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Perceptions, realities, concession—What is driving the integration of European energy policies?

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ABSTRACT

Today's European energy policy is characterised by national approaches portraying it as one of the least successful areas of integration despite its importance for our everyday life. This exploratory study presents a new way in analysing the approaches and processes operative in this area. It introduces a new dimension of policy evaluation, the role of national energy majors, and proposes its utilisation in the increasingly important method of using indexes for energy supply security. By doing so, the relevance of perceptions of energy supply security for energy policy integration is highlighted, pointing at the concessions necessary to overcome the integratory deadlock. The indexes proposed in this paper can provide insights for policy-makers and researchers into the ongoing integration process and the crucial importance energy business plays therein. Finally, the exploratory methodology developed in this essay can be employed in various other policy areas to classify, discover and analyse policy directions.

1. Introduction

During the last decade, the development of public and political awareness for all kinds of energy related issues, be it the political stability of supplier countries, the long-term sustainability of energy mixes or the increasing concentration of natural reserves, experienced an unparalleled renaissance since the oil crises of the 1970's. Still, within the various areas of policy-making in the European Union (EU), hardly any can be found to be as contested, controversially discussed and characterised by national opposition, as it is the case in the field of energy policy. Even though the Union took off with the integration of its member states' most vital economic domain, by establishing the European Coal and Steel Community and the Euratom Treaty some half century ago, today's Union is still without what could be called Common Energy Policy. Despite various concrete endeavours for a formal EU competency, legal initiatives still stem solely from the assignment of competencies to the *European government* in the areas of environment, research, infrastructure and mainly competition and the Single Market (Eberlein, 2005, p. 63; Matláry, 1997, pp. 58–65).

At the same time, the driving forces of integration of European energy policies and the reasons for national roadblocks are opaque in form, and often hard to explain thoroughly. Scholars of energy policy, the European Commission and various Presidencies pointed out the beneficial effects of integration measures like a common external energy policy, an internal market for energy or common approaches to climate change (Helm, 2005b). Yet, the member states take up all possible stances and combinations of stances on integration in the different subareas of energy policy. On the one hand, evaluations of the effects of certain policy strategies are often characterised by normative assumptions. On the other hand, official statements do not reveal these strategies extensively, because at least the pursuit of a secure supply of natural resources is characterised by rivalry in consumption and increasingly in production between countries, which are equipped with only limited indigenous reserves. This cleavage between obvious policy goals, like the EU's trinity of competitiveness, sustainability and security, and the strategic behaviour of the involved players, be they governments, interest groups or companies, makes the analysis of energy policy in general a difficult task, even more so when countries are in the process of economic and political integration.

This study aims to shed light on the ongoing integration process in the European energy sector. It is an exploratory research, emphasising on the dimensions that determine the member states' approaches towards integration. The applied methodological construct aims to indicate differences and similarities in the EU-15's starting points in the rally for security of energy supply, to explain member states' diverging policy directions. For this purpose an index is proposed that indicates a significant dimension in the perception of energy supply security. This index is constructed by comparing the capacities of a country's main producer of primary energy resources to the country's consumption characteristics (Harks and Pointvogl, 2007). In combination with other proxies for supply security, groups of member states are formed, which are compared in their

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performance in patterns of integration aiming to deduct mechanisms of integration of European energy policies. The hypotheses tested in this study are (a) that perceived security of energy supply is a main determinant of member states' position towards integration of energy policies; and (b) that the relative strength of national energy business has significant impact on the member states' perceptions of a secure energy supply.

The remainder of this paper is organised as follows. The next section provides the theoretical background of the analysis and describes the research design. The execution of the before described analysis constitutes section three. It is divided according to the triangular concept indicated by this paper's title: perceptions, realities and concessions; the first part however gives a brief overview of the tide of events relevant for the following evaluation. Subsection 3.2 conceptualises the link between how the member states perceive their supply security, their policies and the role of energy business therein. The realities section examines the relation between the member states' perception of supply security and their willingness to integrate. It points out that groups with similar characteristics of supply security adopt similar policies towards integration. *Concessions* come into play in the subsequent section, which explains what this primacy of supply security entailed and continues to entail for the process of integration of European energy policies. Section four concludes.

2. Research design

This section defines and positions the concepts used in this study, explains the theoretical framework and assumptions that are employed and dealt with in this essay, and outlines arising limitations.

2.1. Definitions

In the following, the concepts of European energy policy and security of energy supply as well as the central players of this study are defined. The concept of energy policy is generally not straightforward (Burton, 1980, p. 1f; Webb and Ricketts, 1980, p. 254f). When applied to the European Union, it exhibits a large number of divergent notions. Firstly, because what is supposed to be a European energy policy is still emerging. Secondly, the different actors involved have partially diametrical views on what government can and should do, what is circumscribed by the term, and whether it should be an integrated, national, or more decentralised area of state intervention.

This essay regards all forms of intervention in the production, distribution and consumption of all sources of energy as European energy policy. Moreover, it treats the member states as the central political players (e.g., Moravcsik, 1993, 1998), in contrast to a *governance* approach (e.g., Hooghe and Marks, 2001; Sandholtz, 1996). Member states are considered to act as monolithic entities that have only one approach to energy policy, what ignores also the multiplicity of domestic actors. This comes close to reality in certain subareas, like external energy policy, but leaves aside for example the direct role the European Commission plays as agenda setter or guardian of the treaties (Belyi, 2008, p. 204f; Matláry, 1997, p. 12f). A contrasting view on the relation between countries and energy firms, i.e. that the latter are the dominant players in policy matters and use their government to fortify and protect their position, may draw on realistic observations in certain areas, too. Nevertheless, the eventuality of state capture is largely omitted from the present paper. The interests and role as actors of the respective member states and companies analysed can in parts be interpreted interchangeably, as the business variables introduced have a country constant parametric value in the employed energy policy approaches. Beyond that, the main reason for non-consideration of energy companies as the main actors is that with that, a second unobservable dimension in the opaque intertwinements in the European energy sectors, would have been introduced. Such a move would point increasingly towards a more *governance* oriented approach, significantly exacerbating the analysis and countering the efforts of singling out relevant quantifiable dimensions. Moreover, it is shown that in most member states business and state endeavours can be described as unidirectional, at least in the context of integration in the energy sector. This paper can serve as a starting point for further researche on the character of degree and methods of potential capture of regulators and governments through energy business and its implications on energy policy.

