Transfer and transformation in processes of Europeanisation

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Abstract.

There is a missing link between studies, which investigate how regulation is becoming more similar on one hand, and studies which focus on how national policy styles and administrative traditions create patterns of stable diversity on the other. The article attempts to bridge these views in an analysis of how ideas transform as they transfer. The article shows, that the idea of creating independent regulatory authorities (IRAs) has become institutionalised as a 'script' regarding how the regulation of liberalised electricity markets ought to be organised. This script has transferred to the EU-15 in processes moving from mimetic and normative to more coercive isomorphism, but the transformation is influenced by the way the need for credibility is mediated by contextual factors. Thus IRAs have more formal independence in countries formerly dominated by state ownership, where policy-makers are perceived as corrupt and where decentralisation is low. In this way, the analysis reveals, how impulses of institutional change from the international arena are mediated by more stable and robust institutional factors at the domestic level.

1. Introduction

A central thesis in the study of comparative politics and historical new institutionalism has been that specific national policy styles create relatively stable patterns of diversity in policies and administrative reform (Richardson, 1982; Lundquist, 1980; Vogel, 1986). It has often been argued that this perspective is not well-equipped to analyse institutional change and hence the Europeanisation of public administration (Hall & Taylor, 1996). With in the sociological new institutionalism the image of nation-specific stability and diversity has been criticised and attention has been drawn to mechanisms leading to similarity between nations or fields of organisations (Meyer & Rowan, 1977; DiMaggio & Powell, 1991). Similarly, the policy transfer literature draws attention to processes by which administrative arrangements, institutions and ideas in one political system is used in the development of policies, administrative arrangements, institutions and ideas in another political system (Dolowitz & Marsh, 2000). The explicit attention directed at the processes of Europeanisation in the transfer literature represents a valuable contribution (Padgett, 2003; Radaelli, 2000); however, the transfer literature and sociological new institutionalism both tend to provide a picture of excessive change (Jörgens, 2004; Busch & Jörgens, 2005; Jordan et al., 2003; Tews et al., 2003). Indeed, they occasionally leave the impression that new policy ideas spread like a virus (Richardson, 2000). Thus, there is a missing link between studies focusing on learning and isomorphism as drivers for institutional change, and studies emphasising how national institutions foster stable diversity.[i] In the following, it is argued, that such a link can be made by integrating recent insights on the transfer and transformation of ideas.

Empirically, the article investigates the diffusion of the idea, that independent regulatory authorities (IRAs) organised according to a specific institutional script, are the appropriate authorities for the regulation of network-bound energy sectors (electricity and gas). The number of IRAs has increased rapidly over the last decade, and the coordination of their activities is one example of the Europeanisation of public administration, where other and similar developments are found in other sectors, e.g. telecommunications and pharmaceuticals (Dehousse, 1997; Gilardi, 2002). The present study focuses on the formal institutional design of IRAs. Formal institutional arrangements do not determine IRA behaviour or their relationships with other actors, however, as powers and controls can be applied in many different ways. Moreover, institutional frameworks are incomplete, allowing discretion to decision-makers. Studies of formal institutions therefore ought to be supplemented with in-depth case studies of actual regulatory practise (Pollitt & Talbot, 2004; Thatcher, 2002b; 2002c). The study is designed as a single-sector study, as the focus is on IRAs with similar functions in the recently liberalised markets for electricity and gas; they all regulate the conditions under which market actors can access the natural monopoly networks. Thus, the technical preconditions for transfer are largely the same. At the same time, the institutional context varies, e.g. the organisation of the energy sector, the level of centralisation and decentralisation, and the administrative traditions.

Theoretically, the article attempts to integrate insights from the new institutionalisms on how impulses external to organisational entities create institutional change and increasing similarity on one hand, and on how institutional conditions at the national level make these impulses transform differently across countries on the other. Recently, there has been an increasing integration between different strands of the new institutionalism (Bates et al., 1999; Thelen, 1999). In fact, it has been argued that there are no methodological differences, which prevent an integration of insights from diverging perspectives (Campbell & Pedersen, 2001: 263). In the article, the conceptualisation of ideas which transfer in processes of isomorphism is contrasted with the view that ideas transfer in processes of policy learning. Second, the understanding of transformation as local and contingent processes is contrasted with the credibility thesis, which state that the need for credibility mediated by contextual factors lead to different degrees of regulatory independence. The integration is sequential, as the focus is on the degree to which these diverging propositions explain different stages of institutional change (Campbell & Pedersen, ibid.: 264). The aim of this is to make a more coherent explanation of how ideas influence institutional change while patterns of diversity are sustained. It is important to link these insights in order to investigate the dynamics of Europeanisation, e.g. the penetration of national systems of governance to a European policy centre and to European-wide norms (Olsen, 2002; Knill &

Lemkuch, 2002). In this context, it becomes relevant to discuss whether the impact of the European Union on national administrative structures leads to convergence or if diversity remains (Knill, 2001).

2. Transfer and transformation in the new institutionalism

The sociological new institutionalism is a fairly diverse body of theory. The discussion in the following focus on firstly to an influential group of American authors, who investigated how institutional change lead to increasing similarity between organisations (Dimaggio & Powell, 1991; Meyer & Rowan, 1997), and second on a group of Scandinavian authors who – more recently - have extended this research programme to the explanation of diversity between organisations (Czarniawska & Joerges, 1996; Sahlin-Anderson, 1996; Røvik, 1996; 1998). [ii] This choice is made in order to spell out that the transfer and transformation of ideas can be seen as sequential processes which can be analysed at two analytical levels, e.g. the transfer of ideas and scripts on the international arena on one hand, and the transformation of this script into formal regulation in a domestic institutional context on the other.

2.1.1 Transfer as isomorphism

The sociological new institutionalism originated on one hand in response to theories and analysis which saw stable features of divergence as dominant, and on the other hand in response to empirical observations of similarity across organisations on the other. Due to the mismatch between empirical observations and theoretical explanations, scholars started investigating mechanisms, which create similarity across organisational fields (DiMaggio & Powell, ibid.). DiMaggio and Powell elaborated an influential typology of three analytically distinct mechanisms of isomorphism (DiMaggio & Powell, 1983: 150-152). Firstly, coercive isomorphism, where institutional change occur as a result of formal or informal pressure form other organisations or the environment in general (DiMaggio & Powell, 1983: 150-152). Second, mimetic isomorphism, which arises when actors imitate perceived successes in order to ensure the legitimacy of the organisation. Thirdly, normative isomorphism, which creates increasing similarity between organisations due to the diffusion of norms and standards through professionalized networks (DiMaggio & Powell, 1983: 152-153). These mechanisms were developed to explain increasing similarity across organisational fields in an open system perspective. Thus, factors at the aggregate level external to the organisation are crucial in order to understand the changes inside the organisation at less aggregate levels. If these mechanisms are applied to the diffusion of IRAs in the EU-15, it can be expected, that there will be an increasing similarity between the type of formal organisation employed in the regulation of liberalised markets. This may, firstly, take place as a result of force, e.g. because the EU commands the member-states to create such regulatory institutions. Second, they may be imitated if they are perceived as being modern, rational and legitimate. Thirdly, professional network may carry norms on how and area should be regulated most appropriately.

