



## UvA-DARE (Digital Academic Repository)

### Institutional complexity and sustainable development in the EU electricity sector

Ciulli, F.

**Publication date**

2016

**Document Version**

Final published version

[Link to publication](#)

**Citation for published version (APA):**

Ciulli, F. (2016). *Institutional complexity and sustainable development in the EU electricity sector*.

**General rights**

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

**Disclaimer/Complaints regulations**

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

## **CHAPTER 7**

### **CONCLUSIONS**

#### *Dissertation focus and contributions*

The substantive chapters of this dissertation consisted of two extensive literature reviews (chapters 2 and 3), a qualitative multiple-case study (chapter 4), a qualitative single case study (chapter 5) and a conceptual study (chapter 6). Conceptually the dissertation focused on exploring *how firms manage sustainability-related institutional complexity within and/or across national organizational fields*, by examining the EU electricity sector as research setting for the focal phenomenon. The dissertation has three main objectives, which are interrelated but make different contributions. First, it aims to contribute to institutional theory by increasing its explanatory power of institutional complexity in general and in the context of the corporate sustainability literature in particular. Adopting a ‘phenomenon-driven’ (Doh, 2015) and ‘problem-driven’ (Davis and Marquis, 2005) research approach and focusing on the critical transformations, disruptive events and associated dynamics faced by electric utilities in the last years, allowed the extent to which institutional theory ‘inform[ed] that reality’ (Doh, 2015) to be assessed and thereby advance the theory of institutional complexity and the integration of complexity within the corporate sustainability literature. Second, and more focused, the dissertation contributes to the research stream on the electricity sector, institutions and sustainable development, by exploring critical occurrences that have revolutionized it in the last years and electric utilities’ responses to these transformations. Focusing on the EU electricity sector and on phenomena present within and across EU countries has allowed light to be shed from perspectives thus far not taken by extant management literature on the electricity sector and have been underexposed in current sector-specific research. Third, this dissertation aims to increase the understanding of phenomena of societal relevance, by focusing on an industry that provides an essential good for today’s society, i.e. electricity, and by examining how firms operating in this industry address multiple sustainable development demands.

In order to attain these objectives, first the state of the art of research on sustainable development (chapter 2) and institutions (chapter 3) of the electricity sector has been examined. Beside providing an in-depth review of extant literature through multiple lenses, chapters 2 and 3 identified a number of areas that deserve further investigation. In particular, chapter 2 highlighted extant studies’ relatively narrow focus, both in terms of the extent of sustainable development issues examined and in terms of the timeframe considered. In order to capture the complexity faced by

electric utilities, chapter 2 stressed the need to explore electric incumbents' responses to tensions between sustainable development issues over time. In addition, chapter 2 illustrated that extant research had in the main explored the relationship between the electricity sector and sustainable development in one country, with particular attention for the US. Despite the relevance of national idiosyncrasies in sustainability-related pressures (e.g. Beelitz and Merkl-Davies, 2012; Patriotta et al., 2011; Banerjee and Bonnefous, 2011), this dissertation has argued that the limited adoption of a cross-country perspective to the study of electric utilities' sustainability-related behaviour represented an important lacuna. A similar gap was also emphasized in chapter 3, which described the literature on institutions and the electricity sector as mainly focusing on one country, with the US again as dominant research setting. Given the crucial impact of national institutional arrangements on electric utilities (Bergara et al., 1998; Holburn and Zelner, 2010), the need for cross-country research on electric utilities was posited as also needed from an institutional perspective. Finally, both chapters 2 and 3 stressed the importance of exploring the interactions between market, state and sustainable development with regards to the electricity sector. Indeed, as a whole the literature reviewed signalled the precariousness of the shift from state-based to market-based coordination of the electricity sector and a resurgence of state intervention, mainly in relation to sustainable development issues (e.g. Sharrat et al., 2007). The relationship between state, market and sustainable development had however been overlooked, thus chapters 2 and 3 emphasized the need to explore whether and to what extent the increasing concerns about sustainable development have affected the maintenance of market-based coordination of the electricity sector and have relatedly driven calls for a 'return of the state'.

Chapters 4, 5 and 6 empirically addressed the gaps identified in the literature on institutions and sustainable development of the electricity sector, while at the same time helping to advance the theory on institutional complexity. More specifically, chapter 4 focused on the complexity faced by MNEs when confronted with different (de)institutionalization processes, following a disruptive event, in multiple institutional environments with heterogeneous market-state relationships. The study explored whether and to what extent the institutional theory concept of isomorphism is applicable to MNEs due to the institutional complexity in which they are embedded. The empirical setting consisted of electric utilities involved in nuclear energy across a set of EU countries with country-specific institutional arrangements that experienced institutional change driven by the Fukushima nuclear disaster. The findings challenged arguments by other scholars (e.g. Kostova et al., 2008) and suggest that isomorphism is applicable to MNEs, yet the current 'monolithic' nature of the construct does not reflect the specificities of MNEs' behaviour. New categories of isomorphism were thus

conceptualized to capture a MNE-specific interpretation: inter-country isomorphism, intra-country isomorphism and isomorphic agency.