In another dimension, the supposed dominance of the member states, which is central to this approach, and the implicated shortcomings, however, are mitigated by the used integration indicators. In a subordinating way, they assign a policy function and element of assessment to the Commission and the European Court of Justice (ECJ) when carrying out infringement procedures or progress reports on the assessed Directives. Finally, only the EU-15 are examined, to avoid a bias in the analysis stemming from the implementation under particular circumstances in the new member states.

Furthermore, for reasons of simplification, the only business players that come into consideration in this study are what is referred to in the following as *Majors*. The term *Major* used to describe the dominant oil companies of the last century (Stevens, 1988, p. 119). Nowadays it relates increasingly to the biggest, often vertically integrated energy companies (or *national champions*) of a certain region. Here, it relates to the biggest oil and gas producing company of a member state. The criteria to allocate a company to a country are the location of its registered office and historical considerations. The procedure seems to be clear-cut. Nonetheless, it reflects actual business activity and company ownership structures only to a limited extent. Today, most of Europe's Majors are multinational companies that pay taxes, have employees, and operate to a large part in countries that are not considered to be their home countries. On the one hand, this bears limitations for the approach at hand, as limited accountabilities towards governments or the possibility of corporate relocation weaken the ties between both entities.[1] On the other hand, established connections are significant sunk costs for energy companies. They benefit for example from support and safeguard for large-scale foreign investments, receive particular emission permits or are being protected from hostile takeover (Harks and Pointvogl, 2007; Molle, 2006, p. 199). This paper assumes that ties between national governments and national champions imply prohibitively high costs of being unwind due to sufficiently high mutual dependencies on both sides. Examples such as *Golden Shares*, significant governmental shareholding, or governmental support and sponsoring in exploration and production projects let this assumption reflect a not too distorted reality.[2]

Lastly, it is important to define the term security of energy supply, which is used in a broad and general notion throughout this essay. It refers to the uninterrupted, continuous and sufficient

[1] Röller et al. (2007, p. 27) support this view, however, do not recognise other than financial aspects.

[2] Examples for government's Golden Shares in national energy champions are found in Belgium, France, Germany, Italy, Portugal, Spain and the UK. Cases of significant shareholding in Majors are present in Austria, Finland, France, Greece, Italy, Portugal and Sweden. Worth mentioning is the support multinationals like Royal Dutch Shell and BP received for projects in Russia (e.g., with the fields Sakhalin-II and Kovykta) from the Dutch and British government, respectively (ECJ, 2008a–c; Grundmann and Möslein, 2003; Harks and Pointvogl, 2007; Privatization Barometer, 2006, 2008).

availability of all forms of energy a given entity requires.[3] In particular, this implies that each country's security of energy supply is defined by a certain level of vulnerability to crisis, typically in the form of a supply disruption, which can be described by the probability of a crisis, its likelihood to impact economy and society, and the final consequences (Blyth and Lefèvre, 2004; Egenhofer et al., 2004; Gnansounou, 2008; Groenenberg et al., 2006). Even though often referred to as a main goal of energy policy and a tool of assessment, the immanent subjectivity of this approach is obvious.

2.2. Description and classification of data, indicators and indexes

The data and information used in this paper are publicly available and dealt with in a transparent way. The sources and processing of data as well as arising implications are reviewed at the outset of this section. After that, the *integration indicators*, which are used as proxies to reflect member states position towards integration of energy policies, are presented together with the EU sources. Finally, attention is given to the discussion about how to measure the objectives, drivers and outcomes of energy policy in the form of indexes.

2.2.1. Data

Data about the production capacities of energy companies was collected from the respective corporate websites. The *Oil and Gas Journal*'s *OGJ 100*, a compilation of the world's biggest oil and gas producing companies (Radler and Koottungal, 2007), comparisons of incumbent companies in business data, production and reserve figures, and progress reports on the implementation of the electricity and gas Directives, served to assess, which companies represent the national Majors. Company information about production and reserves of oil and gas are regarded to be reliable, as these are standardised information requirements that represent the most important valuation criterion for investment in the EU-15's Majors. However, the data for two Majors have not in detail (GalpEnergia/Portugal) or not in general (Hellenic Petroleum/Greece) been available. Hence, only the remaining 13 countries are taken into consideration for analysis.

Information about national consumption and indigenous production of the natural resources gas and oil as well as all input that constitutes the integration indicators is taken from the websites of Eurostat, the Directorates-General (DG) Energy and Competition, and the ECJ. The data provided by these institutions are expected to be complete and correct.

2.2.2. Integration indicators

The following analysis aims at delivering insights in the driving factors of the integration of European energy policies; the measures for the member states willingness to do so are introduced here. The literature on Europeanisation provides a starting point for the classification of the indicators employed here. One branch of this area of research regards what is often referred to as EU performance, the member states' timeliness of Directive transposition as reflecting the willingness to comply with the rules and thus with integration or the Europeanisation of certain policies (König et al., 2005; Tallberg, 2002). Contributions of Börzel (2000) or Cowles et al. (2001) suggest that the concept of *goodness to fit*, the compatibility between European and national institutions, is decisive for adaptational pressures and consequently influence the member states' compliance with EU norms. Another stance in this debate, however, is that non-compliance in the EU hardly allows for systematic quantification (Börzel, 2001), or even that it is not significantly different from other federal systems (Keohane and Hoffmann, 1990, p. 278), and that therefore no explicit explanatory value is entailed in it. In spite of that, Mastenbroek and Kaeding (2006) showed that preferences of domestic political actors are a valid explanation of the Europeanisation of policy areas. Moreover, Falkner et al. (2004) proved that the notion of *opposition through the backdoor* is somewhat appropriate when studying the transposition of Directives; it occurs even without substantial disagreement in the previous European policy process.

In this spirit, this contribution uses a review of infringement procedures carried out with regard to the second electricity and gas Directives, referrals to the ECJ in other energy policy matters and the annual figures of market opening during the implementation period as proxies for the willingness of member states to integrate in the area of energy policy. The bias on the Directives aiming to create an internal energy market (IEM) stems from the consideration of this project being the most far-reaching energy policy so far (Cameron, 2005, p. 2). A similar depiction of implementation patterns has for example been used by Giuliani (2003) or Falkner et al. (2004).

