

# Independent regulatory authorities in European electricity markets

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## Abstract

Liberalisation of the electricity market has taken place in most European countries within the last decade. It is considered a precondition of successful liberalisation to establish so-called independent regulatory authorities. In this article, we compare the status and practice of them in 16 European countries, and discuss the relationship between the organisation of the regulation and the market outcome.

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## 1. Introduction

In recent years, the European markets for electricity have been undergoing large changes due to the European Union's decision to create an internal market for electricity through the gradual opening of national electricity markets. The purpose of this article is to discuss an important aspect of this liberalisation process, namely the establishment and development of regulatory authorities with independent powers.

In the European Directive from 1996 charting the course of the liberalisation of European electricity markets, very little was said about regulatory authorities.<sup>1</sup> In 2003, the European Council and Parliament issued a new directive on the common market for electricity, repealing the directive from 1996. This directive explicitly requires the establishment of inde-

pendent regulatory authorities<sup>2</sup> with a certain set of competences. This has been followed by the formal establishment of a European Regulators Group for Electricity and Gas to work in close cooperation with the European Commission (see [European Parliament and Council, 2003](#); [European Commission, 2003](#)). These regulatory agencies play an important role in the implementation of the directive and the establishment and development of a competitive European electricity market.

In addition, the proliferation of independent regulatory authorities (or agencies) is a phenomenon that has attracted a good deal of attention in the journals of political science in recent years ([Gilardi, 2002, 2005](#); [Levi-Faur, 2003](#); [Thatcher, 1998, 2002a, b](#); [Thatcher and Stone Sweet, 2002](#)). IRAs are often seen as a symptom of a general change in governance from a 'positive' to a 'regulatory state' ([Majone, 1997](#)). IRAs in the real world can, however, be rather different kinds of organisations, which do not always perceive themselves as belonging to

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<sup>1</sup>"Member States shall designate a competent authority, which must be independent of the parties, to settle disputes relating to the contracts and negotiations in question. In particular, this authority must settle disputes concerning contracts, negotiations and refusal of access or refusal to purchase." (Article 20, paragraph 3, Directive 96/92/EC of the European Parliament and Council.)

<sup>2</sup>"States shall designate one or more competent bodies with the function of regulatory authorities. These authorities shall be wholly independent from the interests of the electricity industry." (Article 23, paragraph 1, Directive 2003/54/EC of the European Parliament and Council.)

a specific class of independent authorities, and it is thus up to theory to define them.

Taking these developments into account the article sets out to discuss what the literature on IRAs sees as defining features of IRAs, and how these features relate to the status and practice of the IRAs on the European electricity markets today.

Thus, the outline of the article is as follows. First, what advantages and disadvantages IRAs entail (section 2) and what the central dimensions the literature on IRAs see as defining features (section 3) are discussed. In Section 4, the empirical analysis describes how IRAs actually cover a wide range of different institutional and organisational arrangements and how European electricity regulators vary with respect to independence, regulatory objectives and competencies. In Section 5, the relationship between the member states' choice of regulatory set-up and the development of competition on their electricity market is discussed.

## 2. Pros and cons of IRAs

There are several normative arguments for creating independent regulatory authorities. They concern their role in limiting market failure, government failure and increasing the credibility of the liberalisation process and regulation.

A classic economic justification for regulatory intervention in the liberalised power market is market failure, e.g. the existence of natural monopolies (Breyer, 1998). In electricity, transmission and distribution networks remain natural monopolies, and regulators must guarantee that all competitors have access to these networks as well as oversee that resources are spent economically in the monopolistic part of the sector. 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 put in place (Olsen, 1993; Crew, 1991; Newbury, 1999). 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 another important concern (Stern, 1997). The protection of small consumers against price discrimination, i.e. regulation motivated by concern for social fairness and redistribution, may also be an important regulatory task, just like interventions motivated in externalities—typically environmental problems—or 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 normative reason for giving them independence is their role in limiting 'government failure'. In Europe,

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 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, the 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, 1996; Demarigny, 1996). Thus, the independent regulator is expected to increase the credibility of regulation, and this credibility is crucial for a successful liberalisation process (Majone, 1996).

Some important critiques of IRAs have also been raised. They concern regulatory capture, accountability and legitimacy.

Some authors argue that sector-specific IRAs are particularly vulnerable to agency capture (Mitnick, 1980; see also OECD, 1999). One reason is that the turnover in staff is limited due to technical specialisation. The lack of turnover means that many things come to be taken for granted and that 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 sector-specific IRAs are more likely to be able to match the expert knowledge of the regulated industry and limit the problem of asymmetric information (Majone, 1996). Balanced consultations or hearings may be a way to limit capture problems, provided that all relevant interest groups are willing and able to participate equally. In theory, the choice of regulatory approach can also help solve this problem, such as the substitution of cost-plus regulation by incentive regulation, which requires less information about the cost function of individual companies.

