measures address the risk of informal pressure from the political authorities. Such measures include non-revocable appointments of regulators for fixed terms and prevent appointment and dismissal on political grounds. To avoid that the independent regulator takes instructions from the appointer in order to get reappointed, appointment procedures which involve several parties (e.g. both parliament and government) and provisions against reappointment can be made.

Finally, as mentioned in Smith's definition, some measure of organisational autonomy may enhance the independence of the regulatory author-

ity. Organisations gain autonomy when they have maximum control of the input of resources on which they are dependent (Pfeffer and Salancik, 1978). In this case, a stable source of funding, e.g. by a fee levied on the regulated industries, and the authority to control appointment, allocation, promotion and dismissal of the regulatory authority's staff are important resources. This is of course also relevant in relation to the question of adequate remuneration of the regulators and their staff discussed above.

The measures discussed here are all quite formalistic and they do not include factors like norms and culture. The reason is, of course, that it is very difficult to make rules about culture and norms. However, in practice, making rules is not enough. For instance, it may be difficult to avoid any kind of interference with the budget, e.g. because of constitutional requirements, and in a similar vein, it may not be all that easy to avoid overlapping competencies etc. In such cases – where the formal rules go bankrupt – informal rules, norms and cultural factors play an important role. These rules, norms and cultures may vary immensely from country to country and from one regulatory field to another. Therefore, in an empirical assessment of the independence of so-called independent regulators, the degree of »compliance« with these measures can only serve as an indicator, not as a key.

2.4 **The pros and cons of regulatory independence**

In this section we will attempt to present some of the key arguments in the ongoing debate on regulatory independence. Some are in favour, others are against and still others point to the fact that we need to refine our understanding of the relationship between independent regulators and their surroundings. The main themes in this debate are agency capture and asymmetric information, accountability, legitimacy and impartiality and the match between regulatory independence and the institutional framework of the specific regulatory field.

Agency capture and asymmetric information

Some authors argue that independent regulators are particularly vulnerable when it comes to agency capture and the establishment of rigid structures (Mitnick, 1980; see also OECD, 1999). One reason is that the turnover in staff is limited due to the technical specialisation of sector-specific independent regulators. The lack of turnover means that many things come to be taken for granted and the staff tends to over-identify with the regulated party. This problem is amplified by the fact that such regulators rarely have an active »public constituency« to supply feedback pressure (Mitnick, 1980). Others, however, argue that the independent sectoral regulatory authorities in general are more likely to be able to match the expert knowledge of the regulated industry and limit the problem of asymmetric information (Majone, 1996). Organising balanced consultations or hearings may be a way to limit the risk of capture, provided that all relevant interest groups are willing and able to participate on an equal footing.

Accountability

The need for an active constituency relates to the problem of accountability. In the UK, where the decision-making competence is personalised and lies with the Director-General (DG), critics claim that the DGs have become too powerful and autonomous, but similar concerns have also been discussed in relation to commission-type independent regulators (Graham, 1998; Stern, 1997; Stern and Holder, 1998; Majone, 1996; Thatcher, 1998).

Majone (1996) and Hall, Scott and Hood (2000) all stress that the concept of a completely autonomous and absolute regulator may be very far from the practical reality of independent regulators. In real life, even if nobody controls the regulators completely, independent regulators have to cooperate with numerous actors including both government institutions and the regulated industry. Therefore, independence and accountability need not be totally incompatible concepts – especially if we broaden our concept of accountability to include more than direct control by Parliament.

Among the sources of accountability is unambiguous primary legislation limiting the discretion of the regulator, the existence of an appeal

mechanism and formal rules prescribing the use of fair and acceptable procedures and justification of methods and decisions by the regulator.

Several studies suggest that more informal measures of accountability are at least as important as these formal measures in practical life. Both Stern (1997) and Hall, Scott and Hood (2000) stress that reputation for doing a decent job as a regulator is more important than formal legitimacy and independence. Stern (1997) and Thatcher (1998, 2001) also note that UK regulators have used transparency and »answerability« as an important strategy to meet the demands for more accountability. Applying normal rules of »good governance« and making public hearings may also improve the informal accountability without compromising the regulator's independence.

Legitimacy and impartiality

In spite of all the possibilities to increase their accountability, independent regulators lack the solid kind of democratic legitimacy that comes from being elected by and accountable to an electorate. Independent regulators are often seen as constitutional anomalies (Majone, 1996; Colliard and Timsit, 1988). The arguments in favour of independent regulators generally build on some implicit or explicit assumption that independent experts will make decisions based on rationality, balancing divergent interest and thus favouring the common good or the public interest (Hall, Scott and Hood, 2000).³ Independent regulators are assumed to incarnate impartiality, expertise and a rationality unblemished by dirty party politics that is the legitimacy on which independent regulators are originally founded.

The notion that the independent regulators serve the public interest better than self-interested politicians and bureaucrats has been rejected as naive for many decades (Mitnick, 1980; Crew, 1991), but it is, nonetheless, still the kind of argumentation which is used by adherents and a theoretical argument supporting this idea can be derived from game theory (Milgrom and Roberts, 1992). The argument goes that in a repeated game, reputation is important even for self-interested actors, and that reputation for rationality, fairness and impartiality is more important for experts than for politicians (having a short time horizon) and bureaucratic generalists (being less visible). As experts have the most to lose from a ruined reputation they are

less likely to cheat, simply because it is in their self-interest to protect their reputation.

Matching the institutional framework

Part of the trouble determining the effects of regulatory independence is probably due to the fact that these effects depend heavily on how regulatory independence is practised as well as a number of contextual factors. In a study of regulation of telecommunications in five countries, Levy and Spiller (1996) conclude that in order to understand success and failure of different regulatory designs more attention should be paid to the importance of the match between the regulatory design and the inherent structures and institutions, administrative and legal capabilities etc. of the country in question. The specific institutional and organisational design of the regulator can be of great importance, because stated independence is no guarantee of de facto autonomy in the regulatory process (Gonenc, Maher and Nicoletti, 2000; Hall, Scott and Hood, 2000). But it is not always possible to implement the ideal design. For instance, in small countries the appointment of a new set of experts with a certain relational distance to the regulated industry every 4 or 6 years may be impossible due to a limited number of people having the necessary expert knowledge. Therefore, the general recommendations on institutional design must be seen in the context of the institutional endowment of the individual country and the individual regulatory field.

Summing up the debate on independent regulatory authorities

While the creation of independent regulators is defended as a necessary condition for the realisation of a credible liberalisation and privatisation process by some authors (Majone, 1996), others state that their independence makes the regulators too powerful and jeopardizes the democratic accountability of the regulatory process (Graham, 1998). The industry-specific independent regulators are sometimes criticized for being particularly vulnerable to agency capture⁴ (Mitnick, 1980), whereas others find that they are better fit to overcome the problems of asymmetric information between the regulator and the regulated industry than general regulators (Gonenc, Maher and Nicoletti, 2000). Still others suggest that the leg-

islature delegates regulatory powers to independent agencies, because in this way, they can actually maximize their own influence, given uncertainties, limited time resources etc. (Horn, 1995; Moe, 1990). Thus, whether regulatory independence is beneficial or problematic and why regulatory independence has become fashionable is still a matter of dispute.

Since independence can have both beneficial and problematic consequences, it may not be a bad idea to limit the independence in some respects. However, one should be careful how it is done. Some restrictions, e.g. measures increasing accountability, may enhance the legitimacy and increase the probability that the regulatory authority attends to its duties in a sensible way, while others, e.g. allowing the appointment of politicians as regulators, may jeopardize the credibility of the regulation.

3 Measuring Regulatory Independence: The Survey Design

3.1 Why make a survey of regulatory independence in the electricity sector?

In the current debate on regulatory independence, the British experience with high profile director generals leading independent regulatory agencies holds dominant position, but many of the newly created independent regulators in Europe are designed quite differently from the British kind of independent regulators. In March 2001, OECD (Organisation for Economic Cooperation and Development)/IEA (International Energy Agency) published a survey of regulatory institutions in liberalised electricity markets in the IEA member countries.⁵ The survey points to the fact that in many IEA countries independent regulators have been created in relation to the liberalisation of the electricity markets. However, it is also evident from the report that these independent regulators vary a lot in terms of their powers and how independent they really are.

Thus, when we talk about independent regulators regulating the electricity supply industry, we are not only faced with uncertainty as regards their effects, we do not really know what we are talking about either – or rather we know that although we talk about independent regulators as a well defined phenomenon, the term actually covers a wide range of different institutional and organisational arrangements. It is those actual institutional and organisational arrangements that I intend to survey and describe in a more systematic way.

The aim is threefold:

1. Empirically, the aim is to measure and compare central dimension of the regulatory authorities in eight European countries in order to investigate similarities and differences.
2. Methodologically, the aim is to make an attempt to measure the relative independence of the regulators by constructing survey and an independence index.
3. Theoretically, the aim is to confront the theoretical concept of regulatory independence with the actual empirical results in order to discuss the empirical relevance of the theoretical discussion.

3.2 **Defining the population**

Given the aim of studying regulatory independence the population of the survey can be delimited in a number of ways. Like OECD (2001) I could study all the regulatory institutions in liberalised electricity markets in the IEA member countries, or I could even include independent regulators in other regulatory fields such as telecommunications. However, since I have limited time resources and as I am particularly interested in electricity regulators I have decided to limit the population of the survey to the members of the Council of European Energy Regulators (CEER).

The CEER is a self-grown organisation of 16 »National Independent Regulators in the fields of electricity and/or natural gas«⁶ (CEER, 2000:1) co-operating in order to promote competitive European markets in electricity and gas, among others by exchanging knowledge, making codes of conduct, formulating policy papers etc. The 16 members are all regulators in countries that are participating in the European internal market for electricity and thus countries that have liberalised or are in the process of liberalising their electricity markets. One EU member country, Germany, is not represented in the council, as the regulation of the German electricity market lies with the ministry and the competition authority, not with a separate regulatory authority.

The delimitation of the population is pragmatic in that it uses a given empirically delimited population: regulators in the field of electricity and

natural gas who are involved in the implementation of the EU directive on the internal market for electricity (EC 96/92) and call themselves independent. Whether all the members of the population can be characterised as independent according to the theoretical definition stated above is an empirical question. It may well be that the empirical concept of regulatory independence is quite far from the theoretical concept of regulatory independence (Ragin, 2000:45ff). Therefore, one result of this survey may be to provide the basis for a discussion of the relationship between the theoretical and the empirical concepts of regulatory independence.

3.3 **Designing the questionnaire: Operationalisation of the concept of regulatory independence**

The data for my survey were collected through a questionnaire sent to each of the 16 members of the CEER. I intend to use the data collected to measure the *degree* of regulatory independence of the CEER members relative to the definition of regulatory independence stated above. For this purpose I will need to develop an index in which different aspects of regulatory independence are weighed against each other in order to produce a single expression for their degree of independence. I will do this by revising an existing index of regulatory independence, see below. In the questionnaire emphasis is put on independence in formal, legal/organisational terms rather than in behavioural terms. Thus the paper does not examine how the formal rules etc. are operated in practice.

When designing the questionnaire about the regulatory independence of the CEER members we must clarify a number of questions and consider the possible dimensions of a typology of regulatory independence. How can we measure regulatory independence? What is an arm's-length relationship? And how do we measure organisational autonomy?

In order to make use of the work already made in this field, I will use Gilardi (2001) as a starting point in my operationalisation of the concept of regulatory independence. Gilardi has developed an index of regulatory independence by modifying Cukierman, Webb and Neyapti's (1992) index

of the independence of central banks.⁷ The index measures four key variables: A) Agency head status, B) Management board member status, C) Relationship with government and parliament, and D) Financial and organisational autonomy, each of which is composed of 4-6 sub-variables (e.g. who appoints the agency head?). Each sub-variable has 2-6 possible answers and each answer has been coded with a number between 0 and 1, 1 being the most independent and 0 being the least independent.

Each key variable counts for 1/4 in the cumulated index and is composed of a set of sub-variables, formulated as questions in a questionnaire. Both key variable A) Agency head status, and key variable B) Management board member status, are composed of six such questions. The questions are practically identical and they all regard the appointment, dismissal and status of the agency head or the management board members, respectively. Together the coding of these 2 times 6 questions counts for 1/2 of the total index value. The questions are (Gilardi, 2001:11-12):

A) Agency head status

- 1) What is the term of office of the agency head?
- 2) Who appoints the agency head?
- 3) What are the provisions regarding dismissal of the agency head?
- 4) May the agency head hold other offices in government?
- 5) Is the appointment of the agency head renewable?
- 6) Is independence a formal requirement for the appointment?

B) Management board member status

- 7) What is the term of office of the management board members?
- 8) Who appoints the management board members?
- 9) What are the provisions regarding dismissal of the management board members?
- 10) May the management board members hold other offices in government?
- 11) Is the appointment of the management board members renewable?
- 12) Is independence a formal requirement for the appointment?

C) Relationship with government and parliament is composed of the following four questions:

- 13) Is the independence of the agency formally stated?
- 14) Which are the formal obligations of the agency vis-à-vis the government?
- 15) Which are the formal obligations of the agency vis-à-vis parliament?
- 16) Who, other than a court, can overturn the agency's decision where it has exclusive competency?

D) Financial and organisational autonomy is composed of these four questions:

- 17) Which is the source of the agency's budget?
- 18) How is the budget controlled?
- 19) Who decides on the agency's internal organisation?
- 20) Who is in charge of the agency's personnel policy?

In my questionnaire, I will uphold the structure with key variables and sub-variables, but a number of modifications to Gilardi's index are necessary. If we relate Gilardi's index to our definition of regulatory independence above (Smith, 1997), we can say that the first three key variables address the question of arm's-length relationship with political authorities and the last key variable addresses the question of organisational autonomy. Thus, an important thing to notice in this operationalisation is that it completely lacks attention to the relationship between regulator and stakeholders (i.e. regulated firms, consumers and other interests).