Still, one can argue from an intergovernmentalist perspective that disputes over transpositions arise as a consequence of member states' failure to enforce their interest in the decision-making process (Rosamond, 2000, p. 75ff). Yet, in the case of the gas and electricity Directives, it can deliberately be assumed that the members' implementation patterns do not reflect ex ante conflict over the legislative acts, despite dispute in the run-up to the adoption of a proposal for the creation of an IEM (Matláry, 1997, p. 103). The reviewed Directives 2003/54/EC and 2003/55/EC are amendments to Directives dating back five and seven years before the second legislative package came into force. A lack of universal agreement on the inherent principles would not have allowed for the adoption of more comprehensive measures in such a sensitive area of strategic interest. Although, the Maastricht Treaty allowed for qualified majority voting in the area of the internal market, and the voting results in the Council are not published for these Directives. A universal agreement based on balancing national positions was required to avoid annulment due to the Community's lack of exclusive competence in energy (Cameron, 2002, pp. 48–53; Council, 2003; Eberlein, 2005, pp. 63–65; Hix, 2008, p. 34).[4] Moreover, the basic principles of the IEM are still the same in a new legislative package adopted by the Commission (COM(2007)0528; COM(2007)0529). A counterexample, where the member states' interests clearly prevailed, is the withdrawal of a proposal to align measures with regard to security of oil supply (COM(2002)488).

2.2.3. Indicators of security of energy supply

Over the last years, various indexes have been developed and used as indicator measures for security of energy supply. They focus on countries' vulnerability to crisis, coming from market, supply and environmental risks. As mentioned above, security of energy supply is no uniform concept. Correspondingly, its indicators demonstrate significant heterogeneity, based on diverging normative assumptions. Groenenberg et al. (2006) and Markandya et al. (2005) for example include an assessment of demand side effects on supply security, based on economically adverse effects of resource price changes. The study at hand only

[3] Disputed is the inclusion of a price criterion, which emphasises on the economically adverse long-term effects of high energy prices and price volatility.

[4] The first Directives on electricity (96/92/EC) and gas (98/30/EC) were less precise about the mechanisms to be adopted by the member states. A comprehensive study of the member states' implementation of the second gas and electricity Directives is provided by Cameron (2005).

considers long-run market distortions caused by physical or political disruptions as a dimension of supply security, and thus neglects the effects of resource price changes stemming from standard market interactions. Another source of discrepancy is the weighting of the factors composing the indicators. Nevertheless, all studies include the dimension import dependency, in one or the other way, as well as a component that represents structural characteristics. This reflects a certain agreement on the above mentioned factors depicting the overall vulnerability of a country to crisis. Thus, most scholars employ these indicators to study the potential effects of future scenarios and/or certain policy directions on supply security to deduce policy implications, evaluations and recommendations as well as situation analyses (Blyth and Lefèvre, 2004; Groenenberg et al., 2006; Gupta, 2008; Jansen et al., 2004; Röller et al., 2007; Schaepers et al., 2007; Van Oostvoorn, 2003).

In the following, two of the indicators constructed by Gnansounou (2006, 2008) and another two, introduced by Harks and Pointvogl (2007) to point out the distinct business side potentials large member states have to provide for their supply security, are employed. The former are standard proxies for supply security that incorporate the two dimensions common to all indexes reviewed. Those have been selected because of their relative, statistics based objectivity, their simplicity, and because the member states' scores in these indexes are relative to a peer-group of 37 industrialised countries, implying the competitive element of energy supply security. Moreover, the proposed variable for import dependency incorporates most of the sources causing and influencing the extent of a supply disruption, namely the diversification of primary energy resources and (geo)political risks in supply countries. The energy intensity variable is included to reflect the likelihood and degree of a socio-economic distortion caused by supply disruption. To simplify matters, other dimensions are not incorporated in this approach (Gnansounou, 2006, 2008). The capability of member states to manage and mitigate a crisis, as suggested by Schaepers et al. (2007), is another crucial factor, although not yet quantified. This assessment proposes a factor, which represents a dimension of governmental response mechanisms not yet studied in this regard: a country's perceived impact on its energy supply security due to direct intervention in energy businesses' production regimes (see Section 3.2.1). This factor, which is henceforth referred to as both, a potential determinant of supply security and an indicator for member states' perception of the latter, is represented by two indexes, which are called R1 and R2. These measures describe the production capacity of a Major relative to the gross national consumption of the respective resources natural gas (R2) and crude oil and other petroleum products (R1). R1 and R2 are dealt with as separate indicators to embrace their limited substitutability and differing determinants of dependency (Harks and Pointvogl, 2007; Markandya et al., 2005, p. 12ff).

A closer look at the connection between the theses analysed in the following clarifies the link between the indicators used as dependent and independent variables. One of the assessed theses of this paper is that a lower perceived energy supply security leads, ceteris paribus, to a decreased willingness to integrate in energy policy matters. A second thesis studied, that the Majors' respective productive capacities impact directly on the perception of security of supply, highlights the link between the respective indicators. Beyond that, the case of natural gas bears an additional, direct connection between the willingness to adopt and implement the Union's energy acquis and production capacities through the comprehensive regulation of that resource's market. In contrast to that, the relation between the IEM and oil products is merely of secondary or indirect quality. Indeed, only one Council Directive (2006/67/EC) deals directly with crude oil products. The mentioned existence or lack of such a direct link shall, however, not be confused with the more general, indicative link studied here. The analysis' main focus on the implementation of the two main liberalisation Directives on gas and electricity is to be understood as an indicator for the member states' positions. The opposite idea, that the variables are directly influenced by the level of resource production, is assumed to be of more specific and thus minor general influence. The obvious connection between regulation and production in gas is accompanied by a more arguable connection due to the role oil products play in the production of electricity. Overall, the dependent variables serve as proxies for the willingness to integrate member states' policies in all energy areas comprising present and future regulation as well as a broad array of not directly analysed legal acts, such as the Directives on security of supply (2004/67/EC; 2005/89/EC) or renewable energy sources (2009/28/EC).

2.3. Empirical strategy

Due to the small number of cases, the strong assumptions necessary to this approach and the exclusive use of proxy variables, this study is mainly of exploratory nature. It applies a combination of qualitative and quantitative methods that fit these conditions.

As a first step, the benefits of a cluster analysis are used to create homogeneous groups of member states. The purpose of a cluster analysis is to group the cases (the member states) according to their variable values in a way that the cases belonging to the respective groups show more similarities in their values of the explanatory variables, the established and hypothesised measures for energy security, compared to the heterogeneous total (Backhaus et al., 2003, pp. 490–492). Among the various clustering techniques an iterative clustering method has been chosen. The so called *Normal Mixtures* technique based on a *k*-means algorithm[5] can be understood as an estimation method to characterise the particular groups. The cases are not classified into clusters, but their probability of belonging to each possible cluster in each configuration of clusters is estimated out of all potential variations. This method was selected for two reasons. First, it is a method being able to handle with overlapping clusters because it characterises clusters, the cases belong to with the highest probability. Second, the iterative algorithm used is theoretically close to the standard iterative steps applied by *Qualitative Comparative Analysis* (QCA), which is applied in the next step in an adapted form. Thus, these specifications implement the assumption of this study that the configurations of the variables classify the cases into characteristic groups (McLachlan and Krishnan, 1997).