Independent regulatory authorities have also been criticised for lack of democratic accountability (e.g. Graham, 1998). However, the concept of a completely autonomous regulator may be far from the practical reality of IRAs (Majone, 1996; Hall et al., 2000). Even if nobody controls the regulators completely, they have to cooperate with numerous actors including both government institutions and the regulated industry. Therefore, independence and accountability need not

be quite incompatible concepts. Among the sources of accountability is unambiguous primary legislation limiting the discretion of the regulator, the existence of appeals mechanisms, formal rules prescribing the use of fair procedures and justification of methods and decisions by the regulator. Applying normal rules of “good governance” and making public hearings may also improve the informal accountability without compromising the regulator’s independence.

However, 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 justification of IRAs in a democratic system generally builds on an assumption that independent experts will make good decisions based on rationality, balancing divergent interest and thus favouring the ‘public interest’ (Hall et al., 2000). One argument for this view is that experts are more interested in making reasonable and fair decisions, because they have the most to lose from a ruined reputation in the long term (cf. Milgrom and Roberts, 1992). It is thus often argued that the legitimacy of IRAs is based on their superior outputs (Thatcher and Stone Sweet, 2002; Majone, 1996); i.e. that IRAs can guarantee more ‘efficient’ policy-making procedures, better policy outcomes, etc.

### 3. Central features of IRAs

Drawing on the discussion of their pros and cons above and definitions of IRAs, some crucial features of IRAs are identified below. In the following paragraph 4 of these dimensions are used to compare and contrast the IRAs on the European Electricity Market.

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 to 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, p. 69). Fesler’s definition stresses 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, pp. 26–27), who point to the role of independent regulators in balancing interests and making all parties understand the rules of the game.

In his definition from 1997, Smith (1997) mentions three dimensions of regulatory independence, which are much in line with Fesler’s stress on independence from

government, independence from stakeholders and integrity.<sup>3</sup>

In the following, we will elaborate on these three dimensions of regulatory independence:

- (1) An arm’s length relationship with the government, which will also include features of organisational autonomy such as earmarked funding and the exception from restrictive civil service salary rules.
- (2) An arm’s length relationship with the stakeholders.
- (3) Independent decision-making competencies.

#### 3.1. Independence from government

When it comes to the first dimension—the relation to government and the legislature—there are limits to the degree of independence attainable (or desirable), regulators being part of the state apparatus. Even if regulators are granted formal independence, the 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 system (Stern, 1997; Stern and Holder, 1998; Majone, 1996; OECD, 2001; Greve, 2002). 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 irrevocable appointments of regulators for fixed terms and prevent appointment and dismissal on political grounds. To avoid a situation where the 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.

As mentioned by Smith, a measure of organisational autonomy may enhance the independence of the regulatory authority. 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, dismissal and salary policies in relation to the regulatory authority’s staff are important resources.

<sup>3</sup>Several international organisations such as the World Forum on Energy Regulation, The International Energy Agency (IEA) and the World Bank (see IEA, 2001a–c; Smith, 1997) have come up with similar recommendations.

### 3.2. Independence from stakeholders

With regard to the second dimension, relations with stakeholders, the literature discusses at least three threats to the independence of the regulators.

Firstly, there is a risk that the regulated parties may “capture” the regulators, e.g. by holding up the prospect of well-paid jobs if the regulators are sympathetic to the views of the industry (Laffont and Tirole, 1993; Stigler, 1971; Peltzman, 1989). Secondly, there is a risk that the industry can manipulate the regulator due to the asymmetric access to information (Mitnick, 1980). Finally, there is a risk that the regulator’s independence is compromised by the regulator’s private interest in the sector, e.g. when the regulator holds stocks in a unit trust investing in the regulated industry.

Theorists and practical policy makers have developed many recommendations for safeguarding measures against the risks to regulatory independence from industry (Stern, 1997; Elforsyningsloven, 1999; Majone, 1996; OECD, 2001).

Some of these measures are closely related to standard rules regarding good governance. For instance, it is common practice that regulators cannot have personal interests in industry. In some cases, there are formal rules prohibiting informal discussions of pending cases with any of the parties involved. There can also be rules prohibiting the employment of regulators in the regulated industry 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. Some of these rules can be difficult to honour in the real world, where there are usually a limited number of people with insight into the quite technical issues involved in regulation.