In Gilardi's study the aim is to test the credibility thesis stating that the legislature chooses to delegate more competencies to more independent agencies, when they need to give their policies more credibility. Therefore, it is understandable that he chooses to emphasise the independence (and delegation) from government and parliament. However, when studying regulatory independence in the electricity sector more broadly, the independence from stakeholders, and in particular incumbents, is equally important, as one of the most important tasks of regulatory institutions is to promote competition and prevent incumbents from taking advantage of

their position in the market. Therefore, I will include a key variable called »independence from stakeholders«.

The key variable »independence from stakeholders« will include the following sub-variables:

- 1) May commission members/the agency head have held a position in the electricity supply industry/industrial associations in the years preceding their/her appointment?

Answers:

- a) No
- b) Yes, but not within the last two or more years prior to the appointment
- c) Yes
- d) Yes, and they can hold a position in industry during their term of office.

- 2) Are there provisions restricting the commission members'/the agency head's possibilities of accepting a job in the electricity supply industry after their term?

Answers:

- a) Yes, regulators are not allowed to take positions in the regulated industry for several years after finishing their term.
- b) Yes, regulators are not allowed to take positions in the regulated industry for up to a year after finishing their term.
- c) No.

- 3) Are there provisions forbidding discussions of pending cases with stakeholders?

Answers:

- a) Yes, in the specific legislation regarding the regulator/the specific statute for the regulator.
- b) Yes, in the general legislation regarding good governance.
- c) No.

- 4) Are there any provisions forbidding that the agency head/commission members have any personal or pecuniary interest in the electricity sector?

Answers:

- a) Yes, both in relation to the appointment and in relation to individual cases.
- b) Yes, in relation to individual cases.
- c) No.

These questions reflect the two of the propositions made in the rational choice literature on regulation. The first proposition is that there is a risk that the regulated parties may try to capture regulators in order to influence their decisions, e.g. by bribing them or by promising them well-paid jobs in the future (Mitnick, 1980; Laffont and Tirole, 1993). The second proposition is that there is a risk that the regulator's independence is compromised if the regulator has direct or indirect private economic interests in the sector, e.g. by holding stocks in a unit trust investing in the regulated industry. A third important point of the rational choice literature on regulation with regard to regulatory independence is the risk that the regulated industry uses asymmetric information to manipulate the regulator to act in the interest of the industry. The problem of asymmetric information is also relevant in relation to recruitment of qualified staff in two regards: Firstly, higher salaries in the industry may attract the most skilled persons. Secondly, there may be a trade-off between independency and expertise as detailed knowledge about the regulated industry hardly can be obtained from an outside position. Although important, this aspect is not included in the survey, as I find it very difficult to construct an indicator about which information can be collected in a questionnaire directed to the regulatory institutions.

Another important problem with Gilardi's index is that it presumes that one particular institutional design prevails. In reality, it may be difficult to determine who the agency head and the management board members actually are due to the many variations in the institutional set-up in the

CEER countries. Some countries may only have one of the two. Also, it may be difficult to determine which powers and responsibilities are held by whom. Therefore, although it does make the questionnaire slightly more complicated to answer, I will include the question: Who is responsible for the regulatory authority's decisions? And give the possible answers: a) a board of commissioners (full time), b) a board of commissioners (part time) c) an agency head/director, d) other. The answer to this question will not be part of the index – but it could be relevant for a discussion of different kinds of independent regulators. Then, the respondent will be asked to answer the questions regarding the status of the person or the commission responsible for the regulatory authority's decisions.

Gilardi's key variable C) regarding the relationship with government and parliament, is the one that comes closest to what I would call a measurement of *substantial* independence, as opposed to the formal independence (the formal status of the regulator) related to the key variables A) and B). By substantial independence I mean independence – or one might say autonomy – in relation to actual decision-making. In order to describe this matter in a little more detail I have decided to include some questions regarding the tasks and competencies of the regulatory institution.

How competent is the regulatory institution in carrying out the following tasks?

- Approval or determination of the tariffs of monopolistic companies (ex ante or ex post)
- Network access
- Licensing and modification of licenses
- Laying down rules regarding terms of delivery
- Dispute settlement (between companies and between companies and their customers)
- Enforcement.

For each task I will ask the respondent to choose between the following answers: a) the regulatory institution is fully competent, b) the regulatory institution shares decision-making power with another institution, government or parliament, c) the regulatory institution plays a consultative role, and d) the regulatory institution has no competencies. The lack of compe-

tencies or a consultative role in relation to a specific task need not in itself compromise the independence of the regulator, but due to interdependence between the different tasks, the possibilities of carrying out one task independently of other institutions will be limited if those institutions have the competencies to carry out related tasks. Thus, although I am interested in regulatory independence and not in delegation in broader terms, the amount of competencies in relation to different key tasks is relevant as it may serve as an indicator of independence.

I have made further changes in the index, in particular with regard to the possible answers, but I will not go into detail about each and every one of these. However, I should point out that I have moved (a slightly modified version of) the question »Is the independence of the agency formally stated« from Gilardi's key variable C) regarding the relationship with government and parliament to the introduction. The reason is firstly that I think the question has a bearing for all the following questions, and secondly that I want key variable C) to reflect what I have called the substantial independence of the regulatory authority.

In addition to the questions included in the index, I have added two questions regarding the objectives and task of the regulatory authority and four questions regarding the respondents' own assessment of the degree of independence of the regulatory authority. Finally, I have added a question regarding the professional background and the regulators. These questions will not be part of the independence index, but be used in the description and discussion of the different kinds of independent regulators.

3.4 **Pretest of the questionnaire**

The questionnaire was sent to the regulatory authorities by e-mail and it can be completed by any person in the authority, who knows about the statute and obligations of the authority. The answers should not be dependent on the judgements of a particular person – although one can never completely preclude any differences in the interpretation of both questions and answers. The questionnaire was pretested before it was sent out by e-mail. First, a researcher and member of the Danish Energy Regulatory Authority completed and commented on a draft version of the questionnaire.

Then a revised version of the questionnaire was completed by two staff members of the Danish Energy Regulatory Authority: a head of section with a legal background, and a head of division with an economic background. Their answers revealed difficulties with the interpretation of certain questions, among others regarding the competencies of the regulatory authorities, which I have tried to compensate for by adding more text, changing the wording etc. Finally, another head of section who often participates in the CEER meetings, commented on the terminology in order to make sure that the questionnaire uses the standard terminology of the CEER. The resulting questionnaire is reproduced in appendix 1.

3.5 **Representability and validity**

The questionnaire was sent to 16 regulatory authorities with competencies in the field of electricity regulation, all of which are members of the Council of European Energy Regulators. Of the 16 regulatory authorities eight have answered the questionnaire, namely the regulators in the following countries: Austria, Denmark, Greece, Ireland, Italy, Luxembourg, Northern Ireland and Spain. A brief description of the broader energy regulatory framework in the eight countries can be found in OECD (2001). It would, of course, have been better if regulators from more countries had answered the questionnaire, but several regulators have desisted from completing the questionnaire due to a heavy workload.

The number of answers being limited, it is, however, fortunate that regulators in the survey represent both Mediterranean countries, Central European countries, the British Isles and Scandinavia. The countries represented in the survey are not the most intensively studied countries in recent academic work on liberalisation processes. I consider this an advantage, because in this way the survey may contribute to a broader understanding of these processes in general and the independent regulators as a phenomenon in particular than the one which can be obtained from studies of the British experience with deregulation and independent regulators.

As the pre-test showed, some of the questions leave room for interpretation although I have made an effort to make them as clear and unambiguous as possible. This problem may of course have an important bearing

on the reliability of the answers from my respondents. However, in most of the authorities, the questionnaire has been looked over by senior staff and most of the respondents have given thorough answers and comments. Furthermore, I have discussed some of the more ambiguous or inconsistent answers with the respondents to eliminate misinterpretation. Thus, all in all, the reliability of the answers can be expected to be fairly high.

4 **Regulatory Independence in Practice: A Survey of the Institutional Design**

In this chapter we will summarise the results of the survey of the institutional design of independent electricity regulators in eight European countries. The results have been organised in four sections, throwing light on different aspects of the independent regulators and their regulatory independence. For more detailed information about the individual countries and subjects, please consult appendix 2, which gives a full presentation of the questionnaire and the answers of the respondents.

4.1 **The mission, tasks and competencies of the regulatory authorities**

The regulatory authorities have all explicitly stated objectives which they must pursue, but the scope of their mission and the powers they have been given to pursue them differ quite a lot.

With regard to the regulatory objectives, table 4.1 shows that the protection of consumers and the promotion of competition are core objectives of the electricity regulators. All regulators have these objectives as part of their mission, and almost all are engaged in the promotion of two closely related objectives, namely market transparency and economic efficiency in the electricity supply sector.

Tabel 4.1 Which are the regulatory objectives of the regulatory authority (explicitly stated in the legislation or in a mission statement)? The regulatory authority works to promote:

Country	consumer protection	economic efficiency in the supply industry	competition	market transparency	an environmentally friendly electricity supply	socially responsible price policies	security of supply
Austria	x	x	x	x	x		x
Denmark	x	x	x	x	x		
Greece	x	x	x	x	x	x	x
Ireland	x	x	x	x	x	x	x
Italy	x	x	x	x	x	x	
Luxembourg	x		x	x			
Northern Ireland	x	x	x		x		x
Spain	x	x	x	x			x
Countries with the objective (n=8)	8	7	8	7	6	3	5

The emphasis on economic regulation is in line with the findings in OECD (2001). In the OECD report, the UK is mentioned as the only exception to the rule due to its tasks related to distributional issues such as fighting fuel poverty. However, the present survey shows that the regulatory authorities in three other countries, Greece, Ireland and Italy, are specifically meant to promote socially responsible price policies – and both the Irish and the Italian regulators are fully competent in the regulation of tariffs (see below). Furthermore, the promotion of the security of supply and an environmentally friendly energy supply are also explicitly stated objectives for the majority of the regulatory authorities.

The regulators in four countries, Austria, Greece, Ireland and Italy, have a very wide range of, potentially conflicting, objectives to pursue. Of the remaining four regulators, the Luxembourgian regulators have the most limited number of explicitly stated objectives.

In the questionnaire the respondents were asked to state how competent the regulatory authorities are in relation to six regulatory issues in the regulation of the electricity sector. They were also asked to comment on this statement if there are exceptions to the rules, unresolved questions

concerning overlapping competencies, differences between *de jure* competencies and *de facto* influences and tasks etc. The six regulatory issues are:

1. Approval or determination of the tariffs of monopolistic companies (ex ante or ex post)
2. Network access
3. Licensing and modification of licenses
4. Laying down rules regarding terms of delivery (within the limits of the existent legislation)
5. Dispute settlement (between companies and between companies and their customers)
6. Enforcement.

The survey shows that the Luxembourgian regulator is the regulator who has the most limited set of competencies in relation to these core issues in electricity regulation. In fact, according to some definitions of regulatory authorities, the Luxembourgian regulator would not be regarded as a regulatory authority due to lack of decision-making powers. The Luxembourgian regulator only plays a consultative role in relation to tariffs, third party access (TPA) and dispute settlement in conflicts between companies and between companies and their customers, and has no powers in relation to neither licensing, terms of delivery nor enforcement. The Spanish regulator has almost equally limited powers. As shown in table 4.2, the Irish, Italian and Danish regulators have the most extensive powers being fully competent in at least five of the six areas.⁸

Tabel 4.2 Competencies. Number of areas¹ in which the regulatory authority is:

Country	fully competent	sharing decision-making power with another institution	playing a consultative role	incompetent
Austria	3	2	0	1
Denmark	5	0	0	1
Greece	3½ ²	0	2½ ²	0
Ireland	6	0	0	0
Italy	5	0	1	0
Luxembourg	0	0	3	3
Northern Ireland	3½ ³	2½ ³	0	0
Spain	1	1	3	1

1. As mentioned above, the total number of areas is six.
2. The Greek regulatory authority is fully competent in relation to certain questions regarding transmission tariff and plays only a consultative role in relation to other questions regarding tariffs.
3. The Northern Irish regulatory authority has exclusive powers in relation to disputes between customers and companies, but only shared powers in relation to disputes between companies.

The majority of the regulators are fully competent when it comes to approval or determination of tariffs, laying down rules regarding terms of delivery and dispute settlement, but only two (the Irish and Northern Irish) regulators are fully competent in matters of licensing. Six regulators are fully competent in the regulation of network access, the exceptions being Luxembourg and Northern Ireland. In addition to their tasks in these regulatory fields, almost all the regulators perform tasks such as giving policy advice to the government, providing market information to consumers, participating in international co-operation and monitoring. Again, the Luxembourgian regulator has the most limited portfolio dealing only with monitoring.

Five out of eight regulatory authorities are given powers to enforce their decisions. The regulators with the most limited powers in general, the Luxembourgian and Spanish regulators, are also, together with Austria, among the regulators without powers to enforce their decisions.

The examination of the objectives, competencies and tasks gives us an indication of the variation in the role played by independent regulatory authorities in the field of electricity regulation in the CEER member states. Although pursuing objectives of economic regulation is the main purpose

of the independent regulators, more than half of them are also expected to pursue social and/or environmental objectives. Furthermore, the number of areas in which the regulators are fully competent varies from six out of six (Ireland) to zero out of six (Luxembourg).

4.2 **Who is in charge?**

In all eight countries, the independence of the regulatory authorities is formally stated. However, although some organisational models are clearly more popular than others, the diversity is still quite remarkable when it comes to the translation of this formal statement into procedures for the appointment and dismissal of regulators.