As a next step, the results of the cluster analysis are merged with the indicators of member states' willingness to integrate in an adapted *truth table*. This table is a part of the QCA method, but as mentioned earlier, is applied here in a different form. First, the integration indicators are not presented or computed in a way that would allow for the creation of a *typical* fuzzy or crisp set; as the assumptions necessary for a dichotomisation or calibration of membership scores would introduce an additional normative element. For this reason, the proxies are presented in a visual way that provides clear insights into the analysis. Second, the subsequent analysis is based on intergroup comparisons. Besides these changes in application, some implications of the use of QCA are still the same. What is presented in the truth table are co-occurrences that mirror potential explicit connections requiring

[5] The *k*-means algorithm is used to cluster cases based on attributes into groups by minimising intra-cluster variance.

qualitative analysis to gain momentum. Correspondingly, the studied variables are better understood as conditions for certain outcomes than as independent variables, underlining the exploratory approach of this study (Ragin, 1987; Ragin and Rihoux, 2004).

Starting from the relative homogeneity of the groups, the comparative element in this method stems from the analysis of similarities and differences across groups to indicate multiple conjunctural causation. The effects the conjunction of what is regarded here as determinants of energy supply security has on the member states' positions towards the integration of energy policies, are studied. As a consequence, the whole approach tends to be more qualitative than quantitative, and the constructed method rather heuristic (Lijphart, 1971, 1975). The method that comes closest to what is applied here is the *Systematic Comparative Case Analysis* introduced by Marx and Van Hootegem (2007). Its main shortcomings are that it does not allow for a measurement of net-effects or an explanation of variance of a given variable, respectively.

2.4. Assumptions and limitations

This study is characterised by strong assumptions. The description of the key actors, along with the theoretical framework, determines its limitations. First, what is studied here are correlations between two types of variables. Thus, for the relation between the integration indicators and the indicators for supply security, reverse causality has to be considered. These are for example that the observed process of integration itself influences the member states' determinants of energy security or the size of a Major's production capacity. This may hold to be true in the long run. However, it does not necessarily influence what is observed here during the implementation period of the assessed Directives. Therefore, assuming energy industry structures and member states' perceptions of supply security and positions towards integration to be approximately stable is appropriate.

Second, the variables regarded as being exogenous are not absolutely independent from each other and from other influences. A change in the energy intensity of a country or in a Major's productive capacity, for example, can impact the measure for import dependency. These interferences, however, are not severe, and mostly muted by the stability assumption of the slowly changing variables. In accordance, the impact on the assessed indicators is assumed to be negligible. Furthermore, causal complexity in energy policy matters has the potential of introducing third variable problems. Changes in resource prices for example can affect the energy mix by allowing for more renewables and thus creating a shift in the relative importance given to certain policy directions and finally to integration of energy policy itself. Controlling for these impacts on the present analysis is attempted by including an overall energy policy proxy in the integration indicators in the form of referrals to the ECJ. Nevertheless, this cannot provide for comprehensive internalising. Moreover, distortions due to administrative capacities and procedural matters of implementation are ignored.

Third, the willingness to integrate energy policies has to be distinguishable from a willingness to liberalise, as the main measurement focusses on Directives in which 'Liberalisation of national energy markets is pursued simultaneously with their integration into a single European energy market' (Cameron, 2005, p. vii). According to the above assumption of stable positions of member states in the integration process at the time of implementation and the outlined agreement with the IEM principles (Section 2.2.2), one can reasonably argue that member states' willingness to liberalise is constant and positive as well.

3. The drivers of integration of European energy policies

This section executes the above described analysis. It starts by giving a brief overview of the state of integration of European energy policies. Theoretical arguments regarding the link between the role of governments and the liberalisation and integration of energy markets are presented, before the results of this study are explained and discussed.

3.1. Integration so far

This section is devoted to give a brief overview of the most important steps in the European integration process concerning energy policy. Despite the start of a common approach to energy policy with the ECSC and the Euratom, only the most important developments in the period after 1985 are presented. The precedent period can be regarded as 'the most spectacular failure in the process of integration' (George, 1985, p. 100). Recently, attempts to create a more European approach to energy policy accelerated the process, namely after the informal Hampton Court Summit in 2005, with the resulting publication of a Green Paper circumscribing and emphasising the Commission's policy objectives of a common energy policy, and the entry of energy policy in the Lisbon Treaty, where it was supposed to become a shared competency for the first time (Art. 194 TEFU; COM(2006)105; Council, 2005). The latest developments were the publishing of a package of measures in 2007, 'to propose a new Energy Policy for Europe' (COM(2007)1), and a subsequent proposal, mainly to tackle climate change by setting two specific targets for the reduction of green house gases and the increase of renewable energy in the future consumption (COM(2008)30).

Without assessing the quality of interrelation, it is to say that the Commission continuously emphasised the mutually reinforcing powers of its three energy policy goals. Ever since the first Green Paper on energy policy in 1995 (COM(94)659) its goals have been environmental sustainability, security of supply and the establishment of an internal market for energy.[6] The 2008 communication considered the aspect of environmental sustainability with less regard to the other strands of this trinity. Nonetheless, at the same time the importance of this energy policy driver was somehow compromised by stating that 'the costs of change and the consequences for the Union's global competitiveness, employment and social cohesion need to be kept at the forefront [...]' (COM(2008)30, p. 5). The environmental aspect of European energy policy, however, developed its particular tools like the Emissions Trading Scheme (2003/87/EC), increasing legislation on energy efficiency and renewable energy sources, and is embedded in the Union's policy framework, the Sustainable Development Strategy (Ámon et al. 2008, p. 4f; Council, 2006). The only EC law focusing primarily on the subject supply security is Directive 98/93/EC, regulating a minimum security stock of oil and petroleum products.

The following paragraphs focus on the development of the internal market for energy, as this is the central object of assessment of this study and regarded by many scholars as the most important legal instrument of the Union's energy policy. The *turning point* in most policy matters that can be subsumed under European energy policy was the Milan European Council in June 1985. With the adoption of Lord Cockfield's White Paper (COM(85)310) and the Single European Act, the EU heads of government envisaged the completion of the Internal Market.

[6] Government stakes in companies support them in various ways in market operations, for example by shielding them against take-overs or in credit quality ratings (Núñez, 2007, pp. 27–30).