### 3.3. Independent decision-making competencies

The third dimension of regulatory independence concerns the scope of decision-making authority. 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, independent regulatory authorities must hold some exclusive decision-making powers. 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, e.g. the calculation of tariffs for network access, 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).

Thatcher (2002b) and Gilardi (2002) have also applied such operational definitions of the characteristics of IRAs in empirical analyses of the new independent regulators in Europe. Thatcher relates the independence of regulators to the above-mentioned three dimensions. He compares regulators of market competition (both general competition authorities and sectoral regulators) in the four large European countries. He concludes that the new regulators in general are independent according to the three dimensions and that the greatest break with the past has come in the processes of regulatory decision-making. Much more open and transparent procedures have been introduced involving more actors than the former closed process of governmental decision-making. Gilardi has constructed an independence index operationalising five dimensions of independence, in order to test the credibility thesis statistically. However, he mainly focuses on regulators’ independence from government, having four out of five sections of his survey deal with regulators’ independent status from government.

Even if the pros and cons of IRAs are contested in the literature and disagreement exists on what the authorities should be independent from and how independence is secured, this mode of organisation seems to have diffused to the European countries as the energy markets have been liberalised. In the following, the results from introducing independent regulators are compared

## 4. The status and practice of European electricity regulators

The empirical background for the analyses in this article consists of a survey<sup>4</sup> (see Appendix A), in-depth interviews with representatives of regulatory authorities, IEA country reports (IEA, 1999, 2000a–d, 2001a–c, 2002a–e, 2003) and consultation of the web pages of the European regulators. The empirical work is thoroughly explained and documented in Johannsen et al. (2004). The empirical analysis will be divided into three main sections. In the first section, we present some of the results from the survey on the independence of

<sup>4</sup>The survey has been conducted through a questionnaire answered by CEER members in 2002/2003. At this point, CEER consisted of regulatory authorities from 14 of the 15 EU member countries plus Northern Ireland and Norway. At that time Germany was not represented in the CEER, because it had no sector-specific regulatory authority, so no questionnaire was sent to Germany. Furthermore, answers are missing from the Belgian authority.



regulators; in the second section their competencies, scope of activities and regulatory practices are discussed.

#### 4.1. Independence of regulators

The reality of the European electricity regulators varies a lot and is not always in line with the recommendations presented in Section 3. According to the new market directive, the regulatory authorities must monitor transmission and distribution companies, regulate network access and balancing services, settle disputes and monitor abuses of market power.<sup>5</sup> There are, however, no provisions on the choice of the concrete organisational form and it is not even required that there should be only one regulator.

##### 4.1.1. Who are the regulators?

Some of the regulators are sections of a government ministry or agency, whereas others are independent agencies headed by a commission or a director, some of them with a large bureaucracy and others with only a small secretariat.

There are two main types of leadership: commissions/boards and agency heads/directors. Generally, commissioners and board members are experts within different areas of relevance to energy regulation: i.e. law, economics or engineering. They often have a background as university professors, consultants, senior civil servants or former staff in sector organisations or energy utilities. Agency heads or directors often have a background as civil servants, but there are also some who are former directors or board members in energy utilities.

All South European authorities (Greece, Portugal, Spain and Italy) as well as Great Britain, Belgium, France and Denmark have commission-type leadership, whereas in most North European countries, i.e. the Netherlands, Sweden, Finland and Norway, the regulatory authority is organised as an agency with a director as leader. In Norway and Sweden, the regulator is part of the energy agency, whereas the Dutch regulatory office is part of the competition authority. Following the 2003 directives for electricity and gas markets, legislation is being negotiated in Germany, which will establish a regulatory authority for electricity and gas from 2005. This will be part of the existing independent regulatory authority for telecommunications, which is headed by a president and two vice-presidents.

##### 4.1.2. How independent are regulators from government?

In our survey, the regulators were asked about the appointment and dismissal of the commission or the person in charge of the regulating authority and its financial and organisational autonomy (see Table 4 in Appendix A).

With respect to the first issue we regard regulators with a long tenure, whose term cannot be renewed, who are appointed by the legislature, who cannot be dismissed for policy reasons and who are not allowed to hold offices in government as more independent than regulators with a short tenure, appointed by a minister, who can be dismissed for policy reasons and hold offices in government. Most regulators are appointed by the government or by one or two ministers for a period of 4–7 years. Only in France, Greece, Italy and Spain the legislature is involved in the appointment. Dismissal for policy reasons is not possible in most countries (except the Netherlands where there are no special provisions) and the commissions and heads are generally not allowed to hold offices in government (here, Denmark is the exception, whereas in the UK, there are no special provisions).