The most common way to organise the regulatory authorities is the commission-type regulator. Four regulatory authorities are headed by a board of commissioners working full time with the authority, whereas the overall responsibility for decisions of two regulatory authorities, the Austrian and the Danish, lies with commissions working only part time. In the Austrian case, an agency head is responsible for some decisions. At present a single commissioner is in charge in Ireland, but the legislation gives the possibility of appointing more regulators. Only one regulatory authority, the Northern Irish regulator, is headed by an agency head that is fully responsible for the regulatory authority's decisions.

In the countries with a commission-type regulator, most have a board of commissioners composed of persons with technical skills and legal and/or economic skills. In principle, the Danish regulatory authority has the broadest span of professions represented in the regulatory board as according to the law the commissioners must represent expert knowledge, not only in economics, law and technical issues, but also in business, environmental and consumer affairs. In several countries some of the commissioners have a professional background in academia: both university professors and other researchers have been appointed commissioners. In Ireland and Northern Ireland, at present the two countries with one-person regulatory boards, the persons in charge are career civil servants.

In (almost⁹) all countries the responsible commissioners, or in the Northern Irish case the agency director, are appointed for a fixed term of at

least four years. Furthermore, they all – with the exception of the Northern Irish regulator – enjoy some measure of protection against dismissal before the end of their term. However, in most countries regulators can be dismissed for reasons not related to policy, e.g. if they have strong economic interests in the electricity sector, or if they severely neglect their duties. Thus, there seems to be a general understanding that in order to be independent, regulators must be appointed for fixed terms and protected against dismissal on political grounds. On the other hand, most countries allow for the reappointment of regulators, Greece and Italy being the exceptions to the rule, which can give the regulators an incentive to act in order to please the appointers.

When it comes to the appointment procedure, i.e. who appoints the regulators, the Mediterranean countries all have procedures involving the legislature and the executive, whereas the appointment is made by the executive collectively in Austria and Luxembourg. In Denmark, Ireland and Northern Ireland only one or two ministers are involved in the appointment of the regulators. Thus, it seems that the further to the North, the fewer people involved in the appointment procedures.

In five out of eight countries independence is a formal requirement for the appointment of regulators (see also table 4.3) and in seven of the eight countries regulators are not allowed to hold another office in government during their term. Denmark is the exception to the rule, in spite of the country's formal requirement for independence.

4.3 **Relationship with the regulated industry**

As mentioned above, all the regulatory authorities are formally independent and in the majority of the countries, independence is a formal requirement for the appointment. But how does this formal requirement relate to rules regarding the relationship with the regulated industry? One way of ensuring independence from the regulated industry is to maximize the relational distance from the industry by excluding former employees in the industry from being appointed regulators. This measure is used in half of the countries, although in two of the countries, Austria and Italy, this provision

is not directly stated in the legislation, but a corollary of the rules regarding »factual proximity«.

In none of the countries may regulators be employed in the regulated industry or its industrial associations during their term. As indicated in table 4.3, there seems to be a correlation between the formal requirement for independence and the exclusion of persons formerly employed in the regulated industry from being appointed, but the number of cases is too small to test the statistical significance of this correlation.

Tabel 4.3 Independence as a formal requirement for regulators and restrictions on the appointment of persons formerly employed in the regulated industry

	Restrictions on the appointment of persons formerly employed in the regulated industry	No restrictions on the appointment of persons formerly employed in the regulated industry
Independence is a formal requirement for the appointment	Austria, Ireland, Italy, Northern Ireland	Denmark
Independence is <i>not</i> a formal requirement for the appointment	Luxembourg	Greece, Spain

Once the regulators are appointed, the several measures can enhance the regulatory authorities' independence from the regulated industry (cf. section 2.3). One such measure is provisions restricting the commissioners'/ agency head's possibilities of accepting a job in the regulated industry. This measure is also in use in four of the eight countries, but as shown in table 4.4, these countries are not necessarily the ones that have made restrictions regarding employment in the regulated industry prior to the appointment.

Tabel 4.4 Restrictions regarding employment in the regulated industry before and after the appointment

	Restrictions on the appointment of persons formerly employed in the regulated industry	No restrictions on the appointment of persons formerly employed in the regulated industry
Restrictions on the possibility of accepting a job in the regulated industry after the end of the term	Italy, Northern Ireland	Ireland, Spain
No restrictions on the possibility of accepting a job in the regulated industry after the end of the term	Austria, Luxembourg	Denmark, Greece

In almost all countries there are provisions forbidding that the agency head/the commissioners have any personal or pecuniary interest in the electricity sector both in relation to the appointment and in relation to individual cases. The only exception to this rule is Denmark where the rules only regard the individual cases (i.e. they are general rules regarding incompetence). Thus, it seems that in Denmark, the only real consequence of the formal requirement for independence in relation to the appointment is that the commissioners cannot be employed in the regulated industry during their term.

Direct interaction in terms of discussions of pending cases between the regulator and the regulated parties is forbidden in four countries: Denmark, Ireland, Luxembourg and Northern Ireland. However, it is only in Northern Ireland that this prohibition is stated in the specific rules regarding the independent regulatory authority. In the other three countries the ban stems from general rules regarding good governance. In a comment to the answer, the Spanish respondent states that exchange of information with all stakeholders is actually encouraged, and the Austrian respondent explains that the Austrian regulatory authority discusses its decisions with interest groups (organised in an advisory council) before making its final decisions. The Austrian respondent argues that this is part of the system to prevent regulatory capture. Arguably, discussing the decisions with stakeholders can be a way to overcome some of the problems of asymmetric information and avoid capture provided that e.g. business and consumer interests are balanced and participate in the decision-making process on an equal

footing. However, it is a question, how often this is actually the case the electricity supply industry having more resources in terms of expertise, advisers and information than consumer groups. On the other hand, if one accepts Mitnick's argument that specialised independent regulatory authorities are particularly vulnerable to capture due to the lack of an active (and balanced) constituency (see section 2.4), then a formalized consultation procedure may be a way to contain this problem.

All in all, the examination of the rules regulating the relationship between the independent regulatory authorities and the regulated industry shows a mixed picture of how the arm's-length relationship between the two parties is interpreted in practice. There is clearly not one single model to which all countries adhere.

4.4 **Relationship with government and parliament**

To a wide extent the relationship with government and parliament is determined by the delegation of competencies and the procedures for appointment and dismissal of the regulators, factors which have been discussed above. But in order to use their powers in an independent way and uphold an arm's-length relationship with government and legislature, the regulatory authorities need to have some measure of organisational autonomy and to be exempted from direct supervision. Therefore, we will now take a closer look at the possibilities of the government and the legislature to control the regulatory authority directly, e.g. by overruling its decisions, or indirectly, e.g. by cutting its budget.

Both Greve (2002) and Smith (1997) mention some kind of exception from the state budget regulation and an exception from restrictive civil service salary rules as prerequisites for regulatory independence. To begin with the budget, it is generally assumed that an external source of funding is more stable than government funding for two reasons: Firstly, regulatory authorities with external funding are not affected by general cut-backs and can stay out of the annual fight for resources from the state budget between state institutions. Secondly, with an external source of funding the regulatory authority is less vulnerable to politically motivated budget cuts. All of the regulatory authorities have such external sources of funding. The Au-

strian and Northern Irish regulatory authorities also have government funding, but all the others are funded entirely by external sources, e.g. by a fee levied on the regulated industry.

Most of the regulatory authorities also have the disposal of the resources within the appropriated budget, but in Austria and Denmark the government and the regulatory authority control the budget in co-operation, and in Spain, the budget is entirely controlled by government. Thus, the general picture is that the regulatory authorities have considerable financial autonomy, but there are exceptions to the rule.

When it comes to the regulatory authorities' personnel policy, i.e. decisions regarding recruitment, promotion and salaries, only half the regulatory authorities can decide for themselves. In two countries, Luxembourg and Northern Ireland, the government is fully in charge, whereas in Denmark and Greece, the regulatory authority shares the competence with government. In these latter countries and in Austria, the government also has a say with regard to the regulatory authority's internal organisation (internal procedures, allocation of responsibility and tasks etc.), but the majority of the regulatory authorities are fully autonomous in this regard.

Tabel 4.5 Factors of financial and organisational autonomy

Number of countries (n=8)	The regulatory authority	The government and the regulatory authority in co-operation	The government
When the budget has been appropriated, who controls the budget?	5 (Greece, Ireland, Italy, Luxembourg, Northern Ireland)	2 (Austria, Denmark)	1 (Spain)
Who decides the regulatory authority's internal organisation (internal procedures, allocation of responsibility, tasks etc.)?	5 (Ireland, Italy, Luxembourg, Northern Ireland, Spain)	3 (Austria, Denmark, Greece)	0
Who is in charge of the regulatory authority's personnel policy (recruitment, promotion, salaries)	4 (Austria, Ireland, Italy, Spain)	2 (Denmark, Greece)	2 (Luxembourg, Northern Ireland)

The survey of the eight independent regulators shows that none of the factors of organisational and financial autonomy are regarded as necessary conditions for regulatory independence in all countries. Furthermore, as

shown in table 4.5 the independent regulators in the survey are given the highest degree of autonomy in relation to their internal organisation, whereas they are given the lowest degree of autonomy in relation to the personnel policy – a factor which according to the definitions of both Greve (2002) and Smith (1997) is one of the definitional characteristics of regulatory independence.

The regulatory authorities all have some obligations of accountability vis-à-vis the political authorities, but none of them are fully accountable to neither government nor parliament. In most cases, the obligations are limited to the presentation of an annual report for information either to the government, the parliament or both. In Ireland the annual report must be approved by government, and in Luxembourg the parliament must approve the annual report, and the obligations of the Spanish regulatory authority are more far-reaching. Here, the regulatory authority must present a forward activity plan annually and make progress reports to the ministry quarterly.

Another measure of accountability – or one might call it control with the decisions of the regulatory authorities – is the existence of an appeals mechanism. The appeals mechanism can take several forms. In most countries, decisions made by the regulatory authorities can be appealed and overturned by specialised bodies. However, in three countries, Austria, Greece and Ireland, the decisions can only be overturned by a court. Spain is the only country in which the decisions of the regulatory authority can be overturned by the ministry.

Summing up on the relationship between the regulatory authorities and the political authorities, the survey shows that only in two cases, Italy and Ireland, does the institutional design of the independent regulatory authorities live up to the conditions regarding financial and organisational autonomy stated in the definitions by Smith (1997) and Greve (2002). However, in most of the countries (perhaps with the exception of Spain), the independent regulatory authorities enjoy more financial, organisational and decisional autonomy than is normally granted to institutions within the traditional ministerial hierarchy. Thus, bearing the label »independent« is not completely without practical implications for the regulatory authorities, but the label is definitely no guarantee of full autonomy.

5 Independence Index

In this chapter, we will go on to construct an independence index weighting together different aspects of regulatory independence into a single measure. The main purpose of the construction of the index has been to establish an overview of the data material and the diversity of the organisational and institutional design of independent regulatory authorities. Thus, my claim is not that the index shows the ultimate truth about the degree of independence of each of the regulatory authorities, the index can at best give an indication. Arguably, some of the factors in the index are not as unambiguous as one might wish and how the different aspects should be weighted will always be debatable. What I hope to do with this index is to demonstrate how extensive the diversity in the design of regulatory authorities is, and how different countries appear to stress different aspects of independence in that design. I hope that the reader will keep this in mind, when looking at the resulting index.

5.1 Construction and calculation of the index

The index is inspired by Gilardi (2001) and constructed on the basis of the answers in the questionnaire. The questionnaire has five parts: an introductory part and four thematic sections each of which is designed to shed light on a particular aspect of regulatory independence (see also chapter 3 and appendix 1 and 2). In the introduction the questions regard the formal status, mission and overall organisation of the regulatory authority. The

purpose is mainly to get an overview of the organisational diversity of the regulatory authorities.

Section A deals with the formal independence from government and legislature and the questions mainly regard the procedures for appointment and dismissal of the commissioners or the director heading the authority.

Section B regards the independence from stakeholders, and the questions in this section are supposed to provide information on how and to what extent the relationship between the regulated parties and the regulatory authority is subject to formal regulation.

Section C regards the possibilities of independent decision-making of the regulatory authorities. This is operationalised in questions regarding their obligations regarding accountability, their competencies and the degree of irrefutability of the decisions made by the regulatory authorities.

Section D concerns the financial and organisational autonomy of the regulatory authorities.

In the index I have weighted the variables in each section together to construct four key variables (A, B, C and D). In all the thematic sections, I have excluded the questions regarding the respondents' own assessment of the degree of independence of the regulatory authority (i.e. questions 11, 16, 22 and 27) from the calculation of the index. The answers to these questions will be used in a discussion of the relationship between the theoretical concept of independence and its measurement and the perceived independence of the regulatory authorities.

In the calculation of the independence index, all answers have been given a value between 1 and 0, 1 being the answer indicating a high degree of independence and 0 indicating a low degree of independence. Where there are three possible answers I have accorded the answers the values 1, 0.5 and 0, and where there are four possible answers they have been accorded the values 1, 0.67, 0.33 and 0.¹⁰ Thus, when according values to non-binary answers, I have simply translated the ordinal scale into numerical values with no consideration of the possible differences in the size of the steps between the answers. The procedure is of course not flawless. In many cases one could easily argue that a qualitative judgement would lead to different values, but I have chosen to use the procedure in order to keep the index as simple and transparent as possible.

In section C, I have constructed a single variable out of the six items from question 17 regarding the competencies of the regulatory authority. The answers for each variable have been coded as the above (1, 0.67, 0.33, 0). The mean of values accorded to the six items is used as the regulatory authority's score on the competence variable (see also appendix 2).¹¹ The answers to question 18 regarding the tasks of giving policy advice, participating in international co-operation, providing market information and monitoring market behaviour are not included in the independence index.