2.1.2 Transfer as learning

In the sociological new institutionalism, the transfer of formal organisation – such as for instance IRAs – is mostly the result of a need for legitimacy, and the imitation which takes place is large unconscious, in the sense that the actors are not expected to have much information on the consequences of the formal institutions, which they imitate. According to the historical new institutionalism, in contrast, actors are able to make deliberate choices between several building blocks, when reforms are undertaken (Hall, 1998; Hall, 1993). Thus, one of the main dividing lines between mechanisms of transfer lies in the room for the conscious and deliberate choice the actor is assumed to possess. Hall defines political learning as conscious attempts at adapting policy objectives and instruments to experience from previous regulation or to new information (Hall, 1993: 278). The core of this concept of learning is instrumental, in the sense that new regulatory means are introduced on the grounds that they are seen as better solutions to present problems, rather than simply because they are in vogue (Hall, 1993). One second difference between the mechanisms of transfer suggested is, that in the sociological new institutionalism the impulses for change are coming from an aggregate level, e.g. from the international arena, where as the agent for change in the historical perspective are found at the national decision making arena. These diverging insights can be investigated empirically. If transfer is initiated at the national arenas and there is room for choice between different building blocks, this can be expected to result in at least some variation in the type of regulatory agency chosen, whereas the mechanisms of isomorphism emphasised in the sociological new institutionalism are likely to lead to a very high degree of similarity in the type of agency applied.

2.1.3 Decoupling in relation to transfer

A second central point in the sociological new institutionalism is that formal organisation tend to be loosely coupled to the actual working practises of an organisation (Meyer & Rowan, ibid.). Thus, the choice of formal organisation is expected to be largely symbolic. For instance, policy makers may choose to implement formal rules signalling a high level of regulatory independence in order to gain legitimacy, whereas actual practice may change less dramatically as formal rules. In this way a decoupling between formal rules and actual working practises may take place (Meyer & Rowan, 1977). If this point is applied to IRAs, it lead us to expect, that formal rules symbolising independence such as for instance the formal statement of independence in the statute of the organisation is matched by lesser degrees of independence concerning the actual competencies and working practises such as for instance the control of the budget and the recruitment of employees.

2.2. Transformation

One central limitation of the sociological new institutionalism - as described above - is the one-sided focus on mechanisms which create similarity. These lead to an understanding of how behaviour is diffused and copied, but fail to explain diversity across organisational boundaries (Sahlin-Anderson & Sevón, 2003). More recently, Scandinavian writers have tried to mitigate this problem, by supplementing the traditional focus on how ideas transfer, with an increasing concern with how ideas are transformed as they transfer (Czarniawska & Joerges, 1996; Sahlin-Anderson, 1996). Thus the mechanisms of isomorphism describe how ideas transfer and result in similarity, where as the Scandinavian tradition emphasize that processes and mechanisms which sustain heterogeneity exist simultaneously.

2.2.1 Transformation as local translation

The central insight in the Scandinavian perspective is that ideas can travel. This takes place when local ideas are being de-contextualised and institutionalised as scripts on how regulation should be undertaken in a rational and efficient manner (Røvik, 1996; 1998). In line with this, ideas about administrative reform travel. For instance, regulatory independence can be seen as an idea, which has been institutionalised as a script on how the regulation of liberalised markets should be organised (McNamara, 2002; Johannsen et al., 2004). Thus, it is argued, that ideas become stabilised at an aggregate level as socially shared scripts, but when these scripts are transferred to other localities, they are translated according to the frame of reference present at that location (Czarniawska & Joerges, 1996: 26). In contrast to most theories of diffusion – which regard the objects moving in time and space as remaining essentially the same – the sociological new institutionalism argues, that ideas continuously are being translated and transformed as they diffuse (Czarniawska, 1996; March, 1999). Thus, one contribution of the notion of translation is, that it alters the locus of change, as the local contexts are not seen as obstacles to policy change, but as the place where change takes place. A second contribution is that the diffusion of ideas which create similarity are combined with an insight in mechanisms which create diversity.

However, the sociological new institutionalism has few explanations for the mechanisms and contextual conditions, which guide the way the translation takes place. It is argued that translation is more than linguistic reinterpretation, as it also involves 'displacement, drift, invention, mediation and the creation of new links' (Czarniawska & Joerges, 1996: 24-25). Thus translation is a contingent process framed by cognitive institutions (Clemens & Cook, 1999). But, the sociological new institutionalism does not attract attention to macro-variables, which could explain similarity in the way translation takes places across countries (Christensen & Lægreid, 2001). On the contrary, it is emphasized that the process is taking place locally, and that it is strongly influenced by uncertainty (Czarniawska & Joerges, ibid.). But if these processes in essence are local constructions guided by uncertainty, there is little reason to investigate cross-country patterns of variation in an attempt to find causal mechanisms and contextual conditions explaining such variation. Indeed, if one takes a radical constructivist point of departure there is little reason to do comparative studies of institutional change, as there will be little hope for cross country generalisation. As I believe that cross-country comparisons can contribute to the sociological notion of transfer and transformation, I turn to 'the credibility thesis', which suggests mechanisms and conditions, which may influence the independence granted to regulatory authorities and explain cross-country variation.

2.2.2 Transformation as credibility mediated by contextual factors

According to the credibility thesis policy makers generally choose to establish independent regulatory authorities on the grounds, that they require such institutions to strengthen the credibility of regulation in the liberalisation process (Kydland & Prescott, 1977; Majone, 2001). If they are to achieve their long-term goal of establishing well-functioning markets, they must convince stakeholders, that they will refrain from interfering with regulation in the short term. Furthermore, they must be able to shift the blame for unwanted consequences of liberalisation in order to secure support from the electorate (Majone, 2001; Gilardi, 2002; Horn, 1995). Thus, the need for credibility creates a functional pressure for regulatory independence. Applied to the energy sector, this leads us to expect, that IRAs will be transformed in a way, where more regulatory independence is granted in countries, where the politicians face a larger need for credibility. Along these lines, the degree of independence will be larger in countries where the energy sector has been controlled by state-owned companies and where there is a tradition for state involvement in the energy sector and in countries where politicians are perceived as being corrupt and the need for credibility in consequence is large. Thus, in contrast to the propositions raised in the sociological new institutionalism, macro-variables are expected to influence the way regulatory independence is transformed across countries.

2.3 Summing up: Propositions on the transfer and transformation of IRAs

In the historical and rational new institutionalisms factors at less aggregated levels are seen as decisive to the dissemination of ideas (Hall, 1989; 1993; Garrett & Weingast, 1993). Such factors are for instance the institutional configuration of the state administration and the institutionalisation of state-society relationships (Weir, 1992; Gourewich, 1989), or the actors' perception of the distributive consequences of ideas (Garrett & Weingast, ibid.). In contrast, the sociological new institutionalism reverse this causal imagery, as institutional change is attributed not to the characteristics or motives of an entity, but to its context or factors at an aggregate level, such as for instance developments in the world society (Schneiberg & Clemens, forthcoming; Meyer, 1994). Both analytical levels are relevant in order to investigate the Europeanisation of public administration, and in order to create a link between mechanisms which create similarity and patterns of stable diversity they should be integrated. On one hand, the transfer of scripts from aggregate levels to less aggregated levels is crucial in order to comprehend why the member states simultaneously undertake the same type of reforms; however, the domestic institutional context is likely to influence how the script is transformed locally.