The electricity regulator can be financed either by a fee levied on the regulated firms or from the state budget. We consider the former as more independent than the latter. France and Norway are cases of purely government finance whereas the other regulators are financed by fees or by a mixture. In most countries, the regulator controls the budget after it has been appropriated. The exception is Spain, whereas Austria and Denmark have mixed government-agency control. When it comes to matters of internal organisation and personnel policy most regulators decide by themselves. Only in Austria, Denmark, Greece and Luxembourg does the government participate in decision-making.

In general, the regulators in Italy, France, Ireland and Portugal have more of the above-mentioned characteristics institutionalising independence from government than regulators in other countries. Regulators from Luxembourg, Denmark, Norway and Finland have particularly few of these characteristics (see Table 4 in Appendix A).

##### 4.1.3. How independent are regulators from stakeholders?

It is explicitly stated in the European market directive that the regulator shall be independent of industry.<sup>6</sup> This obligation is interpreted in different ways in the member states. Most countries apply restrictions on the former and future affiliation of the commissioners and agency heads with the electricity industry (see Table 5 in Appendix A). In some countries, they are not allowed to have held a position in the industry or in its associations in the years preceding the appointment (this is the case in Austria, Italy, Luxemburg and Portugal), and some put restrictions on accepting a job in the years after their term (in France, Italy, Portugal, Spain and Ireland). The commissioners and agency heads are also forbidden to

<sup>5</sup>Article 23, paragraphs 2, 4, 5 and 8.

<sup>6</sup>“Member States shall designate one or more competent bodies with the function of regulatory authorities. These authorities shall be wholly independent from the interests of the electricity industry.” (Article 23).

have any personal or pecuniary interest in the industry, a restriction that is applied in all countries.

In general, there are many restrictions on relations between regulators and stakeholders in France, Italy, Luxembourg, Ireland and Spain. In Norway, Denmark, Finland, Sweden, Greece and the Netherlands, there are very few restrictions (see Table 5 in Appendix A).

#### 4.1.4. Scope of independent decision-making

When it comes to independent decision-making most regulators are fully competent with respect to the approval or determination of network tariffs and network access conditions and the terms of delivery issued by the network companies. Exceptions are France, Spain, Greece and Luxemburg, where the regulator only has an advisory role in some of these matters (see Table 6 in Appendix A). However, the new market directive provides such regulators with stronger powers.<sup>7</sup> In some countries, the regulator has the authority to issue licences and in most countries they can settle disputes between companies and between companies and their customers (the main exception is Finland). Finally, most regulators possess the powers to enforce their decisions (exceptions are Austria and Spain). In general, regulators have strong independent decision-making competencies in Ireland, Norway, the Netherlands, Italy and Sweden. They have few competencies in Spain, Portugal and Luxembourg (see Table 6 in Appendix A).

#### 4.2. What do the independent regulators regulate?

The objectives of the IRAs vary (see Table 1). There are few regulatory authorities with few objectives and many authorities with many objectives. Market transparency and competition are the core objectives for the regulators, whereas security of supply, environmental objectives and objectives on socially responsible price policies are less widespread.

It is far from clear that the objectives have the same meaning in the different national contexts. If, e.g. regulator A claims to have “security of supply” as one of its objectives, does it mean that it shall address the issue in its annual report on the state of the world or should it also take concrete action in matters of relevance for security of supply? Therefore, we have

attempted an alternative classification that includes not only the formally stated objectives, but also the actual activities undertaken by the individual regulators:

- (1) *Monopoly regulation*: Network tariffs and access conditions, supply tariffs for captive customers, licensing of network operators and suppliers of captive customers.
- (2) *Competition regulation*: Surveillance of wholesale and retail markets (supply of eligible customers).
- (3) *Protecting customers*: Handling of consumer complaints, helping vulnerable consumers.
- (4) *Wider energy policy obligations*: Environmental friendly energy supply (promotion of and access conditions for renewable energy and cogeneration), security of supply.

We have categorised regulators according to this scheme, on the basis of studies of annual reports and other descriptions of activities found on the websites of the IRAs. Generally, the North European regulators (the Nordic countries and the Netherlands) are assigned quite a narrow scope of activities mainly concentrated on monitoring the network monopoly. The competition authorities regulate the wholesale and retail markets whereas the consumer authorities (consumer agencies and specific complaint boards) handle consumer complaints on supply conditions. The wider energy policy obligations are here the responsibility of the energy agencies—one can of course argue that as the electricity regulator in countries like Norway and Sweden is part of the energy agency this statement is misleading.<sup>8</sup> However, regulation of network monopolies has by now become more separated from the rest of the ministerial agency in these two countries.