5.2 Discussion of the resulting index

Table 5.1 below shows the index for each of the four thematic sections and the general independence index of the eight independent regulators in alphabetical order. The general independence index is shown in the last column to the right. It shows that the independent energy regulator in Italy has by far the highest independence index. After the Italian regulator follow first the Irish, then the Northern Irish, the Greek and the Austrian regulators. The three regulators with the lowest degree of independence as measured by the independence index are the Luxembourgian, Spanish and Danish regulators.¹²

Tabel 5.1 The independence index

<i>Country</i>	<i>A. Independence from government</i>	<i>B. Independence from stakeholders</i>	<i>C. Independent decision- making</i>	<i>D. Organisational autonomy</i>	Index	Rank
Austria	0.58	0.50	0.93	0.63	0.66	5
Denmark	0.44	0.33	0.87	0.63	0.57	8
Greece	0.78	0.33	0.92	0.75	0.69	4
Ireland	0.69	0.58	0.88	1.00	0.79	2
Italy	1.00	0.75	0.89	1.00	0.91	1
Luxembourg	0.42	0.63	0.58	0.75	0.59	6
Northern Ireland	0.44	1.00	0.88	0.63	0.74	3
Spain	0.61	0.58	0.36	0.75	0.58	7
Mean	0.62	0.59	0.79	0.77	0.69	-

If we turn to look at the index values, section A demonstrates a considerable variation between the countries regarding the independence from government. Three countries – Greece, Ireland and Italy have a score above the mean. Austria and Spain constitutes a middle group, whereas Denmark, Luxembourg and Northern Ireland have scores considerably below the mean.

Section B regarding the independence from stakeholders stands out as the section with the lowest mean (0.59) and the highest degree of dispersion (from 0.33 to 1.0). This could indicate that some governments and legislators – in line with political scientists like Greve (2002) and Gilardi (2001) – are more concerned with the formal status and the independence from government than with independence from stakeholders when designing regulatory institutions, whereas others – in line with the American tradition – take this aspect very seriously. The dispersion may also reflect the fact that different countries have different understandings of how the trade-off between expertise and knowledge on the one hand and independence and relational distance on the other hand should be made. For instance, the Austrian regulator sees the interaction with all stakeholders as a safeguard against regulatory capture because the information from and influence of the different stakeholders are balanced against each other. In Denmark, where the regulatory authority has a very low score on independence from stakeholders, there is a strong tradition of self-regulation and corporatist arrangements in the electricity sector, and a close corporation with industry is regarded as a necessity.¹³

Section C is the most complex measure of independence as it contains questions about the competence of the regulator, questions about accountability and irrefutability of decisions by government. In this section countries like Spain and Luxembourg stands out with a score which is considerable below the remaining countries.

The dispersion is lowest in section D regarding the financial and organisational autonomy of the regulatory authorities, and all regulators score between 0.63 and 1. These figures indicate that, in spite of many compromises, the actual possibility of acting independently is considered very important in most countries.

The index does not make the identification of any clear patterns easy. Some regulators (Denmark, Luxembourg and Spain) have a low score in practically all thematic sections and Italy has a high score in all thematic sections. Of the remaining cases, Northern Ireland is the most interesting case, because the Northern Irish regulator has the lowest score in section D and the highest score in section B where the mean is lowest. Thus, the Northern Irish regulatory design putting strong emphasis on independence from stakeholders seems to run counter to the general trends in the other European countries. However, on the basis of this survey, it is not possible to explain why.

Table 5.2 shows the respondents' own assessments of the independence of the regulatory authority in the four thematic sections. Unfortunately, not all the respondents have been willing or able to make such assessments and the respondents may of course have weighted the different aspects of independence in different ways. However, it is easy to see that in almost all cases, the respondents give a very positive assessment of the degree of independence, even if they have a very low score in the index.

The most striking examples are the assessments of the independence from stakeholders made by the Danish and Greek regulators. In both cases the respondents state that they consider the regulatory authority to be fully independent from stakeholder interests even though they score only 0.33 in the index. The Danish respondent notes that according to the law, the members of the board must be independent from the regulated parties, and the Greek respondent refers to prohibitions regarding the participation in companies of the energy sector provided for in the law 2773/1999. Apparently, the respondents find that these rules are sufficient to promote real independence regardless of the risk of regulatory capture by means of informal contacts and relational closeness.

Tabel 5.2 The respondents' own assessment of the degree of independence of the regulatory authorities

<i>Country</i>	<i>Assessment A</i>	<i>Assessment B</i>	<i>Assessment C</i>	<i>Assessment D</i>
Austria	9	7	8	9
Denmark	10	10	10	n/a
Greece	10	10	10	10
Ireland	10	10	10	10
Italy	9	10	10	10
Luxembourg	2	n/a	n/a	8
Northern Ireland	5 and 10 ¹	10	10	10 and 7 ²
Spain	n/a	n/a	n/a	n/a

1. 5 by appointment (a civil servant) and 10 by formal status.

2. Organisational = 10 and financial autonomy = 7.

Although the assessments made by the respondents from the Northern Irish, Luxembourgian and Austrian regulators are more in line with the assessment in the index, the general conclusion to be drawn from this comparison is that the respondents tend to give a more positive evaluation of the regulatory authorities than the index. There are at least two possible reasons for this to be the case. Firstly, some element of loyalty towards the regulatory authority is likely to influence the overall assessment of the independence of a presumably independent regulatory authority given by a member of the authority's own staff. And secondly, the perception of how and by which measures independence can be promoted may to some degree vary with national traditions, experiences and debates, so that the views of the respondents are much in accordance with those of legislatures and/or governments who decided on the institutional and organisational design of the regulatory authorities.

6 Conclusion

Empirically, the aim of the paper was to describe and compare the organisational and institutional design of independent regulators. The empirical investigation shows that the classical regulatory objectives on consumer protection and the creation of competition are formally stated as regulatory objectives in all countries. Market transparency and economic efficiency in the supply industry are objectives in all countries but one. These findings are in line with what could be expected taking the discussion of independent regulators into consideration, as these objectives are defining features of this type of organisation. However, it is more interesting that a socially responsible price policy is an objective in three countries. A result that deviates from the OECD report (OECD, 2001) stating that the regulatory authority in the UK is the only agency with that objective. Furthermore, six countries state to have explicit objectives concerning the environment. Thus, at this point the independent regulators in several cases hold conflicting objectives, which may even be contradictory at some points. In theory a clear division of roles has been recommended and seen as one of the reasons to create independent bodies in the first place. It has been argued that government may be tempted to try to address social problems of poverty through the price mechanism at the energy market. This is a problem as the investors in the liberalised market need to know the rules of the game and that they can have their costs covered in order to make investments attractive (Stern, 1997; Stern and Holder, 1998). Thus, the actual division of roles seems to be considerably less clear in the real world than recommended by theory. Rather than keeping the contradictory objectives apart they have been internalized in the regulatory body. This

could mean that the attempt to enhance trust in the liberalisation process by creating independent regulators in several cases has been compromised by the practical implementation.

Another striking feature is the deviations between the formal objectives and actual competencies of the regulatory authorities. Thus the most striking variation between the regulatory authorities in the eight countries is found in the competencies they actually possess. At one extreme the Luxembourgian regulator is not fully competent in any of the six regulatory issues investigated. Thus, this case does not meet the criteria of being a regulatory authority (Noll, 1985). At the other extreme, Ireland is fully competent in all six issues investigated. Thus, even if there is considerable similarity in the core objectives there is maximum variation in the means the regulators have to pursue. Thus, even if the creation of independent regulatory authorities lends legitimacy to market liberalisation the main emphasis in some cases has been on creating independent bodies rather than independent regulation. In other words, the regulatory power of the independent authorities can be very weak. This could either be because the regulatory competencies are located within the realm of other authorities, or because less regulation is undertaken.

An important point of similarity is found in the question of who is heading the regulatory authorities. 6-7 countries employ a commission type of regulator, whereas only one country holds an agency head as the sole responsible. The commissioners generally hold a multiplicity of skills within the realm of law, technical sciences and economics. In several cases university professors or other researchers are appointed commissioners as a means to create independence and expertise. Generally, they are appointed for fixed terms and protected against dismissal on political grounds. In all countries except Denmark other employment in government is prohibited.

Considering the relation between the independent authorities and the stakeholders the survey shows a mixed picture of how the arm's-length relationship is interpreted. No single model can be found. In half the countries employment in industry in the years preceding appointment is prohibited and in half of the countries there are restrictions on the possibility for regulators to accept positions in industry after the end of term. Also, in half of the countries it is prohibited to discuss pending cases with stake-

holders, either due to specific rules or due to general rules regarding good governance. The variation found is also reflected in the independence index in which the section regarding independence from stakeholders stands out as the section with the lowest mean and the highest degree of dispersion. This could indicate that some governments and legislators, in line with political scientists, have been more concerned with the formal status and the independence from government than with independence from industry when designing the regulatory institutions, whereas others, in line with the American tradition, take this aspect very seriously.

When it comes to accountability, the regulatory authorities generally have to present an annual report to parliament or government or both. In most countries, decisions made by the regulatory authorities can only be appealed and overturned by a specialised body (four countries) or by a court (three countries). However, in Spain, the decisions made by the regulatory authority can be overturned by the ministry to which the regulator must also present a forward activity plan annually and progress reports quarterly.

All the regulatory authorities are fully (six countries) or partly (two countries) financed by external sources such as a fee levied on the regulated industry, but only half of the regulatory authorities can decide their own personnel policy regarding recruitment, promotion, salaries etc. In Smith's definition of regulatory independence earmarked funding and exception from restrictive civil service salary rules are central attributes of the organisational autonomy necessary to underpin an arm's-length relationship (Smith, 1997). The survey shows that only in two cases, Italy and Ireland, these conditions are met. However, in most of the countries (with the exception of Spain), the independent regulatory authorities enjoy more financial, organisational and decisional autonomy than is normally granted to institutions within the traditional ministerial hierarchy.

In an overall view, the data indicate that the countries converge on certain points such as holding formal objectives considering consumer protecting, competition, economic efficiency and market transparency. Furthermore, the regulatory bodies are commissions in $\frac{3}{4}$ of the cases. The regulators share highly visible features regarding the appointment of regulators. These are being appointed for a fixed term, cannot be dismissed be-

fore the end of their term and are not allowed to hold other employment in government in the same period. They generally have limited obligations of accountability, and generally government cannot overturn their decisions. In sum, the regulatory authorities share a range of defining features, which holds a high signal value. However, the regulators show more variation when it comes to questions like the independence from stakeholders and actual competencies. These features are important in order to be able to regulate a market with monopolistic structures in the first place. Thus the establishment of regulators who are independent in name has not necessarily led to independent regulation in actual fact.

Methodologically the aim of the paper was to develop a comparative framework for the measurement of regulatory bodies. This has been accomplished developing a survey which compares the independence on four dimensions, e.g. from government and stakeholders, the independence of decision-making and the organisational autonomy. Thus, it is possible to measure institutions in a quantitative and comparative way. However, there are also limitations in this approach. First, the national context is difficult to grasp in the survey design. What is considered independent in the context of one country may be judged differently in another country. Second, the construction of scales and indexes in the survey has been based on simple addition of the different items. It could be considered to weigh the items differently on the basis of qualitative assessment of their relative importance, or to use multiplication in the construction of scales. Thus, this is a first step in developing quantifiable measures. However, it is possible to use it as a vantage point for further methodological refinements. Furthermore, it can be used to investigate institutional change over time if the survey is made in the same countries at a later point in time.

Theoretically, the aim of the paper was to inform the discussion on independent regulators. The survey shows very clearly that there is a considerable gap between the theoretical concepts of regulatory independence and the actual institutional design of independent regulators within the realm of the liberalised energy market. One implication of this is that there is a need to refocus the discussion on the independent regulators on their actual activities rather than on their theoretical form, in order to investigate the consequences of a muddled independence. One relevant question is

whether an independence riddled with compromise is better than no independence. Furthermore, it is relevant to ask if independence is a precondition for market liberalisation, or if an authority within the ministerial hierarchy could undertake the detailed regulation, while competition authorities could secure the competition in the cases where privatization is undertaken.

Further perspectives

In the analysis it has proven to be difficult to identify clear patterns in the mosaic of empirical results. Several possible explanations of the similarities and differences in the regulatory design can be suggested. Drawing on comparative politics one possible explanation of the variation between the countries could be the existence of distinct national policy styles (Vogel, 1986; Richardson, 1982). In this tradition it is expected that each nation regulates a new regulatory issue pretty much as it regulates everything else (Vogel and Kuhn, 1987). Thus, one would expect the regulatory design of independent electricity regulators to be very similar to that of independent regulators in other newly liberalised sectors such as the telecom sector or be similar to the regulation of monopolised sectors in general. A related argument is found in the concept of path dependency in historical institutionalism which states that the most important explanation of institutional design at one point in time is the institutional design in the past (Steinmo and Thelen, 1992; Krasner, 1984). Where the policy style argument suggests similarity across sectors within a national context, the path dependence suggests similarity across time within a specific sector. Drawing on sociological new institutionalism important explanations of tendencies to isomorphism originate from coercion, imitation or normative pressures (Di-maggio and Powell, 1991). These mechanisms are important in order to explain institutional change, but they can also be important in order to understand regional variation for instance if countries imitate the countries they compare themselves to. Differences regarding the energy sources and ownership structure of the national supply industries can also be expected to generate differences between the countries. Eventually, the specific bureaucratic and political decision-making processes leading to the establishment of independent regulatory authorities might resemble garbage can

decision-making processes in which specific actors, problems and solutions are linked largely at random (Cohen et al., 1972). In general, the chaotic element in the decision-making can be expected to lead to unexplainable variance between the countries.