It is a central insight in the sociological perspective that the concept of ideas which are institutionalised as scripts connect processes of transfer on and from the international arena and transformation at the local arena and hence mechanisms creating similarity as well as mechanisms creating diversity. In order to link these two levels of institutional change an analysis in two steps must be undertaken. In the first part central dimensions of the institutionalised script are identified and the transfer of the script is analysed. In the second part, it is analysed how the script has been transformed, looking into how the central dimensions of the script vary in different local settings. The review of the mechanisms guiding transfer and transformation in the new institutionalism suggests two diverging set of propositions.

Firstly, ideas are institutionalised as scripts, which transfer from the international to the domestic arena. According to the sociological new institutionalism the script on IRAs are expected to transfer through processes of mimetic, normative and coercive isomorphism due to pressures external to the entity (country) investigated (see proposition 1.A. in figure 1). Seen from a historical new institutionalism – on the contrary – the transfer of an idea assumes the form of learning, which is the result of search initiated by national decision-makers (see proposition 1.B. in figure 1). If transfer takes place as learning, it is expected that some variation can be observed in the type of authorities the countries establish in order to regulate the liberalised energy markets, where as the mechanisms of isomorphism predict a high degree of similarity across countries.

Second, the transformation of ideas takes place, when the regulatory script is transformed into formal rules and regulatory practises in the domestic arenas. According to the sociological new institutionalism transformation depends on local translation processes (see proposition 2.A in figure 1). These are contingent processes framed by local cognitive institutions and drift. Systematic patterns of variation in the way the script is transformed across different domestic contexts cannot be derived from macro-level variables, though divergence between local contexts is to be expected. According to the credibility thesis – in contrast – transformation depends on the politicians need for credibility which is mediated by the national institutional settings (see proposition 2.B. in figure 1). Thus, it is expected, that more formal rules can be found on independence, where the need to demonstrate an arms-length relationship is larger, e.g. in countries where the energy sector has been formerly dominated by state ownership and where government is perceived as corrupt and hence less credible.

Figure 1: Mechanisms of transfer and transformation

Transfer	Transformation
1.A.:Isomorphism IRAs are transferred from the international arena through processes of mimetic, normative and coersive isomorphism	*2.A.: Local translation* The transformation takes place in local processes of translation
1.B.: Learning The transfer of an idea is the result of a deliberate choice made by national policy makers between several possible building blocks.	*2.B.: Credibility* The transformation depends on how the need for credibility is mediated by the institutional context

3. Data

Independent agencies have been increasing in recent decades (OECD 2002), but their definition has been critiqued for being fluid and fuzzy (Pollitt & Talbot, 2004). In this study, the delimitation of the population is pragmatic in that it uses a given empirically delimitated 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 and call themselves independent. These are organised in CEER – a self-grown organisation of 16 "National Independent Regulators in the fields of electricity and/or natural gas" (CEER, 2000:1) cooperating in order to promote competitive European markets. The data consist of interviews with regulators, documents from international policy organisations and a survey, based on a questionnaire, which has been completed by the CEER members. The questionnaire was pre-tested by members of the Danish Energy Regulatory Authority. In most of the authorities, the questionnaire has been looked over by senior staff, and most of the respondents have provided thorough answers and comments. Furthermore, some of the more ambiguous or inconsistent answers were discussed with the respondents to eliminate misinterpretation. Thus, the reliability of the answers can be expected to be fairly high. As the survey was carried out in 2001-2003, the authorities from new member states are not part of the population, and neither is Germany. Only the Belgian respondent has failed to complete the questionnaire. The full questionnaire, the data documentation and coding – as well as more qualitative comments added by the respondents – is available in English at www.akf.dk (see Johannsen et al., 2004).

4. The transfer of the script on independent regulatory authorities

The increasing number of IRAs is not explained by the innovation of a new idea, as IRAs have existed for more than a century in the USA (Majone, 2001). The first European IRA in the electricity sector (OFFER) was established when the market was liberalised in the UK in 1990 in order to deliver a central plank in the Thatcher Government policy; namely to transform the monopolistic public sector industries into competitive industries in the private sector (Bower, 2003). The inspiration for OFFER came from other British IRAs, e.g. OFTEL (1984) and OFGAS (1987) (interview with former regulator in OFFER, 2003). The liberalisation of the Norwegian electricity sector in 1991 did not lead to a similar institutionalisation of arms-length relations between the regulatory authority and the government, though a unit responsible for the energy market was established with in the regulatory authority (NVE) and the NVE was separated from the Directorate for State Power Plants in 1986. This indicates that the establishment of a strong IRA is not always a necessity in a liberalisation process. On a larger scale, in comparative studies of the European regulators it has not been possible to find a positive relationship between the independence of regulatory authorities and successful market liberalisation (Larsen et al., forthcoming). Furthermore, it illustrates that the two first-movers in market liberalisation – the UK and Norway – were largely independent of one another (Amundsen & Bergman, 2003).

In the first part of the 1990s, international expert organisations started to recommend the establishment of IRAs. The ideological elements of the Thatcherite reform were de-emphasised and the reform was described in terms of expertise (Johannsen et al., 2004; Sahlin-Anderson, 2001: 56). For instance, the World Bank has encouraged its client countries to create IRAs since the issuance of its power sector policy paper in 1993 (Bakovic et.al., 2003). Similarly, the OECD and the IEA often recommend regulatory independence (Gonenc et al., 2000; IEA, 2001b). In its country studies, the IEA frequently recommends individual countries to strengthen their independent regulatory authorities (IEA, 1999; 2000; 2001a). The country studies can be seen as incidences in which the IEA exercises a normative pressure on the member states. A third example is the World Forum on Energy Regulation attended by an array of different energy regulation stakeholders.[iii] Thus these institutions all recommend independence in decision-making, independence from stakeholders, actual decision-making powers and competencies, as well as sufficient resources in varying degrees (WTER, 2003; Smith, ibid.). A fourth example is the European Commission, which has emphasised the importance of the independent regulation of energy markets in numerous benchmarking reports (Commission, 2003). In 2003, the European Council and Parliament issued a new directive on the common market for electricity, which explicitly requires the establishment of independent regulatory authorities. The idea that independent regulatory authorities are necessary ingredients in a successful liberalisation process thus appears to have gained a firm footing in the EU legislation. The review of the

World Bank and IEA statements reveals, that the idea is translated as it transfers, in the sense that the World Bank recommendation focuses on electrification based on private sector investment, whereas the OECD/IEA and EU recommendations focus on liberalisation in a situation where capacity already exists. However, the recommendations share a high degree of similarity in the general recommendation on establishing IRAs as well as on the formal measures, which are regarded as ways of ensuring independence. Thus, energy sector IRAs have been institutionalised as a script for the achievement of rational and efficient regulation.