Contrary to Northern Europe, the regulators in Ireland, Britain, Belgium and the Southern European countries are characterised by quite broad responsibilities—also according to this classification. In addition to monopoly regulation, they supervise competition and handle or refer violations to the competition authorities, and they are active in protecting vulnerable consumers, they participate in the promotion of renewable energy and in securing future supply. In some of these countries (Italy, Portugal and Spain), the regulator also participates in the creation of market institutions such as national and international power pools.

#### 4.2.1. Regulatory practice

The above classifications according to the formal objectives and scope of actual activities cover a wide range of different regulatory practices that cuts across

<sup>7</sup>“...Member States may provide that the regulatory authorities shall submit, for formal decision, to the relevant body in the Member State the tariffs or at least the methodologies referred to in that paragraph as well as the modifications in paragraph 4. The relevant body shall, in such a case, have the power to either approve or reject a draft decision submitted by the regulatory authority. These tariffs or the methodologies or modifications thereto shall be published together with the decision on formal adoption. Any formal rejection of a draft decision shall also be published, including its justification.” (Article 23, paragraph 3).

<sup>8</sup>Such confusion could be the explanation of why the Norwegian regulator reported six objectives in the questionnaire and the Swedish only reported one (cf. Table 1).

Table 1  
Objectives of the IRAs<sup>a</sup>

Country	Competition	Market transparency	Consumer protection	Economic efficiency in the supply industry	Environmentally friendly electricity supply	Security of supply	Socially responsible price policies	Number of objectives ( $n = 7$ )
Austria	X	X	X		X	X		5
Denmark	X	X	X	X	X			5
Finland	X	X						2
France	X	X	X	X			X	5
Greece+	X	X	X	X	X	X	X	7
Ireland	X	X	X	X	X	X	X	7
Italy	X	X	X	X	X		X	6
Luxembourg	X	X	X					3
Netherlands	X	X	X	X		X		5
Northern Ireland	X		X	X	X	X		5
Norway	X	X	X	X	X	X		6
Portugal	X	X	X	X	X		X	6
Spain	X	X	X	X		X		5
Sweden		X						1
UK	X		X	X	<sup>b</sup>		X	4
No. of countries with the objective ( $n = 15$ )	14	13	13	11	8	7	6	

Source: Johannsen et al. (2004).

<sup>a</sup>The respondents were asked to report the regulatory objectives of the authority, e.g. the objectives explicitly stated in the legislation or in a mission statement.

<sup>b</sup>It was not quoted by the British regulator who nevertheless is heavily involved in the administration of policy instruments to promote renewable energy such as the Renewables Obligation (see [www.ofgem.gov.uk](http://www.ofgem.gov.uk)).

Table 2  
Regulatory scope and practice

Scope/regulatory practice	Narrow scope focused on monopoly regulation	Broad scope including monopoly regulation, competition regulation, consumer complaints, wider energy policies
'Hands-on regulation': regulators decide network and supply tariffs		Belgium, France, Ireland, Italy, Spain, Portugal
'Light regulation': monitoring and ex post intervention	Finland, Germany	
Ex ante incentive regulation	Denmark, Norway, Sweden	UK

the groupings identified by these classifications (see Table 2):

- Some regulators decide and specify in detail the (nationwide) tariffs to be paid for network use and for supply by captive customers. This is the case in Belgium, France, Ireland, Italy, Portugal and Greece. The other regulators issue tariff principles and monitor the pricing practices of the transmission and distribution system operators. As these countries have introduced full third-party access they have no remaining captive customers.<sup>9</sup>
- There are wide differences regarding the practice of the regulators in the last mentioned group of countries (the Nordic countries, Britain, Austria, the Netherlands). In some of these, ex ante incentive regulation has been introduced (e.g. the UK), whereas only monitoring and ex post intervention in case of detected violations is practiced in others (e.g. Finland). However, the trend goes towards ex ante regulation, which is also encouraged in the new electricity directive.<sup>10</sup>
- In Germany, there has until recently been no sector-specific regulator. Non-binding criteria for network access have been developed in corporatist agreements between sector stakeholders, and abusive practices have been prosecuted ex post by the General Competition Authorities and civil courts. End-user tariffs are usually regulated by the Länder Ministries of Economics. Political agreement has only recently been reached on the regulatory practice to be applied by the new sector-specific independent regulator.

<sup>9</sup>In Denmark, separate supply obligation companies still offer regulated supply tariffs to customers not wanting to use the market.