A more thorough investigation of these hypotheses is outside the realm of the present working paper, as it demands thorough case studies of the political and administrative context as well as the bureaucratic and political decision-making processes in each country. However, these questions are relevant for further research. If conclusions from studies of independent regulatory authorities in other sectors hold for the energy sector it can be expected that functional as well as contextual factors are important in order to explain the actual regulatory design (see Thatcher, 2002).

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Appendix 1

The Questionnaire

28 February 2002
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J.no. 2479

Questionnaire on the Regulatory Independence of the Members of the Council of European Energy Regulators

Dear madam/dear sir

As part of my research on the regulation of the liberalised electricity market in Europe, I am currently making a survey of regulatory independence. Through the attached questionnaire, I hope to obtain valid information on how and to which degree your institution is independent.

The questionnaire has been sent to all members of the Council of European Energy Regulators and I believe that the representative from the Danish Energy Regulatory Authority, Jan Hansen, mentioned the questionnaire at the CEER meeting last week.

Please take the time to fill out the questionnaire and return it to: kj@akf.dk within two weeks. In case you need to qualify your answer, please feel free to add your comments directly in the questionnaire. If you have any questions, do not hesitate to contact me, by e-mail: kj@akf.dk or telephone: +45 33 11 03 00.

When I have received your answers the data will be analysed and a brief presentation of the results will be forwarded to you.

Thank you very much for your co-operation.

Kind regards

Katja Sander Johannsen

The respondent

What is your position with the regulatory authority? (please type)

Formal status, mission and responsibility

- 1) Which are the regulatory objectives of the regulatory authority (explicitly stated in the legislation or in a mission statement)? The regulatory authority works to promote (mark the right answers with an X):
 - a) consumer protection
 - b) economic efficiency in the supply industry
 - c) competition
 - d) market transparency
 - e) an environmentally friendly electricity supply
 - f) socially responsible price policies
 - g) security of supply
 - h) other issues/objectives:

- 2) Is the independence of the regulatory authority formally stated either in legislation or in the statute of the regulatory authority? (mark the right answer with an X)
 - a) yes
 - b) no

- 3) Who is responsible for the regulatory authority's decisions?
 - a) a board of commissioners (full time)
 - b) a board of commissioners (part time)
 - c) an agency head/a director
 - d) other:

- 4) What is the professional background of the current agency head/the commissioners?

A. Formal independence from government and legislature: Status of the regulatory authority

In the following I will ask a number of questions regarding the status of the person or the commission responsible for the regulatory authority's decisions. When you answer, please give the answer which is relevant for the *responsible* person(s).

- 5) What is the term of the agency head or the commissioners?
 - a) more than 7 years
 - b) 4 to 6 years
 - c) 1 to 3 years
 - d) no fixed term or at the appointer's discretion

- 6) Who appoints the agency head or the commissioners?
- a mix of the legislature and the executive
 - the legislature
 - the executive collectively
 - one or two ministers
- 7) What are the provisions regarding dismissal of the agency head or commissioners?
- dismissal is impossible
 - dismissal is only possible for reasons not related to policy
 - there are no specific provisions for dismissal
 - dismissal is possible at the appointer's discretion
- 8) May the agency head or the commissioners hold other offices in government?
- no
 - only with the permission of the executive
 - there are no specific provisions
 - yes
- 9) Is the appointment renewable?
- no
 - yes, once
 - yes, more than once
- 10) Is independence a formal requirement for the appointment?
- no
 - yes
- 11) On a scale from 1 to 10, how independent would you say that the head/board of the regulatory authority is by appointment and formal status? (1 being not independent and 10 being fully independent)

On which criteria do you base this judgement?

B. Independence from stakeholders

- 12) May commissioners/the agency head have held a position in the (public or private) electricity supply industry/industrial associations *in the years preceding* their/her appointment?
- no
 - yes, but not within the last two or more years prior to the appointment
 - yes
 - yes, and they can hold a position in industry during their term of office.

- 13) Are there provisions restricting the commissioners'/the agency head's possibilities of accepting a job in the electricity supply industry after their term?
- yes, regulators are not allowed to take positions in the regulated industry for several years after finishing their term
 - yes, regulators are not allowed to take positions in the regulated industry for up to a year after finishing their term
 - no
- 14) Are there provisions forbidding discussions of pending cases with stakeholders?
- yes, in the specific legislation regarding the regulator/the specific statute for the regulator
 - yes, in the general legislation regarding good governance
 - no
- 15) Are there any provisions forbidding that the agency head/commission members have any personal or pecuniary interest in the electricity sector?
- yes, both in relation to the appointment and in relation to the individual cases
 - yes, in relation to individual cases
 - no
- 16) On a scale from 1 to 10, how independent would you say that the regulatory authority is from stakeholder interests? (1 being not independent, 10 being fully independent)

On which criteria do you base your judgement?

C. Substantial independence from government and legislature: Competencies and independent decision-making

Questions 17 and 18 regard the competencies and tasks of the regulatory authority in relation to the electricity sector. These questions can be difficult to answer, as there are often exemptions to the rules, unresolved questions concerning overlapping competencies, differences between *de jure* competencies and *de facto* influences and tasks etc. However, I invite you to answer the questions to the best of your ability and, if required, add your comments about the premises and exemptions to the answer below.

- 17) Which competencies does the regulatory authority exercise in relation to the following tasks in relation to the *electricity sector*?

=> Approval or determination of the tariffs of monopolistic companies (ex ante or ex post)

- the regulatory authority is fully competent
- the regulatory authority shares decision-making power with another institution

- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

=> Network access

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

=> Licensing and modification of licenses

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

=> Laying down rules regarding terms of delivery (within the limits of the existent legislation)

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

=> Dispute settlement (between companies and between companies and their customers)

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role

d) the regulatory authority has no competencies

Comments:

=> Enforcement

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

18) Which of the following tasks does the regulatory authority perform?
(mark the relevant tasks with an X)

- a) giving policy advice to the government
- b) provision of market information to consumers (transparency)
- c) participation in international co-operation and policy-making
- d) monitoring of the market behaviour and performance

19) Which are the formal obligations of accountability of the regulatory authority vis-à-vis the government?

- a) none
- b) presentation of an annual report for information only
- c) presentation of an annual report for approval
- d) the agency is fully accountable

20) Which are the formal obligations of accountability of the regulatory authority vis-à-vis the legislature?

- a) none
- b) presentation of an annual report for information only
- c) presentation of an annual report for approval
- d) the agency is fully accountable

21) Who, other than a court, can overturn the regulatory authority's decision where it has exclusive competency?

- a) nobody
- b) a specialised body (e.g. a legal tribunal)
- c) the government, with qualifications
- d) the government, unconditionally

- 22) On a scale from 1 to 10, how independent would you say that the regulatory authority is in actual decision-making? (1 being not independent, 10 being fully independent)

On which criteria do you base your judgement?

D. Financial and organisational autonomy

- 23) Which is the source of the regulatory authority's budget?
- a) external funding (e.g. fee levied on regulated firms)
 - b) government and external funding (e.g. fee levied on regulated firms)
 - c) the government
- 24) When budget has been appropriated, who controls the budget?
- a) the regulatory authority
 - b) government and the regulatory authority in co-operation
 - c) the government
- 25) Who decides the regulatory authority's internal organisation (internal procedures, allocation of responsibility, tasks etc)?
- a) the regulatory authority
 - b) the regulatory authority and the government in co-operation
 - c) the government
- 26) Who is in charge of the regulatory authority's personnel policy (recruitment, promotion, salaries)?
- a) the regulatory authority
 - b) the regulatory authority and the government in co-operation
 - c) the government
- 27) On a scale from 1 to 10, how independent would you say that the regulatory authority is in terms of organisational and financial autonomy? (1 being not independent, 10 being fully independent)

On which criteria do you base your judgement?

If you have more specific comments or general remarks to the questions, please write them here:

Appendix 2

Documentation of the Data Set

In the following the text and questions of the questionnaire are reproduced and the respondents' answers are presented. Furthermore, the respondents' comments and my interpretations of ambiguous answers are discussed.

The respondent

What is your position with the regulatory authority? (please type)

Country	Position of the respondent
Austria	Not answered
Denmark	Two head of sections, one head of division, one commissioner
Greece	Chairman
Ireland	Manager – Consumer/Environmental Affairs, Independent regulatory body, established under legislation
Italy	External affairs
Luxembourg	Legal adviser affected to Energy Department and Frequencies Department in Telecommunications, revised by deputy Director
Northern Ireland	Economist
Spain	External relations coordinator

In the Danish case three staff members and a commissioner have been involved in answering the questionnaire. They have in most but not all cases agreed on the answers. Therefore, the answers stated here are the result of my interpretation based on the answers from the respondents and relevant legal documents etc.

Formal status, mission and responsibility

- 1) Which are the regulatory objectives of the regulatory authority (explicitly stated in the legislation or in a mission statement)? The regulatory authority works to promote (mark the right answers with an X):
 - a) consumer protection
 - b) economic efficiency in the supply industry
 - c) competition
 - d) market transparency
 - e) an environmentally friendly electricity supply
 - f) socially responsible price policies

- g) security of supply
- h) other issues/objectives:

The question has been answered as follows:

Which are the regulatory objectives of the regulatory authority (explicitly stated in the legislation or in a mission statement)? The regulatory authority works to promote:

Country	Consumer protection	Economic efficiency in the supply industry	Competition	Market transparency	An environmentally friendly electricity supply	Socially responsible price policies	Security of supply
Austria	x	x	x	x	x		x
Denmark	x	x	x	x			
Greece	x	x	x	x	x	x	x
Ireland	x	x	x	x	x	x	x
Italy	x	x	x	x	x	x	
Luxembourg	x		x	x			
Northern Ireland	x	x	x		x		x
Spain	x	x	x	x			x
Countries with the objective (n=8)	8	7	8	7	5	3	5

Answers to the open question (h):

Austria: Efficient networks.

Ireland: Not specified.

Italy: Quality standards.

In the Austrian case, I have interpreted the answer “efficient networks” to question h as equivalent to a positive answer to question b: economic efficiency in the supply industry.

2) Is the independence of the regulatory authority formally stated either in legislation or in the statute of the regulatory authority? (mark the right answer with an X)

- a) yes
- b) no

All 8 respondents have answered a) yes.

3) Who is responsible for the regulatory authority's decisions?

- a) a board of commissioners (full time)
- b) a board of commissioners (part time)
- c) an agency head/a director
- d) other:

Who is responsible for the regulatory authority's decisions?

Country	A board of commissioners (full time)	A board of commissioners (part time)	An agency head/a director
Austria	Most decisions		Some decisions
Denmark		x	
Greece	x		
Ireland	x		
Italy	x		
Luxembourg	x		
Northern Ireland			x
Spain	x		

4) What is the professional background of the current agency head/the commissioners?

Austria: Commissioners: 1 judge, 1 legal expert, 1 technician. Agency head: technician.

Denmark: There are no formal requirement regarding the professional background of the chairman, but the commissioners collectively must represent expert knowledge on consumer affairs as well as legal,

economical, technical, environmental and industrial expert knowledge. The current commissioners are administrators and scientists with special knowledge about the energy sector, law and economics.

Greece: Three university professors, 1 energy expert, 1 manager.

Ireland: Previous secretary general of the Government Department responsible for energy and transport

Italy: Pippo Ranci (President) - Professor of Economics at Milan's Università Cattolica, he has also taught at the Universities of Bergamo and Milan. One of the founders of the IRS (*Istituto per la Ricerca Sociale* - Social Research Institute) in Milan, he was its chairman from 1973 to 1982 and headed the Industrial Economics Research Unit until 1996. He was a consultant to the Ministry for Industry from 1974 to 1980 and to the Prime Minister's Office from 1992 to 1993. He has a degree in Economics from Milan's Università Cattolica and obtained an MA in Economics from Michigan University.

Giuseppe Ammassari (Member) – Director General for Industrial Production at the Ministry of Industry from 1988 to 1996, and Director General for Energy Resources at the same Ministry from 1975 to 1988. He has served on the executive committees of ENI and INA, and on the boards of IRI, Assitalia, and other smaller companies. He is a former professor of Economic Statistics at the universities of Rome, Bari and Cassino. He has a degree in Economics from Rome University.

Sergio Garribba (Member) – Director of the Energy Department at *ENEA* (*Ente Nazionale Energie Alternative* – National Agency for New Technologies, Energy and the Environment) from 1994 to 1996. He was Director for Energy Technologies, Research and Development at the OECD International Energy Agency, Paris, from 1987 to 1993 and Co-director (1974 to 1984) and Director of Research (1985 to 1987) at *IEFE* (*Istituto di economia delle fonti di energia* – Institute of Energy Resource Economics) at Milan's Bocconi University. He was Professor of Nuclear Power Systems at Milan's Politecnico and served as an associate researcher at the Massachusetts Institute of Technology from 1972 to

1973. He has degrees in Nuclear Engineering from the University of California (Berkeley) and Milan's Politecnico.

Luxembourg: Legal, technical and economical.

Northern Ireland: A career civil servant

Spain: Three different professional backgrounds: Legal, Technical and Economical.

**A. Formal independence from government and legislature:
Status of the regulatory authority**

In the following I will ask a number of questions regarding the status of the person or the commission responsible for the regulatory authority's decisions. When you answer, please give the answer which is relevant for the *responsible* person(s).

In the Austrian case, the answers relate to the Commission, who is responsible for most decisions.