Since then, EU energy policy gradually emerged, with the introduction of qualified majority voting, and a transferral of decision-making power to the Community bodies. However, it was (and still is) characterised by its main competencies in environmental and competition issues, and although mentioned in the White Paper on *Completing the Internal Market*, the energy market was omitted from the internal market programme until 1988 (COM(88)238). Effective adoption only followed with the first generation of Directives to establish the IEM for gas and electricity, despite smaller initiatives in the early 1990s (Hix, 1999, p. 215; Matláry, 1997, p. 19ff).

The central Directives 96/92/EC and 98/30/EC tried to establish common rules for the creation of a competitive IEM out of formerly national markets mainly characterised by state monopolies in production, transmission and distribution. Significant problems during the move towards a single market for energy, like shortcomings in member states implementation, discriminatory network access or the dominance of incumbents, led to the adoption of a second regulatory regime amending the first. Directives 2003/54/EC and 2003/55/EC constitute now the most comprehensive legal framework within European energy policy. They introduced stricter market opening schedules, the opportunity for negotiations between the main actors and enabled the application of competition law, but failed in establishing a pan-European regulator (Belyi, 2008, p. 206f; Cameron, 2005, pp. 7–11; Núñez, 2007, p. 14f). Nevertheless, a third package of legislation on the IEM is on the way. It proposes measures for the better functioning of market access and competition by ownership unbundling or introducing independent system operators, for increasing regulators' capacities and for more transparency, aiming to draw the European model of energy market liberalisation closer to the *standard textbook model* (Victor and Heller, 2008, p. 6).

3.2. Perceptions—the role of European governments

This paragraph is no assessment of the appropriateness of the assignment of energy policy prerogatives to the EU or the member states, or which form of energy market governance promotes better the respective energy policy goals. Rather it aims at outlining what constitutes the origin of divergent perceptions of the member states' supply security, why this matters and, thus, how different stances towards integration may come about. It shows that the question of *market* vs. *state* is only of secondary relevance for supply security, and that the IEM can even be understood to have instrumental character in this regard.

3.2.1. What can governments do?—bringing business back in

Today all European Majors are privatised and governments intervene in their activities by regulation. Besides, they are interconnected with them via numerous financial ties, such as taxes, shareholding or subsidies (e.g., Núñez, 2007). A third domain, which is central to this study, is governments' intervention in their productive supply activity. Member states support their Majors by securing them political backing for activities abroad, 'where government-to-government relations are a crucial part of business-to-business deals' (De Jong and Weeda, 2007, p. 51). As discussed in Section 2.2.3, matters of supply security incorporate worst case scenarios, such as severe interruptions of supply. How would governments exert their influence on energy business or place their military might in the face of such a case? With only a few empirical examples, due to a limited amount of events of relevant magnitude, one may say that governments would attempt to secure all productive capacities at their disposal to maintain their national supply security. A case underlining this view is the first Gulf War, when besides the USA, Italy, France and the UK sought to maintain Kuwaiti and other Gulf countries production (Dargin, 2008, p. 13f; Maurer et al., 2006, p. 28). In general, the three ways to achieve this are (a) to redistribute natural resources, (b) to secure supply routes, and (c) to secure production abroad and at home. Countries like France or Sweden give clear indications that these matters of energy policy fall into the domain of defence and security policy through [...] control of energy resources and their distribution, and competition for energy resources' (Swedish Ministry of Defence, 2007), to avoid experiencing weakness such as during the energy crises of the 1970's. Furthermore, the Commission considers security of supply as relevant for the common foreign and security policy (Belyi, 2008, p. 206; European Commission, 2008a; Matláry, 1997, p. 7; Présidence de la République, 2008; Swedish Ministry of Defence, 2008; COM(2004)702).

From a business perspective member states intervened in the energy sector by protecting its markets and thus its Major(s) from foreign competition, for example by delaying its market opening or fending off foreign take-over bids. The rationale behind it is to shift the costs of providing sufficient potential to secure the national energy supply in a worst case scenario to other countries, in which the Major benefits from economies of scale. This aspect sheds light on a member state's stance towards integration. When, at the same time, the creation of an internal market does not go hand in hand with a common approach to secure supply in a worst case scenario, even countries, which have no potential of shifting the cost of their national supply security because they lack a big enough market or Major, have an interest to halt integration, where it takes place: in the energy market liberalisation (Harks and Pointvogl, 2007; Röller et al., 2007, p. 25ff, 40ff). In other words, the staggered implementation and market opening is not neutral to countries, which individually have no potential to secure their supply in a worst case. With a one-sided opening of their markets they would bear the costs of increasing the liberalisation laggards' supply security by allowing them to benefit from their downstream markets, without having the chance to alter their potential influence on production capacity itself. The mechanism is threefold. First, the entered market delivers financial assets and in the long run maybe employment. Second, the increased size of a foreign Major active in these markets can turn out to decrease the worst case supply security in case both countries under consideration are hit by an external shock, assuming that the Major's home country will exert its influence to first secure its national provision of resources. Third, the country with the opened market risks underinvestment in supply structures and routes when the other country uses its influence to secure sufficient investment of the Major in its native market that may lead to a crowding-out of other investment.

Economies of scale in supply security can arise, on the one hand, as a consequence of the acquisition of additional market share or productive capacity without a concurrent increase of the amount of resources necessary to meet the demand in a worst case scenario, where the Major serves as provider of last resort. On the other hand, a growth in company size can increase the supply security of all customer countries, for example due to the better exploitation and diversification of supply routes, or due to increased market power towards suppliers. Wherever countries position themselves between these two distinct effects, it reflects their perception of the respective benefits from cooperation and competition about supply security. As this study suggests, it depends heavily on the endowment of a country with a Major and its capability to function as ultima ratio of energy supply. When countries lack a Major, and cooperation in securing supply does not take place, it thus seems rational for them to defect to cooperation and integration, too. When countries possess a

potential supplier of last resort, the possibility to free-ride on others in the common energy market arises (Harks and Pointvogl, 2007; Mañé-Estrada, 2006; Núñez, 2007, p. 28, 45f).

From this point of view, one can refer to the question of assignment of energy policy competence as regards a trade-off between heterogeneity of preferences and economies of scale (Alesina and Spolaore, 2005, p. 140; Musgrave, 1999, p. 66f). If the above described mechanism of government's ability to intervene in a worst case scenario and to coerce the nation's Major to care for its energy supply holds to be true, heterogeneity between member states will be prohibitively high for an integration that does not internalise the costs arising. However, mechanisms to resolve this have been on the Commission's table for a while. Examples are the enforcement of solidarity mechanisms between the countries, as envisaged by the Lisbon Treaty, or a common external energy policy to level the playing field with supplier and transit countries (Helm, 2005b). Nevertheless, implementation of such measures would be again in the hands of the member states. As paragraph 3.3 shows, in the case of creating the internal market for energy, it seems that for countries with certain characteristics being a first mover in the integration process brings disadvantages.