<sup>10</sup>“The regulatory authorities shall be responsible for fixing or approving, prior to their entry into force, at least the methodologies used to calculate or establish the terms and conditions for: (a) connection and access to national networks, including transmission and distribution tariffs.” (Article 23, Paragraph 2).

## 5. Liberalisation, regulation and market outcome

Historically, the electricity sector has been the object of much public intervention. A number of countries (Ireland, the UK, France, Portugal, Italy and Greece) have a long history of state-owned monopolies, and the former state monopolists still have a large market share in all these countries, except the UK. To make electricity liberalisation credible in these countries calls for a strong regulator, independent of the state, and with a broad mandate and competencies. Such a regulator has to a larger or smaller extent been chosen in all of the above-mentioned countries. Especially Italy, Ireland and France seem to have IRAs with broad sets of competencies. The UK regulator is also still a rather independent and strong regulator, although its independent status has been somewhat weakened with the 2000 Utility Act.

Other member states such as the Nordic countries, Germany and the Netherlands have a different background with a much more decentralised industry structure, less state ownership and a tradition of self-regulation. Such a history does not create as strong a need to make liberalisation credible by signalling arm's length relation to a regulatory authority, and politicians will be more reluctant towards a new independent regulatory bureaucracy with broad competencies. The approach to electricity market regulation in these countries has indeed been much less ambitious, building on existing institutions that gradually are modified to cope with the new situation. Notably, liberalisation has not been accompanied with the establishment of new IRAs with broad competences and a strong independent status in the Scandinavian countries. In the Netherlands, the regulator is part of the competition authority and in Germany the authorities have only reluctantly and very recently accepted the European concept of a separate energy regulator. In the Nordic countries (except Denmark that has a tradition of tariff regulation by a separate board<sup>11</sup>), the former light-handed regulation by

<sup>11</sup>Representatives of the interested parties, utilities and consumers, and independent experts comprised the tariff board.



ministerial energy agencies was continued and only gradually changed into the direction stipulated by the market directives.

The political attitude towards liberalisation and the speed of opening the electricity market for credible competition are also of relevance for the design and in particular the practice of the regulators. This dimension cuts across the classification according to the tradition of centralised or decentralised electric utilities. The UK together with the Nordic countries and Germany were the first to open their electricity market for full third-party access. However, the approach to liberalisation was very different. The British became the pioneers of liberalisation starting from a situation with 100% state ownership. Privatisation, reorganisation of the industry and a strong regulator became an integrated part of the new policy, which was rather controversial with large consequences in terms of employment in the electricity and particularly the coal sector. One important function of the first regulator, OFFER, was to ‘shift the blame’ for such consequences and convince investors that the liberalisation course would be maintained at all costs. The regulator (now Ofgem) has become an internationally recognised benchmark for the efficient and credible regulation of a competitive electricity market. Ofgem is a large organisation with broad competencies and widespread activities; it is visible and considered competent and independent in decision-making. The French, Irish and Italian IRAs similarly serve to shift the blame away from government and guarantee a stable liberalisation course in a situation, where liberalisation is not universally embraced (Johannsen et al., 2004)

The Nordic countries have a reputation of successful liberalisation, but with a very different background and applying a very different approach than the UK. There were no privatisations. Market institutions and regulation were gradually unfolded from the former institutional structure. The power pool Nord Pool, which is now a key institution in the Nordic electricity market, is an illustrative case. It started as a private association for the Norwegian power producers and then gradually moved to its present position as a common market place owned by the transmission system operators. Instead of

creating one new agency with broad competencies, regulation in the Nordic countries is developed by existing state agencies (for energy, competition and consumers) that cooperate to establish the necessary regulations and sometimes even include private associations for consumers and electric utilities to achieve that. As liberalisation has not been very controversial, it has not been necessary to ‘shift the blame’ to high-profiled IRAs or to delegate in order to convince investors of the credibility of liberalisation policies.

The German approach to liberalisation is very different from that of both the UK and the Nordic countries. In a European context, the German liberalisation took place relatively early. The institutional background was similar to that in the Nordic countries—decentralised industry structure with little state ownership and light-handed regulation—but the commitment of the state authorities to the implementation of a competitive electricity market was minimal. It was left to stakeholders to agree on regulations for network access under some supervision by the competition authorities. Unbundling requirements have so far been limited and negotiated third-party access has been preferred to regulated third-party access.

### 5.1. Regulation and market outcome

Is there a connection between the choice of regulatory structure and the market outcome in the European countries? The discussion in the previous sections indicates that there is not—at least it has not yet materialised. Each year the Commission issues a report on the development of the competitive electricity market in the European Union and its member states. Different indicators are applied to characterise the relative success of the member states to achieve the goals of the market directives.