- 5) What is the term of the agency head or the commissioners?
- a) more than 7 years
 - b) 4 to 6 years
 - c) 1 to 3 years
 - d) no fixed term or at the appointer's discretion

The wording of answer a) should of course have been "7 years or more", but luckily, this little mistake in the questionnaire does not seem to have caused any problems. The Italian respondent has chosen answer a) and noted "7 years only". To reflect the degree of independence, the answers have been coded as follows in the independence index: a=1, b=2/3, c=1/3, d=0. In the Irish case, the law provides for the appointment for a period of minimum 3 years and maximum 7 years. I have chosen to code this answer with the value 2/3 (i.e. 4 to 6 years).

<i>What is the term of the agency head or the commissioners?</i>	<i>Countries</i>
7 years or more	Italy
4 to 6 years	Austria, Denmark, Greece, Ireland, Luxembourg, Northern Ireland, Spain
1 to 3 years	none
no fixed term or at the appointer's discretion	none

- 6) Who appoints the agency head or the commissioners?
- a mix of the legislature and the executive
 - the legislature
 - the executive collectively
 - one or two ministers

To reflect the degree of independence, the answers have been coded as follows in the independence index: a=1, b=2/3, c=1/3, d=0. Although the Luxembourgian respondent has given the answer a) a mix of the legislature and the executive, I have coded the answer c=1/3 (=the executive collectively). This is due to the comment stating that the appointment is made by “the Grand-Duc via the government in council”. According to this comment, the legislature is not involved in the appointment.

<i>Who appoints the agency head or the commissioners?</i>	<i>Countries</i>
A mix of the legislature and the executive	Greece, Italy, Spain
The legislature	none
The executive collectively	Austria, Luxembourg
One or two ministers	Denmark, Ireland, Northern Ireland

- 7) What are the provisions regarding dismissal of the agency head or commissioners?
- dismissal is impossible
 - dismissal is only possible for reasons not related to policy
 - there are no specific provisions for dismissal
 - dismissal is possible at the appointer's discretion

To reflect the degree of independence, the answers have been coded as follows in the independence index: a=1, b=1, c=0,5, d=0. The answers a and b have been given the same value and are combined into a single category due to difficulties with the interpretation of the two categories. E.g. in the Italian case none of the two answers has been chosen, and in this case as well as in the Austrian case, it has been noted by the respondent that dismissal can occur due to conflicts of interest (incompatibility). Such a provision can be said to strengthen the independence rather than weakening it.

<i>What are the provisions regarding dismissal of the agency head or commissioners?</i>	<i>Countries</i>
Dismissal is impossible or only possible for reasons not related to policy	Austria, Denmark, Greece, Ireland, Italy, Luxembourg, Spain
There are no specific provisions for dismissal	none
Dismissal is possible at the appointer's discretion	Northern Ireland

- 8) May the agency head or the commissioners hold other offices in government?
- a) no
 - b) only with the permission of the executive
 - c) there are no specific provisions
 - d) yes

To reflect the degree of independence, the answers have been coded as follows in the independence index: a=1, b=2/3, c=1/3, d=0.

<i>May the agency head or the commissioners hold other offices in government?</i>	<i>Countries</i>
No	Austria, Greece, Ireland, Italy, Luxembourg, Northern Ireland, Spain
Only with the permission of the executive	none
There are no specific provisions	none
Yes	Denmark

The Northern Irish respondent notes that the agency head couldn't be independent, if he was a part-time civil servant and a statutory appointee.

9) Is the appointment renewable?

- a) no
- b) yes, once
- c) yes, more than once

<i>Is the appointment renewable?</i>	<i>Countries</i>
No	Greece, Italy
Yes, once	Ireland
Yes, more than once	Austria, Denmark, Luxembourg, Northern Ireland, Spain

To reflect the degree of independence, the answers have been coded as follows in the independence index: a=1, b=0.5, c=0.

10) Is independence a formal requirement for the appointment?

- a) no
- b) yes

Is independence a formal requirement for the appointment?

Yes	Austria, Denmark, Ireland, Italy, Northern Ireland
No	Greece, Luxembourg, Spain

To reflect the degree of independence, the answers have been coded as follows in the independence index: a=0, b=1.

11) On a scale from 1 to 10, how independent would you say that the head/board of the regulatory authority is by appointment and formal status? (1 being not independent and 10 being fully independent)

On which criteria do you base this judgement?

In the table below, the answers to the first question are noted in the column “Assessment”, whereas the answers to the second question are noted in the column “Comment”. The Northern Irish respondent has given two answers: one regarding the appointment (=5) and one regarding the formal status of the authority (=10). The Spanish respondent notes that he finds his opinion irrelevant to the attempt to make an objective assessment. The answers to this question are not included in the independence index.

<i>Country</i>	<i>Assessment</i>	<i>Comment</i>
Austria	9	Process of nomination, possibilities to overturn decisions, possibilities to give orders.
Denmark	10	The Energy Regulatory Authority is an independent committee which is not subject to instruction from the minister.
Greece	10	Commissioners are senior functionaries of the state and enjoy personal and functional independence. Exoneration is permitted only in case of condemnation for specific crimes.
Ireland	10	Act – independent of government influence. Report and advise in certain instances legislative backing to independence.
Italy	9	According to its instituting law (law n. 481/95) the Authority functions with full autonomy and independence of judgement <u>however within</u> the general policy guidelines laid down by the Government and Parliament and taking into due account the relevant European Union legislation. In its <i>Documento di Programmazione Economico-Finanziaria</i> (Three-year Economic and Financial Planning Document), the Government draws the Authority's attention to any developments concerning the public utilities that it would be in the country's general interest to promote.
Luxembourg	2	The Institute is according to the law independent, but what does this mean in practice? The Institute has limited powers in the Energy sector.
Northern Ireland	5 and 10	By formal status because independence is the role/environment by which he operates. By appointment he was/is a civil servant.
Spain	n/a	n/a

B. Independence from stakeholders

12) May commissioners/the agency head have held a position in the (public or private) electricity supply industry/industrial associations *in the years preceding* their/her appointment?

- a) no
- b) yes, but not within the last two or more years prior to the appointment
- c) yes
- d) yes, and they can hold a position in industry during their term of office.

To reflect the degree of independence, the answers have been coded as follows in the independence index: a=1, b=2/3, c=1/3, d=0. The Austrian respondent has chosen answer a) no, and he notes that although persons with a past employment in the regulated sector are not directly excluded from being commissioners, in practice it would be a case of “factual proximity” which leads to exclusion. The Italian respondent has noted that the question is “not specified in the instituting law”, which I would normally interpret as a c) yes. However, I have discussed the question with the Italian respondent and she confirms that the Italian case is very similar to the Austrian case. Therefore I have decided to interpret the Italian answer as a no (=1 in the independence index).

<i>May commissioners/the agency head have held a position in the (public or private) electricity supply industry/industrial associations in the years preceding their/her appointment?</i>	<i>Countries</i>
No	Austria, Italy, Luxembourg, Northern Ireland
Yes, but not within the last two or more years	none
Yes	Denmark, Greece, Ireland, Spain
Yes, and they can hold a position in industry during their term of office	none

13) Are there provisions restricting the commissioners'/the agency head's possibilities of accepting a job in the electricity supply industry after their term?

- a) yes, regulators are not allowed to take positions in the regulated industry for several years after finishing their term
- b) yes, regulators are not allowed to take positions in the regulated industry for up to a year after finishing their term
- c) no

<i>Are there provisions restricting the commissioners'/ the agency head's possibilities of accepting a job in the electricity supply industry after their term?</i>	<i>Countries</i>
Yes, regulators are not allowed to take positions in the regulated industry for several years after finishing their term	Italy, Northern Ireland, Spain
Yes, regulators are not allowed to take positions in the regulated industry for up to a year after finishing their term	Ireland
No	Austria, Denmark, Greece, Luxembourg

To reflect the degree of independence, the answers have been coded as follows in the independence index: a=1, b=0.5, c=0.

14) Are there provisions forbidding discussions of pending cases with stakeholders?

- a) yes, in the specific legislation regarding the regulator/the specific statute for the regulator
- b) yes, in the general legislation regarding good governance
- c) no

<i>Are there provisions forbidding discussions of pending cases with stakeholders?</i>	<i>Countries</i>
Yes, in the specific legislation regarding the regulator/the specific statute for the regulator	Northern Ireland
Yes, in the general legislation regarding good governance	Denmark, Ireland, Luxembourg
No	Austria, Greece, Italy, Spain

To reflect the degree of independence, the answers have been coded as follows in the independence index: a=1, b=0.5, c=0. The Austrian respondent argues that the discussion of pending cases does not

compromise the independence of the regulatory authority, rather it is a means to prevent regulatory capture. The Spanish respondent presents an argument much in the same line. The interpretation of the impact of stakeholder contacts on the independence of regulatory agencies is discussed in section xx.

15) Are there any provisions forbidding that the agency head/ commission members have any personal or pecuniary interest in the electricity sector?

- a) yes, both in relation to the appointment and in relation to the individual cases
- b) yes, in relation to individual cases
- c) no

<i>Are there any provisions forbidding that the agency head/commission members have any personal or pecuniary interest in the electricity sector?</i>	<i>Countries</i>
Yes, both in relation to the appointment and in relation to the individual cases	Austria, Greece, Ireland, Italy, Luxembourg, Northern Ireland, Spain
Yes, in relation to individual cases	Denmark
No	None

To reflect the degree of independence, the answers have been coded as follows: a=1, b=0.5, c=0. As in relation to question 12, the Austrian respondent refers to the concept of “factual proximity”. In the Danish Energy Regulatory Authority one commissioner has been declared disqualified in relation to numerous specific cases due to conflicts of interest/incompatibility. This commissioner has now decided to leave the Commission.

16) On a scale from 1 to 10, how independent would you say that the regulatory authority is from stakeholder interests? (1 being not independent, 10 being fully independent)

On which criteria do you base your judgement?

In the table below, the answers to the first question are noted in the column “Assessment”, whereas the answers to the second question are noted in the column “Comment”. The Luxembourgian and Spanish respondents have not answered the question. The Spanish respondent notes that he finds his opinion irrelevant to the attempt to make an objective assessment. The answers to this question are not included in the independence index.

<i>Country</i>	<i>Assessment</i>	<i>Comment</i>
Austria	7	Decisions are discussed with interest groups (industrialists, chambers,...) before final decision and follows recommendations – nevertheless this is part of the Austrian system to prevent regulatory capture (interest groups are part of an advisory council, which gets very detailed information).
Denmark	10	According to the Energy Supply Act § 79, 1., the Commissioners must be independent of the energy sector.
Greece	10	The law 2773/199 provides for prohibitions regarding the participation in companies of the energy sector.
Ireland	10	– Independent under legislation – Full consultation process with all stakeholders – In legislation, must treat all stakeholders equally
Italy	10	According to the provisions of the instituting law full independence is a stringent requirement for appointment; direct or indirect interests in regulated subjects (even consultancies are forbidden) are the only reason for dismissal from office of Commissioners; for 4 years after finishing their terms they may not maintain, either directly or indirectly, relationships of collaboration, consultancy or employment with firms operating in their specific sector and violation of this regulation shall be punished by a fine.
Luxembourg	n/a	n/a
Northern Ireland	10	Based on answers to Section B
Spain	n/a	n/a

C. Substantial independence from government and legislature: Competencies and independent decision-making

Questions 17 and 18 regard the competencies and tasks of the regulatory authority in relation to the electricity sector. These questions can be difficult to answer, as there are often exemptions

to the rules, unresolved questions concerning overlapping competencies, differences between *de jure* competencies and *de facto* influences and tasks etc. However, I invite you to answer the questions to the best of your ability and, if required, add your comments about the premises and exemptions to the answer below.

17) Which competencies does the regulatory authority exercise in relation to the following tasks in relation to the *electricity sector*?

=> Approval or determination of the tariffs of monopolistic companies (ex ante or ex post)

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

Greece: The regulatory Authority is fully competent on transmission tariffs and on natural gas distribution. The regulatory authority plays a consultative role on public service obligations, on receivable etc. on tariffs of electricity supply but not on transmission tariffs.

Italy: The Authority sets, ex ante, basic tariffs for the electricity and gas sectors; a price cap mechanism is to be used in tariff setting.

Luxembourg: The ministry receives the tariffs from the company, we make our advice and he takes the final decision (our advice isn't binding)

=> Network access

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role

d) the regulatory authority has no competencies

Comments:

Greece: The Regulatory Authority is fully competent on grid and power exchange code implementation. It plays a consultative role on approving the grid code and the power exchange code.

Italy: The liberalisation decrees of electricity and gas (Ministry of Industry: 16 march 1999, n° 79 for electricity and 23rd may 2000, n° 164 for gas) attributed the Authority all the main competencies in setting technical and economic conditions for network access; in some cases the regulator sets criteria and directives that have to be integrated in codes of conduct drafted by other institutional bodies (TSOs).

Luxembourg: The law is silent... But indirectly through the litigation role the Institute is concerned with the topic.

=> Licensing and modification of licenses

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

Austria: Agency is competent concerning balance group managers, regional executive is competent concerning network operators.

Denmark: Licenses are issued by the Danish Energy Agency.

Italy: The Authority makes observations and recommendations to Government and Parliament with regard to licenses or authorisations, and to the Ministry of Industry with regard to licensing, convention and authorisation schemes, and any changes to or renewal of the existing schemes.

Northern Ireland: Regulator can modify licences with the consent of licence holders.

=> Laying down rules regarding terms of delivery (within the limits of the existent legislation)

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

Austria: Concerns physical delivery by network operator but not delivery by supplier.

Denmark: The Energy Regulatory Authority can intervene in cases of unfair prices or terms of delivery.

Greece: The Regulatory Authority prepares the code of supply and submits it to the minister for approval.

Italy: Commercial and technical standards of supply in electricity and gas are set by the Authority. These include quality standards and contractual obligations in the client/supplier relationship. They are compulsory minimum standards for all suppliers and for the main one refunds are foreseen on case standards are not met. Specific regulation of continuity of service in electricity has been developed with the aim to enhance the general quality level all over the country in four years (i.e. diminishing North-South imbalances and rising the average national standard to the European level).