The idea that some form of IRA is required in order to guarantee the transparency of the access regime was one of the elements in the EU liberalisation process (Padgett, 2003). All member states establish new regulatory authorities after the 1996 directive, apart from Germany, which was the only country to leave the responsibility of monitoring the electricity markets to the competition authorities (see appendix A). Unlike the 1996 directive, the directive from 2003 explicitly requires the establishment of IRAs. This directive has put increasing pressure on Germany, which is now about to establish an IRA. Thus, the transfer mechanisms have moved from normative pressures – where the establishment of IRAs is regarded as beneficial and where their creation is recommended by epistemic communities including academics as well as international policy organisations (Padgett, ibid: 233; Johannsen et al., 2004), to increasing coercive pressures, as the new EU directive from 2003 explicitly requires the establishment of IRAs. The 'club' of energy regulators, 'the Council of European Energy Regulators' (CEER), established in 2000,[iv] is now a non-profit organisation under Belgian law, and its cooperation with the European Commission has been formalised in the "European Regulators Group for Electricity and Gas" (ERGEG) (OJ, 2003). CEER is also an active participant in the Florence Forum, which works to harmonise the existing rules and identify complementary measures in order to avoid 15 separate markets. Thus, the regulators are increasingly becoming involved in policy making as well as policy implementation at the EU level.

The transfer of an idea may take the form of learning (see proposition 1.B in figure 1), e.g. by the result of policy makers searching in the international arena for administrative models, which could be useful in their reform efforts. When this is the case, some variation can be expected in the type of regulatory authorities chosen by the countries. The recent development in EU legislation and the increasing coercive pressures reveal the extent to which policy makers have less room to choose a nationally-specific regulatory regime. While there is considerable variation between the IRAs in terms of independence, apparently there has only been limited room to choose a different type of organisation. Germany initially chose to leave the regulation with the competition authorities rather than creating a sector-specific IRA, but the country has been under pressure to make one. On the contrary, there is an increasing similarity between countries in the sense that an increasing number of IRAs has been established due to pressures moving from mimetic and normative to coercive isomorphism. Thus, the image of policy makers, who enjoy considerable room for making deliberate choice, does not fit the picture of the transfer of IRAs in the liberalised EU energy markets. This being said, it should however be kept in mind, that there is considerable variation among the regulators in the EU countries in terms of the actual regulatory powers they possess.

5. The transformation of the script on IRAs

In the following, four dimensions of regulatory independence are identified, and it is investigated how the IRAs vary on these dimensions.

5.1 Four dimensions of regulatory independence

The recommendations for the institutionalisation of regulatory independence can be synthesised into four dimensions. Even if these features are not a guarantee that actual regulation will be independent of political interests or stakeholder influence, their presence can be perceived as a sign, that policy makers have adopted the idea of independent regulation as appropriate for the electricity sector.

<u>Dimension A: Independence from government</u>

As regards the first dimension – the relation to government and the legislature – there are limits to the degree of attainable (or desirable) independence, as regulators are part of the state apparatus. However, some measures have been devised to support the arms-length relations between regulators and the political system. Such measures include the appointment of regulators to long, fixed terms, as well as provisions against dismissal on political grounds. To avoid a situation where the regulator takes instructions from the appointer in order to gain reappointment, provisions against reappointment and appointment procedures involving both parliament and government are recommended (Stern, 1997; Stern & Holder, 1998; Majone, 1996; OECD, 2001). The appointment procedures and rules for dismissal have been surveyed in relation to this dimension (see appendix C).

In order to render the liberalisation process credible, an arms-length relationship between government and the regulator may be necessary, as investors may otherwise hesitate due to their fear of short-term political intervention. In line with the credibility thesis (see proposition 2.b), it is likely that it will be especially important to demonstrate this distance in countries characterised by a high degree of state-ownership in the sector, as the tradition for discretionary state intervention in the sector is larger in such countries. In order to investigate whether or not this is the case, indicators regarding the extent of state ownership in the sector are compared to the scores on this dimension in the following paragraph.

Dimension B. Independence from stakeholders

With regard to the second dimension – relations with stakeholders – there are several 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 benefits such as well paid jobs if the regulators are sympathetic to the views of industry (Laffont & Tirole, 1993; Stigler, 1971; Peltzman 1989). Second, there is a risk that the industry can manipulate the regulator due to the asymmetric access to information (Mitnick, 1980). Thirdly, it has been argued that regulators who are recruited directly out of positions in the regulated industry may be especially prone to 'philosophical' capture, because they have been socialised to understand and sympathise with the problems of the regulated parties, whereas the concerns of other stakeholders may be more foreign to them (Makkai & Braithwaite, 1989). Experts have developed an array of recommendations for safeguarding measures against the risks to regulatory independence from industry (Stern, 1997; Majone, 1996; OECD, 2001). The formal rules concerning independence from stakeholders have been surveyed by questioning the rules regarding restrictions about which positions the regulators can hold before and after term, as well as the formal rules prohibiting the discussion of pending cases with the parties involved and provisions on personal interests in the sector (see appendix C).

It is likely that the need for signalling an arms-length to business – e.g. by passing formal rules on the above matters – is stronger in countries where public offices generally are perceived as being likely to be abused for private gains (see proposition 2.b). In order to investigate whether this is the case, scores on the Transparency International 'Corruption Perceptions Index' (CPI) are compared to the scores on this dimension (see appendix B + C).

Dimension C. Independence in decision-making

The third dimension of regulatory independence concerns the degree of actual decision-making competence. Most authors argue, that the regulators ought to be able to make decisions without the risk of being overruled by the political system, and that they should have a number of competences to be able to act independently. In line with this, many authors emphasise the distinction between regulatory agencies that are truly regulatory and possess actual decision-making powers, and agencies that are merely consultative (Colliard & Timsit, 1988; Demarigny, 1996; Dupuis, 1988; Capros, 2003). Thus, the recommendations include, that regulators must hold exclusive decision-making powers and not merely serve as symbolic organisations that make market liberalisation legitimate. This fear is somewhat in line with the proposition made from a sociological new institutionalism; namely that reforms are likely to be undertaken for symbolic reasons and that organisations will often be decoupled. In the following, the decision-making powers are investigated by examining the tasks of the IRA and the obligations of accountability (see appendix C). This is not the equivalent of investigating actual working practises, but it is difficult to produce comparable data on actual practises of regulatory institutions. It should involve a comparison of the decisions made by the authorities on actual matters, but as the regulatory issues vary between countries, this type of data is difficult to compare.

In order to tap into the question of the actual and substantial powers of the IRAs and in order to investigate whether the IRAs are symbolic constructs, the scores of the countries in this dimension will be compared to the scores in dimensions A and B, as these dimensions can be regarded to a lesser extent as indicators of the IRA working practises. The presence of great discrepancy between the dimensions is regarded as a sign of decoupling and hence seen as supporting the sociological view.