In the latest report published in January 2005, the member states are classified according to their main obstacles to competition (Table 3).

The table repeats that the Nordic countries and the UK so far have been the most successful in achieving a competitive electricity market, whereas the other

Table 3  
Summary of main obstacles to competition<sup>a</sup>

		Customer switching: large customers
(a) No major issues	SE, FI, DK, NO, UK	> 50%
(b) Unbundling	LU, AT, DE	Range 10% (LU)–35% (DE)
(c) Market structure or lack of integration	FR, BE, GR, IE, ES, NL, IT	Range 0% (GR)–35% (NL)
(d) Long-term power purchase agreements	PT	

Source: European Commission (2005).

<sup>a</sup>In this table the most important obstacle for each Member State is identified. As can be seen below this does not imply that other obstacles do not exist.

member states are behind to a greater or lesser extent. In both groups, there are countries with very different approaches to regulation and the organisation of regulatory agencies. As discussed in the previous section, the first group includes the UK that has a strong regulator with a broad mandate as well as the Nordic countries that have opted for a more pragmatic approach with different public agencies involved besides the regulator. The second group includes countries that have established regulatory agencies with status and ambitions similar to that of Ofgem (first of all Italy) as well as countries with a much less ambitious approach (Germany and the Netherlands).

In the Technical Annexes to the annual report (European Commission, 2005), more details on the different progresses in the introduction of competition are provided. Indicators regarding degree of market opening, unbundling, network access conditions and market structure in the 16 countries are presented. They confirm the differences between the two groups of countries as explained in the former section, with the UK and the Nordic countries demonstrating open and competitive markets and the other countries lagging behind in one or several respects.

In sum, there are few indications of a relationship between the independence of the regulators regarding their formal status and their regulatory practice and the market outcome. This may seem surprising taking the normative discussion on the pros and the cons of IRAs into account, as these often were seen as a precondition of a well-working energy market.

## 6. Conclusion

Most member states in the European Union have chosen to create sector-specific independent regulators combining the independence from commercial interests with separation from the ministerial administration. A number of theoretical arguments from the political science literature support such a choice. Independent regulators can help to improve regulation by limiting government failure as they often replace public ownership as a means of control. After liberalisation it has become important to make the process credible to separate the state as owner and potential seller of utilities and the state as regulator. Arguments against independent regulators are the risk of regulatory capture, the lack of accountability and the lack of democratic legitimacy. However, there are institutional remedies to overcome these problems, an example of which is the self-interest of the regulator to keep a good reputation.

The comparative analysis of 16 European regulators (including the old member states and Norway) provides an impression of large differences with respect to formal

independence as well as to regulatory practice. All regulators are formally independent of stakeholder interest, which is stipulated in the European market directives. In addition, many of them are separated from the ministerial administration and possess considerable independence with respect to budget control and internal organisation.

The scope of competencies and independence in decision-making of the 16 regulators differs a lot. A few of them mainly perform advisory functions whereas most can make their own decisions.

Some regulators have broad competencies including monopoly regulation, competition regulation, consumer complaints and wider energy policy issues, whereas others are mainly confined to regulating access conditions and network tariffs. The members of the first group of countries are often those with a tradition of state-owned national monopolies. The countries in the second group have a more private and decentralised utility structure and they prefer a much more pragmatic approach including a regulator with a narrow agenda and an extended division of labour with other public authorities such as the competition and consumer agencies.

The speed of liberalisation and the achievement so far in terms of market opening differs considerably among the 16 European countries and there is no clear correlation between the set-up of the IRAs and their choice of regulatory approach. The UK and the Nordic countries have established very different regulatory models and practices, but all have managed to develop competitive markets relying on well-functioning market institutions. Similar differences can be found among the countries with less developed markets.

European liberalisation of the electricity market is still young and much can be expected in terms of changes and harmonisation of market conditions and regulatory practices. Therefore, it is premature to expect a definite model of the European independent regulator.