=> Dispute settlement (between companies and between companies and their customers)

- a) the regulatory authority is fully competent

- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

Austria: Shares competencies with civil courts.

Italy: The Authority handles out-of-court settlements and arbitrate in disputes between users or consumers and service providers.

Luxembourg: According to the law, we can make a decision, but we don't have the power to enforce it.

Northern Ireland: Cannot regulate in disputes between companies – answer b.

Between customers and company – answer a where legislation permits

Spain: CNE is fully competent in cases regarding third party access and in other cases, CNE can be chosen voluntarily by the involved parties as an independent referee to solve the dispute.

=> Enforcement

- a) the regulatory authority is fully competent
- b) the regulatory authority shares decision-making power with another institution
- c) the regulatory authority plays a consultative role
- d) the regulatory authority has no competencies

Comments:

Denmark: The Energy Regulatory Authority can impose fines, if the instructions of the Authority are not followed.

Italy: The Authority has the power to enforce its provisions by:
– requesting information and documents from interested parties;

- carrying out inspections and controls;
- levying fines (from 26.000 to 155.000 euro) on the service operator for infringing the rules laid down by the Authority or refusing to provide information or permit inspections when requested to do so, or in cases where the information or documentation received is false;
- suspending the activity of the enterprise for up to 6 or proposing the suspension or invalidation of the concession to the Minister responsible in cases of repeated violation;
- ordering the party operating the service to cease behaviour which is detrimental to the rights of users and oblige the party to pay compensation.

Luxembourg: Sometimes the Institute can take decisions regarding the collection of information. Here the Institute has the power to execute and the Law foresees some sanctions.

Northern Ireland: Is true where legislation permits.

Spain: As in previous issues the administration may consult the CNE.

In the table below, each of the six competencies mentioned has been given a separate variable name (Tariffs, Network access, Licensing, Terms of delivery, Disputes, Enforcement) and each of these variables have been coded so as to reflect the degree of independence, i.e.: a=4, b=3, c=2, d=1.

In the calculation of the independence index, I use the competencies index in the last column of the table. The answers for each variable has been re-coded to values between 1 and 0, i.e. a=1, b= 0.67, c=0.33 and d= 0. The values of the competencies index are equal to the mean of all these six re-coded variables.

Which competencies does the regulatory authority exercise in relation to the following tasks in relation to the electricity sector?

Country	Tariffs	Network access	Licensing	Terms of delivery	Disputes	Enforcement	Competencies index
Austria	4	4	3	4	3	1	72
Denmark	4	4	1	4	4	4	83
Greece	2 or 4	4	2	2	4	4	67
Ireland	4	4	4	4	4	4	100
Italy	4	4	2	4	4	4	89
Luxembourg	2	2	1	1	2	1	17
Northern Ireland	3	3	4	4	3 or 4	4	86
Spain	2	4	2	2	3	1	39

It should be evident from the above, that the delimitation of competencies is often very complex and that the answers to question are accompanied by many comments. Below I give an account of how I have interpreted the most ambiguous answers:

In the Northern Irish case, the regulatory authority has exclusive powers (=a) in relation to disputes between customers and companies but only shared powers (=b) in relation to disputes between companies. I have coded this $(1+2/3)/2=0.83$ in the calculation of the competencies index.¹

In the case of the regulatory authority in Luxembourg, I have decided to use the respondents own answers although the comments suggest that in some cases the regulatory authority has more extensive powers.

In the Spanish case, the regulatory commission is fully competent in disputes regarding third party access, whereas in all other cases the conflicting parties can voluntarily chose to use the regulatory authority as an independent referee and when they do so, the CNE's decisions are binding. I have coded this answer 3 (=2/3 in the competencies index),

¹ The ranking of the countries in the final independence index does not change no matter if this value or one of the two alternative values, 1 and 2/3, is used.

corresponding to c) the regulatory authority shares decision-making power with another institution.²

In the Greek case, the Authority is fully competent in relation to certain questions and plays only a consultative role in relation to others questions regarding both tariffs and network access. In the competencies index I have coded these answers 2/3.

18) Which of the following tasks does the regulatory authority perform?

(mark the relevant tasks with an X)

- a) giving policy advice to the government
- b) provision of market information to consumers (transparency)
- c) participation in international co-operation and policy-making
- d) monitoring of the market behaviour and performance

The table below shows the answers for each task (a=Policy advice, b=Market information, c= International co-operation, d=Monitoring). This question is not included in the independence index.

Country	Policy advice	Market information	International cooperation	Monitoring
Austria		x	x	x
Denmark	x	x	x	x
Greece	x		x	x
Ireland	x	x	x	x
Italy	x	x	x	x
Luxembourg				x
Northern Ireland	x	x		
Spain	x	x	x	x
Countries with the task (n=8)	6	6	6	7

² This is a fairly generous interpretation of the answer. One could also interpret the answer as a c) the regulatory authority plays a consultative role, corresponding to 1/3 in the independence index. However, the ranking of the countries in the final independence index does not change if this value is used instead.

- 19) Which are the formal obligations of accountability of the regulatory authority vis-à-vis the government?
- a) none
 - b) presentation of an annual report for information only
 - c) presentation of an annual report for approval
 - d) the agency is fully accountable

One of the answers, answer d) the agency is fully accountable should of course have had the wording “the regulatory authority is fully accountable”. The error in the questionnaire has caused some confusion: The Austrian respondent has answered that the agency, but not the Commission, is fully accountable. By correspondence with Mr. Johannes Mayer from the Austrian regulatory authority, I have been informed that the Commission has no obligations of accountability vis-à-vis the government. Thus, I have coded the answer from the Austrian regulator as a 4.

In a comment to his answer, the Spanish respondent refers directly to the draft budget which must be approved first by the government and then by Parliament, with no mentioning of an annual report. When I discussed the matter with the respondent it became clear that the Commission also has to present a forward activity plan and deliver a progress reports to the ministry quarterly. Thus, the obligations of accountability of the Commission are quite far reaching. Nevertheless I have not interpreted this as if the Commission is fully accountable.

In the independence index, the answers have been coded as follows to reflect the degree of independence: a)=1, b)=1 c)=0.5 and d=0. The reason why answer a) and answer b) are both coded 1 is that the presentation of an annual report for information only, does not normally reduce the independence of the regulatory authorities substantially. Instead, the annual report may be seen as an occasion to express the opinions of the authority in a systematic way.

The answers to this question are reported in the table below (under question 20). In the table the answers are coded as follows: a)= 4, b)=3, c)=2, d)=1.

20) Which are the formal obligations of accountability of the regulatory authority vis-à-vis the legislature?

- a) none
- b) presentation of an annual report for information only
- c) presentation of an annual report for approval
- d) the agency is fully accountable

In the independence index, the answers have been coded as follows to reflect the degree of independence: a)=1, b)=1 c)=0.5 and d)=0. The reason why answer a) and answer b) are both coded 1 is that the presentation of an annual report for information only, does not normally reduce the independence of the regulatory authorities substantially. Instead, the annual report may be seen as an occasion to express the opinions of the authority in a systematic way.³ However, in the table below the answers are coded as follows: a)= 4, b)=3, c)=2, d)=1, in order to reproduce the answers of the respondents directly.

Which are the formal obligations of accountability of the regulatory authority vis-à-vis:

<i>Country</i>	<i>The government</i>	<i>The legislature</i>
Austria	4	3
Denmark	3	4
Greece	4	3
Ireland	2	4
Italy	3	3
Luxembourg	3	2
Northern Ireland	3	3
Spain	2	2

³ The ranking of the countries in the independence index, would not change if the values a)=1, b)=2/3, c)=1/3, d)=0 were used instead.

- 21) Who, other than a court, can overturn the regulatory authority's decision where it has exclusive competency?
- a) nobody
 - b) a specialised body (e.g. a legal tribunal)
 - c) the government, with qualifications
 - d) the government, unconditionally

In the independence index the answers have been coded as follows in order to reflect the degree of independence: a)=1, b=2/3, c=1/3 and d=0. The Spanish respondent indicates that a specialised body *and* the government without qualifications can overturn the regulatory authorities' decisions. This has been coded as 0 in the independence index, corresponding to answer d) the government, unconditionally.

<i>Who other than a court can overturn the decisions of the regulatory authority where it has exclusive competencies?</i>	<i>Countries</i>
Nobody	Austria, Greece, Ireland
A specialised body	Denmark, Italy, Luxembourg, Northern Ireland, Spain
The government, with qualifications	none
The government, unconditionally	Spain

- 22) On a scale from 1 to 10, how independent would you say that the regulatory authority is in actual decision-making? (1 being not independent, 10 being fully independent)

On which criteria do you base your judgement?

In the table below, the answers to the first question are noted in the column "Assessment", whereas the answers to the second question are noted in the column "Comment". The Luxembourgian and Spanish respondents have not answered the question. The answers to this question are not included in the independence index.

<i>Country</i>	<i>Assessment</i>	<i>Comment</i>
Austria	8	Possibilities to influence the decision by government, regulated companies, interest groups, media...
Denmark	10	The commissioners must be independent from the parties in the energy sector.
Greece	10	The decisions of the authority are based only on objective criteria.
Ireland	10	See above
Italy	10	According to the law the Authority is fully independent in its decision-making process; the Authority has however defined a procedure for written and oral consultation processes before taking decisions of general interests. All interested parties, consumer and environmental associations, industrial consumers, trade unions, local institutions and regulated subjects are normally invited to provide comments and observations to consultation documents and to participate to public hearings.
Luxembourg	n/a	n/a
Northern Ireland	10	Based on answers to section C
Spain	n/a	n/a

D. Financial and organisational autonomy

23) Which is the source of the regulatory authority's budget?

- a) external funding (e.g. fee levied on regulated firms)
- b) government and external funding (e.g. fee levied on regulated firms)
- c) the government

To reflect the degree of independence the answers have been coded as follows in the independence index: a)=1, b)=0.5, c)=0.

<i>Which is the source of the regulatory authority's budget?</i>	<i>Countries</i>
External funding (e.g. fee levied on regulated firms)	Denmark, Greece, Ireland, Italy, Luxembourg, Spain
The government and external funding	Austria, Northern Ireland
The government	None

24) When budget has been appropriated, who controls the budget?

- a) the regulatory authority
- b) government and the regulatory authority in co-operation
- c) the government

To reflect the degree of independence the answers have been coded as follows in the independence index: a)=1, b)=0.5, c)=0. The Italian respondent has not chosen one of the suggested answers. Instead she has noted that the State Audit Court controls the accounts and budgets of all the administration in Italy. However, what I am particularly interested in is who decides how to spent the money within the budget, and the Italian respondent has confirmed that in Italy such decisions are taken by the regulatory authority autonomously (answer a)=1 in the independence index).

<i>When budget has been appropriated, who controls the budget?</i>	<i>Countries</i>
The regulatory authority	Greece, Ireland, Italy, Luxembourg, Northern Ireland
The government and the regulatory authority in co-operation	Austria, Denmark
The government	Spain

25) Who decides the regulatory authority's internal organisation (internal procedures, allocation of responsibility, tasks etc)?

- a) the regulatory authority
- b) the regulatory authority and the government in co-operation
- c) the government

To reflect the degree of independence the answers have been coded as follows in the independence index: a)=1, b)=0.5, c)=0.

<i>Who decides the regulatory authority's internal organisation (internal procedures, allocation of responsibility, tasks etc)?</i>	<i>Countries</i>
The regulatory authority	Ireland, Italy, Luxembourg, Northern Ireland, Spain
The government and the regulatory authority in co-operation	Austria, Denmark, Greece
The government	none

26) Who is in charge of the regulatory authority's personnel policy (recruitment, promotion, salaries)?

- a) the regulatory authority
- b) the regulatory authority and the government in co-operation
- c) the government

To reflect the degree of independence the answers have been coded as follows in the independence index: a)=1, b)=0.5, c)=0.

<i>Who is in charge of the regulatory authority's personnel policy (recruitment, promotion, salaries)?</i>	<i>Countries</i>
The regulatory authority	Austria, Ireland, Italy, Spain
The government and the regulatory authority in co-operation	Denmark, Greece
The government	Luxembourg, Northern Ireland

27) On a scale from 1 to 10, how independent would you say that the regulatory authority is in terms of organisational and financial autonomy? (1 being not independent, 10 being fully independent)

On which criteria do you base your judgement?

In the table below, the answers to the first question are noted in the column "Assessment", whereas the answers to the second question are noted in the column "Comment". The Danish and Spanish respondents have not answered the question. The answers to this question are not included in the independence index. The Northern Irish respondent has

given two answers: one regarding the organisational autonomy (=10) and one regarding the financial autonomy (=7) of the regulatory authority.

<i>Country</i>	<i>Assessment</i>	<i>Comment</i>
Austria	9	Only appointment of management has to get approval of government (i.e. owner of the agency)
Denmark	n/a	The question cannot be answered now as the future organization of the Regulatory Authority's secretariat is not yet determined
Greece	10	The Law 2773/1999 provides for administrative independence in the Authority
Ireland	10	n/a
Italy	10	The Regulatory Authority, according to law, sets its own rules for financing, organisation, personnel and administration
Luxembourg	8	n/a
Northern Ireland	10 and 7	Based on answers to Section D
Spain	n/a	n/a

Sammenfatning

Uafhængige reguleringsmyndigheder i teori og praksis

Katja Sander Johannsen, Februar 2003

Denne rapport beskriver og analyserer oprettelsen og udviklingen af uafhængige reguleringsmyndigheder, som har til formål at regulere de liberaliserede elmarkeder. I EU-regulativerne om oprettelsen af et fælles energimarked er det et afgørende krav, at reguleringsmyndighederne er uafhængige af de kommercielle interesser i sektoren (96/92/EEC).