Dimension D. Organisational autonomy

Organisational autonomy is regarded as a fourth dimension, that possibly enhances the independence of the regulatory authority (Smith, ibid.). Organisations gain autonomy, when they have maximum control of their input of resources (Pfeffer & 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 staff are important resources. This dimension is measured with items considering the source of the budget and the responsibility for personnel policies (see appendix C). The control of personnel policy and financial resources can represent a strong means to control an IRA, which is independent by name. Although neither of these dimensions measures the actual working practises of the organisations, low scores on this, together with high scores on dimensions A and B can be regarded as an indication of decoupling between formal and more hidden practises.

5.2 Variations in regulatory independence

Having identified four dimensions of regulatory independence, the next step is to analyze how the script has been transformed in the member states. The following table contains the values of the key variables A, B, C, D and a total index value, which is the average of the values for the four key variables for each country (see appendix C).

Table 1: Ranking of regulatory authorities on the 'independence index'

	A	*Rank*	*B*	*Rank*	*C*	*Rank*	*D*	*Rank*	*Total index*	*Rank*
Austria	0.67	6/7	0.50	8	0.93	2	0.63	13-15	0.68	7
Denmark	0.44	13/14	0.33	10-14	0.87	8	0.63	13-15	0.57	14
Finland	0.58	10	0.33	10-14	0.83	9	0.88	4-7	0.59	12
France	0.94	2	0.83	2	0.89	3/4	0.75	8-12	0.86	2
Greece	0.78	3	0.33	10-14	0.92	3/4	0.75	8-12	0.69	6
Ireland	0.69	5	0.58	6/7	0.88	7	1.00	1-3	0.79	3
Italy	1.00	1	0.75	3	0.89	5	1.00	1-3	0.91	1
Luxembourg	0.50	12	0.63	5	0.58	13	0.75	8-12	0.61	11
Netherlands	0.63	8	0.33	10-14	0.82	10	0.88	4-7	0.66	8
N. Ireland	0.44	13/14	1.00	1	0.88	6	0.63	13-15	0.74	5
Norway	0.53	11	0.21	15	0.50	14	0.75	8-12	0.50	15
Portugal	0.75	4	0.67	4	0.64	11	0.88	4-7	0.76	4
Spain	0.61	9	0.58	6/7	0.36	15	0.75	8-12	0.58	13
Sweden	0.67	6/7	0.33	10-14	0.72	12	0.88	4-7	0.65	10
GB	0.17	15	0.46	9	0.99	1	1.00	1-3	0.65	9
Average	*0.61*		*0.54*		*0.79*		*0.78*		*0.68*	

<u>Dimension A: Independence from government</u>

Dimension A regards the formal independence of the regulatory authority from government and legislature. The Italian, French, Greek, Portuguese and Irish authorities rank highest on dimension A (see Table 1). These are countries with vertically integrated companies and small market openings (see appendix B). State ownership of the dominant company appears to play a particularly strong role in this dimension. Italy, France, Greece and Ireland all have companies with a state ownership share in excess of 51%, and these companies also have high market shares. The exception is Portugal, which has progressively privatised most of its company EDP. However, EDP remains dominant in generation as well as transmission and distribution, there is still a small-market opening, and most of the market is organised as a 'public service system' (IEA, 2000c). The next two countries on dimension A, Austria and Sweden, also have state-owned generation companies with high market shares. Countries ranking from number 8 (the Netherlands) and lower on dimension A do not have large state-owned companies, with the exception of Finland and Norway; however, Finland and Norway also rank relatively high on dimension A in relation to their ranking on other dimensions.

Generally, it seems as though the institutionalisation of an arms-length relationship to government plays a larger role in countries where (partly) state-owned companies dominate the electricity sector. Thus, ownership structures appear to influence how the institutionalised scripts are transformed in the member states, meaning that more formal measures are taken to ensure independence from government if state ownership is strong.

Dimension B: Independence from stakeholders

The North European countries and Greece have low ranks on dimension B (see Table 1). There are alternative explanations for this pattern; one being that small countries have fewer formal restrictions on recruitment in order not to limit the pool from which commissioners can be drawn untenably. Another explanation could be that greater attention is devoted to the organisation of relations between the regulators and sector stakeholders in countries where tight-knit relations between business and government are generally perceived to pose a major public policy problem. This explanation is supported by the analysis depicted in Figures 2 and 3 below, where 'independence from stakeholders' is the dependent variable and the score on the CPI and the number of inhabitants in the countries are the independent variables (see appendix A).[v]

-------------------------------------FIGURE 2 & FIGURE 3-----------------------------

Figure 2 shows a strong negative relationship between independence of stakeholders and the corruption perceptions index. Figure 3 on the other hand shows a much weaker relationship between number of inhabitants and independence from stakeholders. In other words, more independence is found in countries where public office is perceived as being likely to be used for private gains, e.g. countries where the politicians have a low credibility. In contrast, the number of inhabitants have less influence. Thus, the way the regulatory script has been transformed on this dimension can be ascribed to systematic variation in macro-variables, e.g. the level of corruption across countries, rather than to local patterns of translation.

Dimension C: Independent decision-making

The variation in terms of independence in decision-making is to some extent different, as authorities that rank high on other dimensions can rank quite low in terms of independent decision-making. The top-ranking authorities from Britain and Austria appear to make independent decisions on many issues, even though they do not have significant formal independence from government and stakeholders. The French, Greek, Italian and Irish regulators rank high on dimension C as on most other dimensions, but the Portuguese authority does not rank high here, because government must approve its annual report, and it has no competences on licensing. The Spanish authority primarily plays a consultative role, providing transparency in the regulatory system, whereas the final decision-making rests with the government. This may demonstrate that formal and actual independence can be quite different matters in the sense that formal measures on independence from government and stakeholders by no means are a guarantee of strong regulators if these are not given substantial competencies. On the contrary, regulators can be perceived to be strong on the grounds that they hold actual decision-making powers, even if they are formally less independent from government and stakeholders. However, even if this is the picture in some cases, it does not represent a dominant pattern. On the contrary, the general picture is that countries tend to have similar scores on the dimensions and that some countries actually have higher ranks on independence in decision-making than on the independence from government and stakeholders. According to the sociological new institutionalism, it could be expected that reforms would be undertaken for symbolic reasons and that there would be a decoupling between formal rules and actual practises. The data used for an investigation of this proposition do not measure the actual practises of the regulators; rather, they measure more substantial dimensions of independence concerning the independence in decision making and the organisational autonomy compared to less substantial dimensions concerning the formal rules on the relationships to government and stakeholders. However, while some variation was found across the different dimensions of independence, this was not sufficiently pronounced to support the proposition that the transfer of IRAs is likely to be symbolic and decoupled. However, it should be kept in mind that this is only a first attempt at getting closer to the investigation of actual regulatory practises.