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## Appendix A

The survey is undertaken among the members of the Council of European Energy Regulators (CEER), which was set up in 2000. Initially, the CEER was a self-grown “club” of 16 “National Independent Regulators in the fields of electricity and/or natural gas”

Table 4  
Formal independence from government and legislature

1. What is the term of the agency head or the commissioners?	7 years or more IT	4–6 years AT, DK, FR, GR, IE, LU, NO, PT, ES, SE, UK	1–3 years
2. Who appoints the agency head or commissioners?	A mix of the legislature and the executive FR, GR, IT, ES	The executive collectively AT, FI, LU, PT, SE	One or two ministers DK, IE, NL, NO, UK
3. What are the provisions regarding dismissal of agency head or commissioners?	Impossible or only possible for reasons related to policy AT, DK, FI, FR, GR, IE, IT, LU, NO, ES, SE, PT, UK	Possible at the appointer's discretion	No specific provisions NL
4. May the agency head or the commissioners hold offices in government?	No AT, FI, FR, GR, IE, IT, LU, NL, NO, PT, ES, SE	Yes DK	No special provisions UK
5. Is the appointment renewable	No FR, GR, IT,	Yes, once IR, NO, PT, UK	Yes, more than once AU, DK, LU, ES, SE,
6. Is independence a formal requirement for the appointment?	Yes AT, DK, FR, IE, IT, NL, SE, PT	No FI, GR, LU, NO, ES, UK	
6. Which is the source of the regulatory authority's budget?	Fees levied on regulated firms	Government	Mixed
8. When budget has been appointed, who controls the budget?	DK, GR, IE, IT, LU, ES, UK Regulatory authority	FR, NO Government	AT, FI, NL, PT, SE Mixed
9. Who decides the regulatory authority's internal organisation?	FI, FR, GR, IE, IT, LU, NL, NO, PT, SE, UK Regulatory authority	ES Government	AT, DK Mixed
10. Who is in charge of the personnel policy?	FI, FR, IE, IT, LU, NL, NO, PT, ES, SE, UK Regulatory authority	Government	AT, DK, GR Mixed
	AT, FI, FR, IE, IT, NL, NO, PT, ES, SE, UK	LU	DK, GR

Table 5  
Independence of stakeholders

1. May commissioners/the agency head have held a position in the industry/its associations in the years preceding appointment	No AT, IT, LU	Yes, but not within a specified number of years PT	Yes DK, GR, IE, ES, NO, SE, FI, NL, FR, UK
2. Are there provisions restricting the commissioners'/the agency head's job seeking in the industry after their term	Yes, not for several years FR, IT, PT, ES	Yes, for 1 year IE	No AT, DK, FI, GR, LU, NL, NO, SE, UK
3. Are their provisions forbidding discussions of pending cases with stakeholders	Yes, in the specific legislation regarding the regulator FR	Yes, in general legislation regarding good governance DK, FI, IE, LU, SE, UK	No AT, GR, IT, 43NL, NO, PT, ES
4. Are there provisions forbidding the agency head/commission members to have any personal or pecuniary interest in the electricity sector	Yes, in relation to appointment and individual cases AT, FR, GR, IE, IT, LU, NL, PT, ES, UK	Yes, in relation to individual cases DK, FI, NO, SW	No

Table 6  
Independent decision-making—which competency does the regulator exercise<sup>a</sup>

Country	Tariffs	Network access	Licensing	Terms of delivery	Disputes	Enforcement
Austria	F	F	P	F	P	N
Denmark	F	F	N	F	F	F
Finland	F	F	F	F	N	F
France	P	P	N	No answer	F	F
Greece	P	P	P	P	F	F
Ireland	F	F	F	F	F	F
Italy	F	F	P	F	F	F
Luxembourg	P	P	N	N	?	F
Netherlands	F	F	F	F	P	F
Portugal	F	F	N	F	F	P
Spain	P	F	P	P	P	N
Norway	F	F	F	F	F	F
Sweden	F	F	F	P	F	P
UK	F	F	P	F	F	F

<sup>a</sup>F, fully competent; P, partly competent; N, not competent.

(CEER, 2000, p. 1), cooperating in order to promote competitive European markets in electricity and gas among others by exchanging knowledge, making codes of conduct, formulating policy papers, etc. From 2003 the CEER has been more formalised, and its role in the EU policy-making process has increased (European Parliament and Council, 2003; European Commission, 2003). Most recently, membership has increased by the 10 new EU member countries and Iceland, but the survey was conducted among the original 16 members, which were regulatory authorities from the then 15 EU member countries, except Germany, but with the addition of Norway and Northern Ireland.

The questionnaire was sent to the regulatory authorities by e-mail and answers were received from all CEER members except Belgium. Any person in the authority, who knows about the statute and obligations of the authority, could complete the questionnaire. The answers should not be dependent on the judgements of a particular person—although it is not possible to completely preclude any differences in the interpretation of both questions and answers.

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, some of the more ambiguous or inconsistent answers were discussed with the respondents to eliminate misinterpretation.

The results from the survey are summarised in Tables 4–6.

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