3.2.2. Perception matters

As Breuss and Eller (2003, p. 8f) point out correctly, evaluating the *potential realisation* of economies of scale is what matters for policy assignment in the EU in general. Countries' perceptions play a decisive role in this evaluation. Their believe in the origins and functioning of economies of scale in security of energy supply influence their willingness to integrate and matter for the efficient assignment of energy policy prerogatives. The concept of perception is crucial for analysing policy drivers, not despite, but because it is a psychological aspect, and thus contingent on subjective assessment. It is subject to changes that are not necessarily based on empirical assessments, and to mechanisms to secure supply in the worst case, as explained above. The factual role of a member state in the integration process shows to have spill-over effects to the perception of national supply security, which is an even more effective policy driver in times of public interest in the matter, as it increasingly turned out to be the case (Skinner, 2006, p. 6). In this respect, liberalisation and integration of European energy markets have the potential to be downgraded to instruments to pursue national supply security. An empirical analysis to which extent this argument holds in reality is assessed in the following.

3.3. Realities—empirical analysis of energy policy-making in the EU

3.3.1. Presentation of data

The empirical data employed in this study is presented in Table 1. Besides the four accentuated variables used for further analyses, the figures constituting them are shown; primary indigenous production figures are presented for reasons of comparison. All basic values are measured in million barrel (mbbl) or million barrel of oil equivalent (mboe) per year. A country's energy intensity represents a normalised rank out of all industrialised countries, which is defined as the ratio of gross inland consumption to GDP. Import dependency is the value of a function of the import ratio of oil and gas to gross inland consumption and a concentration measurement for oil and gas import origins (Gnansounou, 2006, 2008). R1 and R2 are calculated as described in Section 2.2.3.

The results of a cluster analysis over the four central variables are presented in Table 2. The respective *F*-values indicate that the variance of each cluster's variables is below the variance of the total, except in two cases. This, however, does neither compromise

Table 1
Indicators of security of energy supply.

Country	AUT	BEL	DEN	FIN	FRA	GER	GRE	IRE	ITA	LUX	NED	POR	ESP	SWE	UK
Company regarded as Major	OMV	Distrigas	Maersk Oil and Gas	Neste Oil	Total	Wintershall	Hellenic Petroleum	Tullow Oil	Eni	Soteg	Royal Dutch Shell	Galp Energia	Repsol YPF	Lundin Petroleum	BP
Energy Intensity	0.048	0.116	0.017	0.152	0.075	0.062	0.101	0.024	0.047	0.077	0.087	0.107	0.095	0.080	0.036
Import dependency	0.586	0.848	0.000	0.450	0.508	0.574	0.857	0.785	0.814	1.000	0.334	0.825	0.755	0.386	0.000
Gross inland consumption of crude oil and petroleum products (mbbl)	105	174	60	79	670	896	133	62	609	21	228	100	516	104	593
Primary indigenous production of crude oil and petroleum products (mbbl)	7	0	127	0	8	25	1	0	43	0	15	0	1	0	575
Gross inland consumption of natural gas (mboe)	55	111	33	29	292	586	20	30	510	9	253	27	229	7	597
Primary indigenous production of natural gas (mboe)	12	0	69	0	8	104	0	3	66	0	408	0	0	0	531
Production of Major, crude oil and petroleum products (mbbl)	60	0	124	0	551	64	N/A	15	372	0	663	N/A	176	11	876
Production of Major, Natural gas (mboe)	57	0	19	0	294	49	N/A	12	261	0	517	N/A	203	1	518
Gross inland consumption of primary energy (mboe)	251	445	154	279	2013	2572	232	114	1372	35	594	187	1060	375	1692
Ratio of Major's production of oil to the home country's consumption (R1)	0.572	0.000	2.080	0.000	0.823	0.071	N/A	0.236	0.611	0.000	2.905	N/A	0.342	0.105	1.478
Ratio of Major's production of gas to the home country's consumption (R2)	1.044	0.000	0.568	0.000	1.008	0.083	N/A	0.406	0.512	0.000	2.045	N/A	0.888	0.217	0.866

Sources: Eurostat, Gnansounou, 2006, company information, own calculations.

grouping over these variables nor the subsequent analysis. *T*-values give indications for comparison of the clusters' parameter values to the total.

Finally, in the form of an adapted truth table, as described in Section 2.3, the clustering results are compared to the member states' performances in the proxies used to indicate willingness to integrate energy policies (see Table 3). The separate presentation of the implementation dimensions of the IEM Directives is according to their principal aims, the quantitative market opening and the enhancement of qualitative regulation (Cameron, 2005, p. 11). The greyed boxes indicate the stage infringement proceedings reached and mark the years until full market opening was achieved.

3.3.2. Similar situations, similar policies?

In the following, the four created groups are described and thereafter potential causalities between the supply security indicators and the integration indicators are deducted.

Member countries belonging to *group one* are characterised by a significant but intermediate productive capacity of their Majors in relation to their gross national consumption of resources. They score higher than average in energy dependency and lower than average in energy intensity, yet in the medium range in both dimensions. On the *dependent* side of the table, this group's performance is the second worst as regards the implementation of the Directives establishing the IEM, the average number of cases referred to the ECJ in other matters, and the opening of markets in time. *Group two* is characterised by the highest scores in variables R1 and R2 when taken together, the three lowest scores in energy dependency and the lowest average energy intensity. This correlates with the best group performance in all dimensions measuring willingness to integrate. Belgium and Luxembourg are the only member states constituting *group three*, which is due to their lack of a strong Major, their above average energy intensity, and the two highest scores in energy dependency. At the same time, they represent the countries with the worst overall evaluation in terms of implementation performance. States belonging to *group four* take a lower intermedium position in the energy dependency dimension and show strong heterogeneity in energy intensity. Their values in both Rs are the lowest after group three and significantly lower than those of groups one and two. This group's performance in terms of implementation is somehow between group one and two.

The overall picture of the adapted truth table suggests that the scores in the supply security indicators are correlated with member states' implementation performances. All exogenous conditions rank group three on one end and group two on the other end of a continuum, the same as the integration indicators do. In between, group one and four are sorted rotatory. The most significant differences between both groups arise in R1 and R2, where group one scores considerably higher. Moreover, the data presentation indicates that both groups have intermediate performances in their implementation measures, whereas it seems that group four is overall slightly more willing to integrate, notwithstanding Finland's derogation in the gas market opening, Sweden's opening in the last possible moment and Germany's referral to the ECJ in other areas.