Dimension D: Organisational and financial autonomy

In general, authorities ranking high on dimension A also rank high on dimension D. This is hardly surprising, given that both dimensions provide us with information concerning the degree to which the authority can regulate free from indirect government influence – either through power over the appointment of regulators or through power over organisational resources. The notable exception here is the British authority, which ranks last on dimension A and first on dimension D. It is also interesting to see that the French authority, which ranks second in terms of arms-length relations between government and regulators (dimension A), has a relatively low ranking on dimension D due to the fact that it has no independent funding. Thus, even if the French IRA appears quite independent in most matters, the funding granted by government can still control it. The Austrian authority also has an uncharacteristically low ranking on this dimension, reflecting that it shares authority over funding, administration of the budget, and internal organisation with the government. Earlier it was argued, that weak scores on this dimension compared to the scores on dimensions A and B could be seen as an indication of decoupling and IRAs as holding a symbolic independence. However, this pattern is not pronounced; hence, the data does not support this proposition.

5.3 Mechanisms of transformation

Even if the script on regulatory independence eventually has been transferred to all the member states – with Germany being the last of the old member states to join the club – the analysis above shows that the formal rules sustaining the local organisations varies and, thus, that the script has been transformed differently in the member states. According to the credibility thesis, transformation may depend on how the need for demonstrating credible commitment to the market order is mediated by the economic, political and administrative contexts. In line with this, it was proposed, that more formal rules on independence would be found, where the need to demonstrate an arms-length relationship with government and sector stakeholders was large. Furthermore, this was expected to be the case in countries where the energy sector formerly has been dominated by state-ownership and where government has been perceived to be corrupt and hence less credible. The analysis of the independence from government and stakeholders supports this, as the countries characterised by the strongest degree of state-ownership and perceived as being the most corrupt have the greatest formal independence on these dimensions.

The need for credibility also appears to be mediated by the previous degree of administrative decentralisation in the sector. In some countries, the electricity sector has grown up as an object of central state policy, whereas in other countries it has to some extent been left to local authorities and consumers and companies to organise electricity supply. Many of the countries where the regulatory authority is not particularly independent have traditions of decentralised structures and/or self-regulation in the electricity sector. This is the case in Denmark, Finland, the Netherlands and also in Germany. One reason for this may be that local authorities and/or non-state sector organisations resist the 'centralisation' of regulatory competence in a new state organisation. Furthermore, representatives of both the Dutch and German regulatory authorities[vi] express the viewpoint that sector-specific independent regulatory authorities may represent a means by which to maintain the influence of national sector policies on energy regulation, whereas truly independent, liberalisation-friendly regulation ought to be based in the competition authorities (interview in the Dutch IRA, 2003; Interview in the German federal cartel office, 2003). This indicates that governments in countries with decentralised structures may have chosen to maintain regulation within normal bureaucratic structures rather than to delegate competencies, not because ministers want to steer regulation in detail, but because they do not perceive the need for a new independent bureaucracy. This supports the proposition that the need to signal credibility is mediated by contextual variables, as the credibility of politicians at the central level is less threatened by liberalisation, if the sector has been decentralised, because the sector is not considered to be linked to the central state to the same extent. The lack or delay of an independent regulatory authority may, however, also be an indicator of the political strength of sector organisations vis-à-vis the central state in countries where the state regulation of the electricity sector has traditionally been limited (Brendstrup, 2005).

Stable institutions and administrative traditions

The script is transformed in accordance with the way credibility is mediated by the ownership structure in the energy sector and the level of corruption and decentralisation. This implies on one hand that cross country divergence continue to exist, but also that institutional change will not always proceed according to the administrative tradition, and that the administrative traditions of the countries are not completely stable in terms of the employment of IRAs. In countries such as France and the UK, where the traditional institutions are hard to reconcile with a credible market and the state has the autonomy to change these structures, there appears to be more of a break with the tradition, than in countries where the traditional administrative institutions do not block the way for credible market liberalisation. Furthermore, new institutions such as independent regulatory authorities can run counter to some elements of tradition, as it continues other elements (see also Döhler, 2002). Discussion of the British, French and Norwegian cases can illustrate this point. Traditionally, France is a unitary state with a large degree of central control over public administration at all levels. Self-regulation or the dispersion of regulatory functions over independent decision-making centres at different levels is not a strong part of the French tradition. It can thus be argued that the creation of the French IRA breaks with the French tradition for unitary state structures, but at the same time continues the tradition of central control over the sector. In the UK, the break with the administrative tradition was stronger due to a very committed and powerful government, e.g. Thatcherism. In contrast, the administrative traditions have not been regarded as problematic for the credibility of market liberalisation in the Scandinavian countries. For instance, Norway has a liberalised market and a regulator with little independence. This is not seen as problematic in Norway, though it has been critiqued by the IEA (interview Norway, 2003; IEA, 2001). In Germany, an IRA was established in the telecommunications sector, even if the establishment of an IRA was blocked in the energy sector (Döhler, 2002). This also indicates, that the administrative tradition does not determine the employment of agencies. In this way, the script on IRAs is being transformed is influenced by contextual factors, which are diverging at the national level, but this is essentially a process of institutional change, rather than a process of inertia and stable patterns of diversity.

6. Conclusion

Thus far, it has been argued, that ideas are transformed as they transfer. In the case of regulatory authorities in the electricity and gas sectors, transfer has taken place as experiences from the UK as a first-mover country have been de-contextualised and institutionalised as a script for how the regulation of liberalised energy markets ought to be organised. All but one of the EU member states have established sector-specific IRAs, and the remaining country is about to do so. The analysis reveals that IRAs transfer to the EU member states by mechanisms that move from mimetic and normative pressures to more direct coercion with the 2003 directive. International expert organisations such as the IEA, the EU and the World Forum of Energy regulators are central agents of transfer. Thus, the mechanisms of transfer in the case of IRAs in the energy sector are in line with those proposed in the sociological new institutionalism. The notion of policy makers who choose from a menu with several options in a process of problem-oriented political learning seem less adequate, as little variation is found, since all of the member states chose to establish IRAs; however, further research is required to make a firm conclusion on this matter. According to the sociological new institutionalism, reforms are often symbolic and the formal rules of an organisation are likely to be decoupled from the actual working practises. This proposition has been investigated by comparing the scores on independence from government and stakeholders – which are very formal – with dimensions of independence concerning the competencies and decision-making procedures as well as the financial and organisational autonomy, which are closer to actual working practises. If the IRAs have significant formal independence, but little independence in terms of organisational autonomy and actual decision-making, this could be interpreted as a sign of decoupling and the creation of IRAs as being largely symbolic. The present analysis does not support this proposition.