Det har i Danmark betydet at energiselskaberne ikke længere kan have sæde i de regulerende organer, som det ellers har været tilfældet under de tidligere korporatistiske strukturer. I andre medlemslande – som for eksempel Frankrig – som tidligere var domineret af statsejede monopoler, betyder liberaliseringen, at der må ske en klar adskillelse af staten som regulerende myndighed og staten som ejer af offentlige forsyningsvirksomheder, enten gennem privatisering, gennem etableringen af uafhængige reguleringsmyndigheder eller evt. begge dele. I EU-direktivet er oprettelsen af sektorspecifikke uafhængige reguleringsmyndigheder imidlertid ikke et krav, men det er påfaldende, at alle andre lande end Tyskland har sådanne organer.

Der er tre hovedformål med rapporten. For det første er det empiriske formål at beskrive og sammenligne forholdsvis detaljeret information om de eksisterende uafhængige reguleringsmyndigheders formelle rammer med henblik på at kunne beskrive forskelle og ligheder. For det andet er

det metodiske formål at udvikle et analyseredskab, som kan anvendes til at måle og vurdere udformningen af de uafhængige reguleringsmyndigheder. For det tredje er det teoretiske formål at informere den teoretiske diskussion om uafhængige reguleringsmyndigheder med analyser af, hvordan disse faktisk er udformet inden for energiområdet.

Den empiriske undersøgelse er baseret på en spørgeskemaundersøgelse med otte uafhængige reguleringsmyndigheder. Undersøgelsens population har været medlemmerne af CEER – som er sammenslutningen af uafhængige energireguleringsmyndigheder i Europa. Det er dog kun otte af rådets 16 medlemmer, der har svaret. De deltagende lande er således: Østrig, Danmark, Grækenland, Irland, Italien, Luxembourg, Nordirland og Spanien. Data er blevet indsamlet ved hjælp af e-mail. I spørgeskemaet lægges der vægt på den formelle og organisatoriske uafhængighed, mens der ikke findes data om faktiske beslutningsgange, eller hvordan uafhængigheden udspiller sig i praksis.

Den teoretiske litteratur om reguleringsmæssig uafhængighed omfatter hovedsageligt normative tilgange, som generelt anbefaler anvendelsen af uafhængige regulatorer og rationelle tilgange, som søger at specificere, hvorfor og under hvilke omstændigheder politikere kan formodes at uddelegere beslutningskompetence til uafhængige regulatorer. Det sidste spørgsmål er blevet analyseret ud fra to forskellige perspektiver: Det første perspektiv er normativt for så vidt, at forfatterne ud fra et samfundsmæssigt synspunkt søger at vurdere, hvorvidt uafhængige regulatorer er en hensigtsmæssig konstruktion. Det andet perspektiv trækker på indsigter fra rational choice og principal-agent teori. Her er det centrale spørgsmål, hvorfor og under hvilke omstændigheder det kan være i lovgivernes egeninteresse at uddelegere magt til uafhængige reguleringsmyndigheder. Mens oprettelsen af uafhængige regulatorer af nogle forfattere forsvares som en nødvendig betingelse for realiseringen af en troværdig liberalisering og privatiseringsproces (Majone, 1996), er der andre, som er af den opfattelse, at myndighedernes uafhængighed gør regulatorerne for magtfulde og skader demokratiet og de folkevalgtes kontrol med området (Graham, 1998). De uafhængige reguleringsmyndigheder, der er rettet mod en enkelt sektor, kritiseres nogle gange for at være særligt sårbare i forhold til at komme i lommen på dem, de som udgangspunkt er sat til at

regulere (Mitnick, 1980), mens der er andre, som mener, at de er mere velegnede til at overvinde problemstillinger om asymmetrisk information mellem regulator og den regulerede branche end almindelige reguleringsorganer (Gonenc, Maher og Nicoletti, 2000). Endelig er der andre, der anfører, at lovgiverne delegerer reguleringsmæssig kompetence til uafhængige reguleringsmyndigheder, fordi de på denne måde faktisk kan maksimere deres egen indflydelse i situationer, hvor der findes stor usikkerhed, begrænsede tidsmæssige ressourcer etc. (Horn, 1995; Moe, 1990). Hvorvidt reguleringsmæssig uafhængighed er fordelagtig eller problematisk, og hvorfor uafhængige regulatorer har vundet stigende udbredelse, er således stadig et omdiskuteret spørgsmål.

Undersøgelsen peger på en række interessante forhold. For det første giver kortlægningen af målsætninger, kompetencer og opgaver en indikation på den variation, der findes i de uafhængige reguleringsmyndigheders rolle inden for elmarkederne i de europæiske lande. Selv om de uafhængige reguleringsmyndigheders hovedformål er den økonomiske og prismæssige regulering, forventes mere end halvdelen af dem også at varetage sociale og/eller miljømæssige målsætninger. Desuden varierer antallet af områder, inden for hvilke regulatorerne er fuldt kompetente fra seks ud af seks mulige (Irland) til nul ud af seks (Luxemborg). For det andet er der fem ud af otte lande, hvor uafhængighed er et formelt krav ved udnævnelsen af regulatorer, og i syv ud af otte lande må regulatoren ikke have andre embeder, mens han besidder posten. Danmark er undtagelsen fra reglen til trods for de formelle krav om uafhængighed. For det tredje viser undersøgelsen af regler angående forholdet mellem uafhængige reguleringsmyndigheder og den regulerede branche et broget billede af, hvordan princippet om, at der skal reguleres med en arms længdes afstand mellem de to parter, udspiller sig i praksis. Der er tydeligvis ikke en enkelt opskrift, som alle landene følger. For det fjerde viser undersøgelsen af forholdet mellem den uafhængige reguleringsmyndighed og de politiske myndigheder, at det institutionelle design kun i to tilfælde – Italien og Irland – lever op til de betingelser omkring økonomisk og organisatorisk autonomi, som indgår i Smiths (1997) og Greves (2002) definitioner af uafhængighed. I de fleste lande (bortset fra Spanien) har de uafhængige reguleringsmyndigheder dog større finansiel, organisatorisk og beslut-

ningsmæssig autonomi end institutioner inden for det ministerielle hierarki almindeligvis besidder. Betegnelsen "uafhængig" er derfor ikke fuldstændig uden praktiske implikationer for de regulerende myndigheder, men det er absolut heller ikke en garanti for en fuldstændig uafhængighed.

Landenes placering på uafhængighedsindekset analyseres ligeledes. Indekset indeholder fire dimensioner. 1) Uafhængighed af regulatorerne fra regeringen, 2) uafhængighed fra interessenter, 3) uafhængighed i beslutningsprocessen og 4) organisatorisk uafhængighed. Målt på disse fire dimensioner viser den italienske reguleringsmyndighed sig at være den organisation, som har den største grad af uafhængighed, mens Irland og Nordirland placerer sig på anden- og tredjepladsen. Grækenland og Østrig udgør en mellemgruppe, og Luxembourg, Spanien og Danmark er de lande, der scorer lavest på indekset. Der må dog tages et betydeligt forbehold for denne rangordning, da der findes en betydelig variation på hver af de fire dimensioner. Desuden medtages forhold som den administrative og politiske kultur ikke i analysen. Da konteksten er af stor vigtighed for at kunne tolke betydningen af specifikke formelle kriterier, betyder dette, at den målte uafhængighed meget vel kan afvige fra de faktiske arbejdsforhold i organisationerne. For eksempel kan behovet for at specificere formelle målsætninger være større i lande, hvor der er problemer med korruption og mangelfuld implementering.

Samlet set peger undersøgelsen på, at landene ligner hinanden betydeligt med hensyn til forhold som, hvorvidt reguleringsmyndighedernes målsætninger omfatter forbrugerbeskyttelse, konkurrence, økonomisk effektivitet og markedets gennemsigtighed. Desuden er $\frac{3}{4}$ af reguleringsmyndighederne organiseret som kommissioner, hvor medlemmerne ikke indgår i almindelige ansættelsesforhold, men er udpeget til posten og træffer kollektive beslutninger. Selv om der er store ligheder med hensyn til de fundamentale målsætninger, er der maksimal variation med hensyn til, hvilke midler myndighederne har til rådighed. Selv om oprettelsen af uafhængige reguleringsmyndigheder legitimerer liberaliseringsprocessen, ligger hovedvægten i en del tilfælde på at skabe uafhængige regulerende organer frem for på at skabe uafhængig regulering. Med andre ord så kan de bemyndigelser, de uafhængige reguleringsmyndigheder har, være me-

get begrænsede, enten fordi de reguleringsmæssige kompetencer findes inden for andre organer, eller fordi de reguleringsmæssige aktiviteter ikke er særligt omfattende.

Regulatorerne deler også en række fællestræk med hensyn til reglerne for udpegelse af regulatorer. Disse udpeges for en tidsafgrænset periode, de kan ikke afsættes, før perioden er slut, og de kan ikke have andre embeder i den samme periode. Generelt er de kun i begrænset omfang underlagt demokratisk kontrol fra de folkevalgte forsamlinger, og generelt kan deres beslutninger ikke omstødes af regeringen. Alt i alt deler reguleringsmyndighederne således en række karakteristika, som har en stor symbolsk betydning, mens der er betydelig større variation med hensyn til uafhængigheden fra interessenter og med hensyn til deres faktiske kompetencer. Disse forhold er imidlertid som udgangspunkt af stor betydning i forhold til at regulere et marked med monopollignende strukturer. Derfor betyder uafhængighed af navn ikke nødvendigvis, at der er tale om uafhængighed af gavn.

Noter

1. The thesis that policy-makers delegate to independent regulators in order to increase policy credibility is generally regarded as falling within rationalist explanations, since it represents a functionalist explanation of delegation. However, in my view, the argument as presented by Majone can be seen in two ways: On the one hand, it is a description of the motivation of rational decision-makers delegating authority to independent regulators. On the other hand, Majone also provides a normative argument for the independent regulators versus traditional regulatory bodies, when pointing out the necessity of independent regulators in liberalisation processes.
2. Whether the term »cost« is always reasonable is debatable. In any case, in Horn's use of the term, cost is a very broad concept which has as its primary function to illustrate that there are trade-offs between different factors of value to the legislature when they choose how much power they delegate and to which kind of agent. What Horn calls cost is very often costs in terms of loss of control, i.e. it is often about risk.
3. This is in line with Kantian thinking according to which »...to be fully autonomous is equivalent to being a fully rational agent. To be a fully rational agent is to be motivated by purely rational principles, which are untainted by particular inclinations or interests. Such purity requires that one acts only on principles one is prepared to universalise in a strong sense« (Lindley, 1986:20).
4. The capture theory of regulation emphasises the role of interest groups, and in particular the regulated industry, in the formation of a regulatory policy. An important point is that the regulated parties may use the asymmetric distribution of information to manipulate the regulator to act in their interest. Therefore, regulators may end up pursuing the interests of the regulated industry instead of social objectives.
5. The member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States of America.
6. The regulators represent the following countries: Austria, Belgium, Denmark, Finland, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, Northern Ireland, Norway, Portugal, Spain, Sweden and the United Kingdom.
7. Gilardi uses this index to compare the British and the Italian regulators in the field of energy and pharmaceuticals in order to test the »credibility thesis«. The thesis is that policy-makers delegate more powers to more independent regulators when their need for credibility is high, i.e. in complex regulatory fields, and when the policy stability is low. Gilardi's results do not support this thesis.
8. See also appendix 2 for a full report of the answers.

9. In the Irish case, the law provides for the appointment of one or more commissioners. When there is only one commissioner (as is the case at present in Ireland) he or she may hold office full-time for a period of not less than three and not more than seven years. The Italian regulator is appointed for seven years.
10. In three cases, questions 7, 19 and 20, I have given the first two answers the same value (the value 1) due to problems with the interpretation of the difference between the two categories. See also the more extensive comment in appendix 1.
11. The extension of the competencies is of course very important to the regulatory authority's capability to make independent decisions on each of the regulatory issues. However, limited powers can also be seen as a factor which influences the independence of a regulatory authority *not only* in relation to the issues where it has no powers, *but also* in relation to the issues where it has exclusive powers, because limited powers, whether exclusive in a limited field or shared in a broader field, can make it very difficult to pursue regulatory objectives in a complex regulatory field with many strongly related regulatory issues. Therefore, it could be argued that instead of adding the competencies index, the index of section C should be multiplied by the value of the competencies index. When one does so, the ranking of the top five independent regulators does not change, whereas the bottom three change places. With this calculation, the Danish regulator being the one with the lowest independence index moves up to be number 6, Spain stays number 7 and Luxembourg moves from its place as number 6 to the bottom. These changes are only minor. Hence the simple addition is used in the final index and analysis.
12. As mentioned above, the ranking of the top five countries is not changed when the competencies variable is given more weight by multiplying the index for independent decision-making with competencies variable. Only the ranking bottom three countries are affected, making the Danish regulator number six and the Luxembourgian regulator number eight. The Spanish regulator stays number seven. In a few cases, I have found the translation of the answers into a numeric value particularly difficult. This has been the case in relation to the construction of the competencies variable (see remarks regarding question 17 in appendix 2) and in relation to the variables for accountability (see remarks to questions 19 and 20 in appendix 2). In these cases I have tested whether the possible alternative interpretations of the answers would change the ranking of the regulators in the independence index. In all cases, the ranking remained the same.
13. Furthermore, it may be difficult to change the institutional set-up drastically without draining the system of expertise. The Danish case may serve as an example: Even if the former electricity price committee with corporatist interest representation has been replaced by a formally independent regulatory authority, both the chairman and a large part of the authority's staff have not been replaced.