Chapter 4 provided three main sets of contributions. First, it contributed to institutional theory, by helping to address the challenges MNEs represent for institutional theory and integrating the institutional complexity experienced by MNEs within one of institutional theory's core concepts. Second, the study contributed to the literature on the electricity sector. By adopting a cross-country perspective of the behaviour of electric utilities, it allowed light to be shed on the behaviour of electric utilities across multiple countries, addressing the limitations of the single-country focus predominantly adopted by extant literature (see chapter 2 and 3). By selecting Germany, France and the UK for the cross-country study it was possible to gain an understanding of institutional and sustainable development-related processes in the countries with the highest electricity generation in the EU (Eurostat, 2015). Third, the study aimed to provide insights of societal relevance, as nuclear energy has been a controversial energy source in the EU for at least thirty years, since the Chernobyl nuclear disaster occurred in 1986. As several transformations have occurred in the electricity sector in the last three decades, our study aimed to inform in particular policy-makers of the responses of electric utilities to a contemporary nuclear disaster, by identifying the actions these firms (were able to) put in place, and their willingness to replace an energy source which raised increasing sustainability-related concerns with less controversial energy technologies. By comparing the ongoing dynamics in different EU countries we also aimed to inform policy-makers on the different approaches they could adopt following a disaster, such as the one that occurred in Fukushima, and on the firms' reactions each approach may engender.

Chapter 5 focused on the sustainability-related institutional complexity faced by electric utilities and on how they address it over time while undertaking strategic changes to tackle radical transformations in their business environment. As a conceptualization of the multiple sustainable development-related beliefs and values firms face and embrace is absent in extant literature, the study firstly brought together the corporate sustainability and the institutional logics literature to develop the construct of a compound sustainable development logic. This logic was conceptualized as formed by three sub-logics (environmental, social and economic sustainability), each encompassing specific 'beliefs' and 'material practices'. The chapter then adopted the sustainable development logic concept to investigate how the German electric utility multinational E.ON responded to sustainability-related institutional complexity over a period of 15 years, since its foundation in 2000. The analysis of E.ON's responses over time allowed a three stage process model to be developed, each featuring different types of responses to SD-related institutional complexity.

Similarly to chapter 4, chapter 5 sought to provide three main types of contributions. First, it contributed to research on corporate sustainability and to the literature on institutional complexity. As regards the former, the study illustrated a dynamic and multifaceted perspective of firms' responses to sustainable development-related demands, which is rather different from both the win-win paradigm to sustainability that has been dominant until recently and the integrative approach to sustainable development-related tensions developed recently. In particular, the perspective emerging from our study suggests that a win-win outcome between multiple sustainability issues is very difficult to attain, due to the heterogeneity of sustainable development-related values to fulfil and to the contestation of the practices to be combined with each value. Also, it indicates that embracing the tensions may not be viable in the longer term, due to legitimacy and/or strategic motives. A firm thus may undertake different types of responses over time, with the integrative approach being just a temporary response. Another contribution to corporate sustainability is made through the identification of an alternative classification of firms' responses to sustainable development demands. Scholars have created different categorizations of firms' approaches to sustainable development, among which the most renowned one, developed by Carroll (1979) has been used in chapter 2. Carroll's (1979) taxonomies and its later refinements however did not manage to capture all the complexity that emerged from E.ON's responses to pressures for environmental, social and economic sustainability. Chapter 5, through the identification of new categories of responses (see table 5.8), tried to capture the core features of sustainability-related institutional complexity in particular in terms of the distinction between 'values' and 'material practices' and of possible combinations of multiple sub-logics. The study also aimed to contribute to research on institutional complexity, with the findings of the E.ON case showing that the adoption of a 'single' and 'sustainable' response to institutional complexity is not always possible. Instead firms can adopt different actions at the same time to address institutional complexity, and certain actions may only be appropriate in the short term and need to be replaced by other responses in the long term. The 'precariousness' of responses to institutional complexity in the case of E.ON was related to the ongoing radical transformations of the firm's business environment. Extant literature on institutional complexity has largely adopted a rather narrow focus, paying limited attention to the wider context in which firms' responses to institutional complexity were inscribed. This may have led to an overestimation of the stability of these responses.

Second, the study in chapter 5 contributed to the literature on the electricity sector, institutions and sustainable development. Although sustainable development has emerged over time as an increasingly complex and disruptive factor for electric utilities, the literature investigating their responses to sustainable development

demands has mostly overlooked the complexity they have experienced (see section 2.4.3). By examining E.ON's responses to multiple sustainable development issues and by putting them in the context of major transformations that were revolutionizing the electricity sector, the chapter sheds light on the critical challenges electric incumbents have been facing in the last decade. Finally, in terms of societal relevance, the E.ON case shows that, based on strategic considerations, electric utilities may decide to abandon key responsibilities they have towards society and the environment. The fact that E.ON assigned the crucial duty of ensuring security of supply to an independent company, destined to be divested, discloses risks for the entire electricity system. Given this risk, policy-makers need to quickly identify and address the changes electric utilities decide to undertake as regards their role in society, in particular in periods of crisis driven by radical transformations in their business environment.