When applying the above mentioned potential mechanisms of securing energy supply, and the implications for the perceptions of supply security, each group can be assigned a specific strategy in the integration process. Starting with group two, one can argue that they bring the best preconditions for feeling secure. Royal Dutch Shell and BP are among the three biggest private oil companies in the world, and among the four biggest companies regarding revenues and profits. The Maersk group for example owns the largest tanker fleet in the world. These countries are equipped with potent Majors compared to domestic resource requirements, and can thus be regarded to be decoupled from, or well prepared for, an intra-European rally for supply security. The UK was a country particularly lobbying for market integration, not least because it was the first country liberalising its markets; and 'only the Netherlands and Denmark have a completely clean bill' (Piebalgs, speech on 4 April 2006). Moreover, these three

Table 2
Results of *K*-means clustering (normal mixture).

	Energy intensity	Import dependency	R1	R2	
Cluster 1	−0.32	0.48	−0.21	0.31	*T*-value
	0.53	0.19	0.06	0.25	*F*-value
	0.06	0.69	0.52	0.77	Mean
	0.03	0.14	0.23	0.29	Standard deviation
	0.76	18.14	0.05	0.09	Variance
Cluster 2	−0.61	−1.16	2.30	1.80	*T*-value
	0.92	0.39	0.62	1.77	*F*-value
	0.05	0.11	2.15	1.16	Mean
	0.04	0.19	0.72	0.78	Standard deviation
	1.31	37.16	0.51	0.61	Variance
Cluster 3	0.71	1.23	−0.78	−1.00	*T*-value
	0.53	0.12	0.00	0.00	*F*-value
	0.10	0.92	0.00	0.00	Mean
	0.03	0.11	0.00	0.00	Standard deviation
	0.76	11.55	0.00	0.00	Variance
Cluster 4	0.74	−0.23	−0.71	−0.83	*T*-value
	1.59	0.10	0.00	0.03	*F*-value
	0.10	0.47	0.06	0.10	Mean
	0.05	0.10	0.05	0.11	Standard deviation
	2.27	9.14	0.00	0.01	Variance
Total	0.07	0.54	0.71	0.59	Mean
	0.04	0.31	0.91	0.59	Standard deviation
	1.42	95.79	0.83	0.35	Variance

Source: Calculation with JMP® 7.0.1.

Table 3
Adapted truth table.

						Infringement proceedings due to electricity Directive 2003/54/EC			Infringement proceedings due to gas Directive 2003/55/EC			Other cases stemming from conflicts regarding the integration of energy policies since 1998	Market openening, electricity, in %						Market openening, gas, in %					
Country	Cluster / Group	Energy intensity	Energy dependency	R1	R2	Formal notice	Reasoned opinion	Referral to ECJ	Formal notice	Reasoned opinion	Referral to ECJ		2001	2002	2003	2004	2005	2007	2001	2002	2003	2004	2005	2007
Austria	1	0.048	0.586	0.572	1.044																			
France		0.075	0.508	0.823	1.008							C-388/06, C-259/01												
Ireland		0.024	0.785	0.236	0.406																			
Italy		0.047	0.814	0.611	0.512							C-360/05												
Spain		0.095	0.755	0.342	0.888							C-196/07												
Denmark	2	0.017	0.000	2.080	0.568																			
Netherlands		0.087	0.334	2.905	2.045																			
UK		0.036	0.000	1.478	0.866																			
Belgium	3	0.116	0.848	0.000	0.000							C-187/08, C-510/07												
Luxembourg		0.077	1.000	0.000	0.000							C-461/02												
Finland	4	0.152	0.450	0.000	0.000														Derogation					
Germany		0.062	0.574	0.071	0.083							C-64/03, C-109/06												
Sweden		0.080	0.386	0.105	0.217																			

Sources: Clustering results, DG Energy (2008); Progress Reports, ECJ (2208); Court of Justice of the European Communities, 2008; European Commission, 2001; European Commission, 2003; European Commission, 2003; European Commission, 2004; European Commission, 2005; European Commission, 2007b; European Commission, 2008a; European Commission, 2008b.

countries are now the main promoters of ownership unbundling in the third legislative package for the internal market. The strength of their Majors strongly correlates with this willingness to integrate (Andersen and Sitter, 2007, p. 7ff; Harks and Pointvogl, 2007; Torriti, 2008, p. 1; company information).

For countries belonging to group one, the perceptions of a secure energy supply look different, as their levels of import independence, energy intensity and the relative size of their Majors are significantly lower compared to group two. Applying the theoretical framework of governments' ability to secure energy supply, this groups' *differentiated* implementation incorporates the notion of positioning their Majors. Various other examples support deriving this conclusion: France's stakes in Total, GDF and EDF, its role in the GDF/Suez merger, Spain's protectionist role in the E.ON/Endesa take-over bid, Italy's stakes in ENI and Enel or Austria's stake in OMV (Harks and Pointvogl, 2007) (see footnote 6).

Members of groups four are more open to market integration and opening, and presumably to energy policy integration, as well. Their approach does not precisely fit into the framework elaborated for groups one and two. Their interest in a fostered integration process can stem from an expectation for market share in other down- and upstream markets, or from the above mentioned economies of scale of supply security a bigger IEM may provide. Yet, group four's Majors have a significantly lower production capacity than those of group one, and so their attempts to strengthen their Majors by delayed or improper implementation may not be successful as the distance to a meaningful threshold of security may be deemed to be too large. As their possibilities to directly intervene in production processes are limited, other aspects may allow them to open towards Europe with more confidence, to dampen adverse effects of free-riding members for example from group one. Distinct perceptions may come from their specific standpoints in the rally for supply security. Finland and Germany have strategic partnerships with Russia. Sweden has a considerable share of renewables in its energy mix, more than any other European country.

Contrary to that, members of group three are countries, characterised by a small-sized economy and a lack of a relatively strong Major as well as strategic partnerships. With regard to the above mentioned mechanisms, both are vulnerable to foreign intervention, and thus threatened by adverse effects of integration. Still, the case of Belgium is specific, as the recent wave of mergers and acquisitions in the European energy sector drove the former Belgian Major Suez into a merger with GDF. Before that, Belgium might have been more similar to the countries of group one, what again would represent a similar implementation outcome, however stemming from different reasons.