Transformation takes place in the domestic arenas, as the institutionalised script is turned into formal rules and regulatory practises. There is considerable variation between the IRAs in the European energy markets in terms of four dimensions of independence: 1) independence from government, 2) independence from stakeholders, 3) independent decision-making and 4) organisational & financial autonomy. This indicates that the script has been transformed differently in the EU countries. The mediation of credibility by contextual factors is a central mechanism of transformation. The analysis shows that there are more formal rules securing the independence of IRAs from government in countries where there is a high degree of state-ownership in the energy sector. Furthermore, IRAs have more formal rules to secure a distance from the energy sector in countries where policy makers are perceived as being more likely to use public office for private gains and hence less credible. The degree of decentralisation also appears to influence the transformation of the script, as countries with decentralised structures appear to be less prone to create strong and independent regulators at the central level. This may be because it would not be in line with the administrative tradition or because decentral authorities and non-state sector organisations possess the power to block the establishment of IRAs. Thus, the way credibility is mediated by contextual factors can account for important cross-country variations. In conclusion, the mechanisms of transfer suggested in the sociological new institutionalism are best suited to explain the similarity in the emergence of IRAs in the EU, whereas the mechanisms of transformation suggested in line with the credibility thesis are best suited to explain systematic differences between the IRAs. By integrating these insights in a two-stage analysis of how ideas institutionalised as scripts transfer and transform, it can be explained how impulses of change are mediated by more stable and robust institutional factors such as ownership structures, corruption and decentralisation. It is within such processes, that ideational scripts travelling from the international arena are undergoing a flexible transformation, whereby new regulatory ideas are adapted to stable and diverging contextual conditions at the national level. The result is a flexible adaptation, e.g. a sequential transfer and transformation of regulatory ideas, rather than the existence of stable divergent policy styles.

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[i] However, Knill (2002) has made an attempt at investigating this link by analysing how policy transfer does not necessarily lead to similarity in policies, as the member states can choose to conform to different extents.

[ii] More encompassing discussions of the sociological new institutionalism are found in DiMaggio & Powell, ibid., Scott, 1995; Peters, 1999.

[iii] It has been organised by the associations of regional energy regulators, the World Bank, the IEA, the European Commission and the World Energy Council.

[iv] www.ceer-eu.org. At the time the survey was conducted, the organisation consisted of 16 members from 14 EU countries (including two members from the UK, one British and one Northern Irish, but excluding Germany) and one EEA country (Norway). By now, the 10 new EU member states have been included.

[v] It should be noted that Greece is treated as an outlier and thus excluded from the calculation. Greece has a score of 4,2 on the CPI & 0,3 on ‘Independence from stakeholders’ and Northern Ireland is missing, as the country is not included in the CPI.

[vi] I.e. the President of the Bundeskartellamt.

Figure 2: CPI and independence (B)

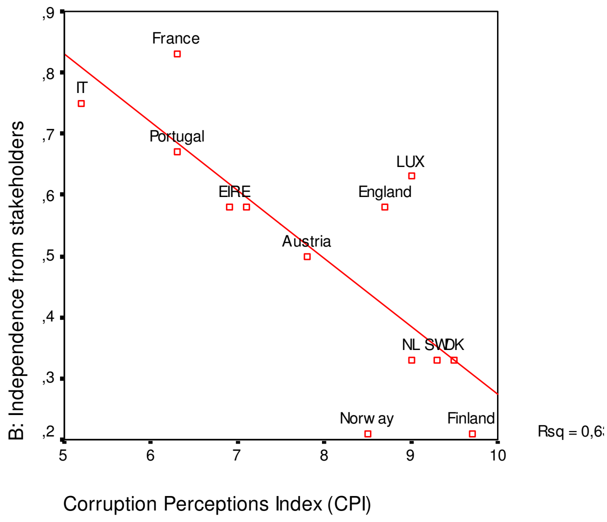
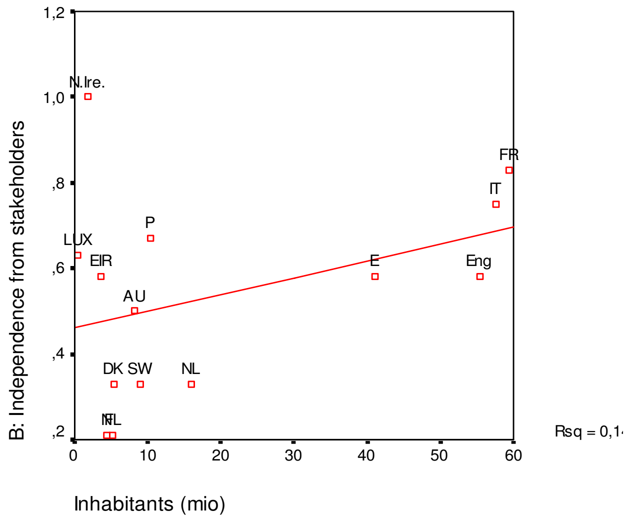


Figure 3: Inhabitants and independence (B)



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List of interviews:

17/6 2003	Interview with representative of Offer, Great Britain
17/6 2003	Interview with representative of the Swedish Energy Agency, Sweden
27/6 2003	Interview with representative of Energy Market Authority, Finland
28/8 2003	Interview with representative of NVE, Norway
6/10 2003	Interview with representative of the Federal Cartel Office, Germany
6/10 2003	Interview with representative of the Commission for Energy Regulation, Ireland
6/10 2003	Interview with representative of Office of external relations, Autorità per l'energia elletrica e il gas, Italy
7/10 2003	Interview with representative of La Comisión Nacional de Energía, Spain
8/10 2003	Interview with representative of ERSE, Portugal.
8/10 2003	Interview with representative of Competition Authority and Office for Energy Regulation, the Netherlands.
8/10 2003	Interview with representative of La Comission de la Régulation de l'Energie, France
1/12 2003	Interview with representative of Danish Energy Regulatory Authority

Appendix A: Years of establishment for IRAs, number of inhabitant and score on Corruption Perceptions Index (CPI)

	Year	*Inhabitants (mio.)*	*CPI*
Austria	1998	8.1	7,80
Denmark	2000	5.36	9,50
Finland	1995	5.2	9,70
France	2000	59.4	6,30
Greece	2000	10.9	4,20
Ireland	1999	3.63	6,90
Italy	1996	57.6	5,20
Luxembourg	2000	0.46	9,00
Netherlands	1998	16	9,00
N. Ireland	1992	1.7	n.a.
Norway	1986	4.33	8,50
Portugal	1996	10.3	6,30
Spain	1998	41	7,10
Sweden	1996	8.9	9,30
England	1990	55.4	8,70

Notes:

1. Information on the year of establishment is based on interviews with regulators, http://www.ceer-eu.org, and Levi-Faur, 2003
2. CPI is Transparency International's 'Corruption Perceptions Index' (CPI) (www.transparency.org/cpi/2002. Ranges between 10 (highly clean) and 0 (highly corrupt).

Appendix B: Market structure in the electricity sector in the CEER member countries

Countries	*Market share of largest upstream generator*[1]	*Biggest three generators' share of capacity*	*Unbundling of transmission system operator/ owner*	*Unbundling of distribution system operator/ owner*	*Market opening*	*Import capacity as % of installed capacity*
Austria	45%	45%	Legal	Accounting	100%	21%
Denmark	45%	78%	Legal	Legal	100%	29%
Finland	40%	45%	Ownership	Management	100%	19%
France	90%	92%	Management	Accounting	37%	12%
Greece	98%	97% (1)	Legal/mgmt	Accounting	34%	11%
Ireland	98%	97% (1)	Legal/mgmt	Management	56%	5%
Italy	80%	69%	Own/legal	Legal	70%	8%
Luxembourg	n.a.[2]	n.a.	Management	Accounts	57%	100%
Netherlands	22%	59%	Ownership	Management	63%	21%
N. Ireland	- -	- -	--	- -	35%[3]	- -
Norway[4]	30%	50%	Ownership	- -	100%	- -
Portugal	72%	82%	Legal	Accounting	45%	8%
Spain	45%	83%	Ownership	Legal	100%	4%
Sweden	50%	90%	Ownership	Legal	100%	21%
GB	16%	36%	Ownership	Legal	100%	3%

Main source: Second Benchmarking Report on the Implementation of the Internal Electricity and Gas Market, Commission staff working paper, SEC (2003) 448, 16/04/2003.