3.3.3. The primacy of security of energy supply

The correlations found in this empirical assessment of proxy variables support the initially outlined hypotheses that for member states *certain* (structures of) characteristics and perceptions of energy supply security are able to explain their respective position towards integration in the area of energy policy, and that the role of energy business adds explanatory value to this argument. The exclusive employment of import dependency and/or energy intensity, without considering the two Rs, would lead to ambiguous results. This approach would lack in an indication for distinct perceptions of supply security and thus would fail to explain diverging implementation patterns. However, both matter. In particular, the empirical indicators point out that in the process of integration of European energy policies member states' adaptive implementation of the IEM Directives can function as an instrument for the promotion of their (perceived) supply security. According to the definitions and assumptions employed, this study suggests that the reason underlying this instrumentalisation is the unwillingness of member states to compromise their competitiveness, economic wealth and political stability by relinquishing their perception of national supply security for the sake of other energy policy strategies, such as environmental issues or the proper functioning of an integrated energy market. The persistence of the latter trade-off is analysed in this study; the former remains open for discussion. A reference, however, to the problematic bargains about the allocation of pollution rights in the Emission Trading Scheme or the debates about nuclear energy and car emissions may indicate the direction.

3.4. Concessions—implications for the integration process

The primacy of energy supply security changes the focus of the discussion about the integration of energy policies. This paragraph looks at the concessions that, according to the developed analysis, may have led to the current implementation gap, and those that would be necessary for a successful future integration.

The *positive coordination* scenario, described by Scharpf (1997, pp. 118–150) for general problems of coordination, fits perfectly onto the integration process observed here, and directs to the fundamental issues in it. The described situation is characterised by coordination problems in two different dimensions: the production of an outcome and the distribution of gains from it. According to Scharpf (1997, p. 133), what is required for the resolution of the overall coordination problem, is that the existence and the legitimacy of the two dimensions are recognised and that both are dealt with explicitly. A problematic situation arises when the *official commitment* to find a common solution is of overriding importance, so that states' self-interests are delegitimized. This can endanger problem solving and lead to adverse outcomes when ignored self-interest becomes a hidden agenda.

Applied to the coordination problem at hand, the production area is to agree on a common policy, distribution problems arise during the formulation and after a policy coming into force, when it is about the states to establish the efficacy of the transposed legislation by sound implementation. As pointed out, national perception of energy supply security can be the currency of distribution. Pressure existed for example in the form of commitment to create the IEM after having established the internal market for other goods and services. From this point of view, three questions regarding the concessions made to integration arise: would the recognition of the primacy of national supply security in the whole policy process of integration have been a necessary requirement for successful policy coordination, and finally for a sound implementation of the assessed Directives?; and was it the fault of the Commission to push for integration and liberalisation?; or was it the fault of the member states to not acknowledge the primacy of national supply security of each other?

This evaluation leads to further questioning for the changes necessary for the future integration process. This analysis concludes that every way towards more integration has to devote more respect to the member states' perceived national supply security; differences in today's situation have to be acknowledged. Consequently, potential disputes have to be resolved before they go underground, and trade-offs between short-run costs and long-run benefits have to be stated clearly, even more so when they imply the distribution from one country to another. Ways often quoted to achieve this are to foster market mechanisms consistently or to pool risks by creating common crisis reaction

mechanisms and establishing comprehensive solidarity mechanisms. In any case, the preconditions for an efficient energy policy remain the same. Nevertheless, some changes are already on the way. A more recent Directive to safeguard gas supply reintroduces the relevance of member states individual supply security, pointing into the mentioned direction (Art.3 2004/67/EC). In contrast, the relevant section in the Lisbon Treaty aims on the establishment of solidarity mechanisms, whereas energy supply security is not included (Belyi, 2008, p. 205). In conclusion, the de facto pro forma liberalisation of the last years proved that concessions to the perceived national supply securities will have to occur, if a beneficial common European energy policy is to be established.

4. Conclusion

The argument made in this study is that one of the main drivers in the process of integration of European energy policies is the member states' perception of energy supply security, with a significant role for energy business in it, as this factor influences their willingness to integrate and defines the realities of the implementation of existing measures, most significantly in the creation of the internal energy market. In this way it contributes to the discussion about the paradigm change in energy policy, by showing that the now observed shift in priorities towards supply security was already immanent in the European liberalisation process (Correljé and Van der Linde, 2006; Helm, 2005a; Skinner, 2006). Moreover, it adds a crucial argument to the study of the Europeanisation of energy policy, and emphasises the introduction of an energy business variable into the area of research on measuring energy supply security.

Due to the exploratory nature of the approach and method employed, the analysis at hand, however, exhibits some explanatory shortcomings and allows for alternative explanations, which are helpful to position the developed findings and to indicate starting points for further research and refinements. First, one part of this study emphasised on member states' potential activities to secure supply in a worst case scenario, which is defined by a high impact, but a low probability. When addressing these problems, the above mentioned mechanisms may hold to be true, and decisions may be taken accordingly. However, the choice of countermeasures depends on a country's evaluation of the threats stemming from these sort of events, which do not necessarily imply the above mentioned reaction mechanisms (Stern, 2002, p. 33). Second, even though both *R* variables are employed to differ between gas and oil, the analysis does not take into account the differences between both variables and implications that may be deducted. Third, the interrelation between environmental policies and the analysed areas of supply security and the IEM have not been taken into consideration. Fourth, the used integration indicators can also be caused by other than the proposed variables. Industrial policy aiming at promoting national income and employment at the expense of integration and other member states, or, more general, national policy priorities which are challenged by the assessed Directives, may play a crucial role (Cameron, 2005, p. 434; Núñez, 2007, p. 17f). Moreover, other policy strategies might have been more difficult to transport than protectionist policies or lagging implementation, which trigger simple reflexes. In-depth assessments of the respective member states and their particular position in the process can provide insights and contribute to clarification (König et al., 2005, pp. 4–7). The direct role of energy business in the creation and implementation of the discussed policies may provide for further explanations for the observed outcomes, as opposed to the allegedly indirect effect as a mere parameter for state driven policy. The conclusions drawn, however, bear the potential of being reinterpreted from the respective position about which are the factual actors.

The last part of this essay showed that for an efficient future integration of European energy policies, it is crucial to successfully accommodate the heterogeneous preferences stemming from differing perceptions of energy security, and to consider the effects of integration on it. Until then, protectionisms and nationalist policies represent a viable way to promote this central driver of energy policy. As problems similar to the observed ones occurred in the new member states as well, this suggestion may hold to be beneficial for the whole Union (Ámon et al., 2008; Blyth and Lefèvre, 2004, p. 9). Finally, as European energy policy tackles three of the major challenges governments face in the 21st century – environmental sustainability, resource distribution and growing scarcity, and maintaining competitiveness – the success in its integration process will give an indication for the future role of the EU.

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