1 Figures for the market share of the largest upstream generator is from the study »Energy Liberalisation Indicators in Europe« from 2000, written by Oxford Economic Research Associates (OXERA) for GB Department of Trade and Industry and the Netherlands Ministry of Economic Affairs.

2 Most of Luxembourg's electricity requirements (around 90%) are imported from Belgium and Germany.

3 Source: Delargy (2003).

4 Figures for Norway are from the study »Energy Liberalisation Indicators in Europe« from 2000, written by Oxford Economic Research Associates for GB Department of Trade and Industry and the Netherlands Ministry of Economic Affairs.

Appendix C

Below the data, e.g. the items, the coding and the scores, used to measure the four dimensions of regulatory independence is presented. In the independence index, we have weighted the variables in each section together to construct four key variables (A, B, C and D). The overall independence index is calculated as the average of the values for the four key variables. In the construction of variables, 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, we 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, 1/3, 2/3 and 0. In section C, we have constructed a single variable out of the six items regarding the competencies of the regulatory authority. The mean of values accorded to the six items in variable 17 is added to the variables coming out of three questions concerning the accountability of the regulatory authority vis-à-vis government and legislature. Together they make up the regulatory authority's score on key variable C concerning competence. More details are found on missing values etc. in Johansen et al., 2004 available at www.akf.dk.

Table A: Formal independence from government and legislature

1.1. What is the term of the agency head or the commissioners?	*7 years or more (=1)**	*4-6 years (=2/3)*	*1-3 years (=1/3)*	*No fixed term (=0)*
	IT	AT, DK, FR, GR, IE, LU, NO, PT, ES, SE		UK
1.2. Who appoints the agency head or commissioners?	*A mix of the legislature and the executive (=1)*	*The Legislature (=2/3)*	*The executive collectively (=1/3)*	*One or two ministers (=0)*
	FR, GR, IT, ES		AT, FI, LU, PT, SE	DK, IE, NL, NO, UK
1.3. What are the provisions regarding dismissal of agency head or commissioners?	*Impossible or only possible for reasons related to policy (=1)*	*No specific provisions (=½)*	*Possible at the appointer's discretion (=0)*	
	AT, DK, FI, FR, GR, IE, IT, LU, NO, ES, SE, PT, UK	NL		
1.4. May the agency head or the commissioners hold offices in government?	*No (=1)*	*Only with the permission of the executive (=2/3)*	No special provisions (=1/3)	Yes (=0)
	AT, FI, FR, GR, IE, IT, LU, NL, NO, PT, ES, SE		UK	DK
1.5. Is the appointment renewable?	*No (=1)*	*Yes, once (=1/2)*	*Yes, more than once (=0)*	
	FR, GR, IT,	IR, NO, PT, UK	AU, DK, LU, ES, SE,	
1.6. Is independence a formal requirement for the appointment?	*Yes (=1)*	*No (=0)*		
	AT, DK, FR, IE, IT, NL, SE, PT	FI, GR, LU, NO, ES, UK		

Table B: Dimension B: Independence of stakeholders

2.1. May commissioners/the agency head have held a position in the industry/its associations in the years preceding appointment	*No (a=1)*	*Yes, but not within a specified number of years (b=2/3)*	*Yes (c=1/3)*	*Yes and they can hold a position in industry (=0)*
	AT, IT, LU	PT	DK, GR, IE, ES, NO, SE, FI, NL, FR, UK	None
2.2. Are there provisions restricting the commissioners'/the agency head's job seeking in the industry after their term	*Yes, not for several years (=1)*	*Yes, for one year (=1/2)*	*No (=0)*	
	FR, IT, PT, ES	IE	AT, DK, FI, GR, LU, NL, NO, SE, UK	
2.3. Are their provisions forbidding discussions of pending cases with stakeholders	*Yes, in the specific legislation regarding the regulator (=1)*	*Yes, in general legislation regarding good governance (=1/2)*	*No (=0)*	
	FR	DK, FI, IE, LU, SE, UK	AT, GR, IT, NL, NO, PT, ES	
2.4. 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 (=1)*	*Yes, in relation to individual cases (=1/2)*	*No (=0)*	
	AT, FR, GR, IE, IT, LU, NL, PT, ES, UK	DK, FI, NO, SW		

Table C.1: Which competencies does the regulator exercise*)?

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	N/A	F	F
Greece	P	P	P	P	F	F
Ireland	F	F	F	F	F	F
Italy	F	F	P	F	F	F
Luxemburg	P	P	N	N	N/A	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

*) Coding: F (Fully competent) = 1; P (Partly competent) = 2/3 ; N (Not competent) = 0

Table C.2: Dimension C: Obligations of accountability

3.1 Which are the formal obligations of accountability of the regulatory authority vis-à-vis the government?	None (=1)	presentation of an annual report for information only (=1)	presentation of an annual report for approval (=½)	the agency is fully accountable (=0)
	AU, GR	DK, LU, NL, IT, SV, UK, FR,	FL, PO, SP	NO
3.2 Which are the formal obligations of accountability of the regulatory authority vis-à-vis the legislature?	None (=1)	presentation of an annual report for information only (=1)	presentation of an annual report for approval (=½)	the agency is fully accountable(=0)
	DK, FL, FR, IR, NO, SW	AU, GR, IT, NL, PO UK	LU, SP	
3.3 Who, other than a court, can overturn the regulatory authority's decision where it has exclusive competency?	Nobody (=1)	a specialised body (e.g. a legal tribunal) (=2/3)	the government, with qualifications (=1/3)	the government, unconditionally (=0)
	AU, FL, FR, GR, IR, UK	DK, IT, LU, PO	NL	SP, NO, SW

Table D: Financial and organisational autonomy

4.1. Which is the source of the regulatory authority's budget?	*Fees levied on regulated firms (=1)*	*Mixed (=½)*	*Government (=0)*
	DK, GR, IE, IT, LU, ES, UK	AU, FL, NE, PO, SW	FR, NO
4.2 When budget has been appointed, who controls the budget?	*Regulatory authority (=1)*	*Mixed (=½)*	*Government (=0)*
	FI, FR, GR, IE, IT, LU, NL, NO, PT, SE, UK	AT, DK	ES
4.3 Who decides the regulatory authority's internal organisation?	*Regulatory authority (=1)*	*Mixed (=½)*	*Government (=0)*
	FI, FR, IE, IT, LU, NL, NO, PT, ES, SE, UK	AT, DK, GR	None
4.4 Who is in charge of the personnel policy?	*Regulatory authority (=1)*	*Mixed (=½)*	*Government (=0)*
	AT, FI, FR, IE, IT, NL, NO, PT, ES, SE, UK	DK, GR	LU