The conceptual chapter 6 explored the institutional complexity enacted by the irruption of the sustainable development logic in a deregulating organizational field. The focus of the study was inspired by the dynamics and transformations of deregulation and sustainable development in the electric utility organizational field(s) that had emerged in the previous chapters and by additional evidence collected from media, electric utilities and government sources. The study examined the dynamics involving the state, market and sustainable development logics in a deregulating field and identified four main state-market-sustainable development logic configurations. These different configurations were then employed to discuss the interactions between state, market and sustainable development logics in three main contexts: fields having SOEs (state-owned enterprises) among their constituents; fields experiencing intra-institutional complexity within the sustainable development logic; and, fields interacting with or nested within other fields.

Similarly to chapter 4 and 5, chapter 6 also provided three main types of contributions. First, it contributed to the literature on institutional complexity. Extant literature on institutional complexity has mainly focused on the interaction between two logics, overlooking the presence of higher levels of complexity in a field. By exploring the irruption of a third logic in a field where two main logics had previously interacted, the chapter provided insights into the dynamics that involve three interacting institutional logics interacting. Also, while extant literature has largely focused on the shift from non-market logics to the market logic in different contexts, we tried to shed light on more complex and dynamic relationships between these two types of logics. In addition, the study emphasized the possibility for intra- and inter-institutional complexity to coexist in an organizational field, and the need to explore the related dynamics. Related to the contributions to research on institutional complexity, insights were provided that addressed organizational fields, in particular by signalling the

relevance of the interactions between fields at the same, higher or lower level of analysis and of the coevolution between institutional complexity and field (re)structuration. Second, chapter 6 contributed to the study of institutions and sustainability in the electricity sector. While extant literature has explored the topic of deregulation, the main focus was on the impact of deregulation, but as shown in chapters 2 and 3, how a deregulation process could be destabilized by sustainable development concerns was overlooked. Only limited reference to this focus was made by the studies of Henisz and Zelner (2005) and Zelner et al. (2009), which examined the retrenchment of deregulation. The chapter thus increased the understanding of the shift from state- to market-based coordination and the dynamics that can unfold through the additional need to attain sustainable development objectives.

Finally, chapter 6 aimed to develop observations which could be of societal relevance. Although the study was conceptual, the illustrative examples helped to provide an overview of the dynamics the EU electricity sector has been undergoing in the last decade and of the implications sustainable development concerns may have for the deregulation project undertaken over the last decades. In particular it highlights the need for policy-makers in the EU member states to adopt a coherent approach, in terms of state-market balance, in the way they deal with multiple sustainable development objectives. Consistency both across EU member states and between member states and the EU is particularly needed now that the transition from a European energy community to a European Energy Union has been initiated.

#### *Limitations and further research*

While the dissertation sheds light on several relevant topics, there are many others not covered but which represent highly promising areas for further research from both an academic point of view and for reasons of societal relevance.

In particular, the study presented in chapter 4 focused on the relationship between two main constituents of the electricity field, i.e. governments and business, with particular attention on the incumbents. Yet, as illustrated in chapter 3 (see table 3.2), other actors, such as new entrants and civil society, can also play a key role in initiating and/or affecting institutional processes in the electricity field. We thus suggest that future research also examines these actors as institutional agents. More specifically, integrating the actions of new entrants and civil society actors in the (de)institutionalization processes following the Fukushima disaster, or another disruptive event affecting the electricity sector, would provide a deeper understanding of these dynamics. Indeed, investigating how electric incumbents respond to not only the government's institutional agency, but also to that of new entrants and civil society would allow more insights on their response(s). Integrating civil society could also be

valuable from a cross-country comparative perspective. Indeed, comparing, for example, the power of civil society actors and their degree of agency across national electricity fields would allow a more detailed 'profiling' of country-specific institutional configurations to be developed. Furthermore, the concept of institutional embeddedness in our study is based on Oliver's (1996: 167) definition, without a consideration of potential variance in the degree of embeddedness. The measurement of the degree of MNEs' institutional embeddedness in home and host countries would allow the identification of different configurations of multiple embeddedness and progress the study of its impact on MNEs' institutional response across countries. Moreover, the study presented in chapter 4 focused on three countries, i.e. the UK, France and Germany, which have specific national institutional configurations. In order to increase the generalizability of the findings, future research could develop a comparison between countries with other kinds of country-specific institutional configurations.

Chapter 5 also has some limitations, which imply fruitful avenues for future research. First, the study examined the environmental, social and economic sustainability sub-logics, but with regards to the latter two, it concentrated on single specific issues. Specifically, it focused on the issue of security of supply within the economic sustainability sub-logic and on the issue of energy affordability within the social sustainability sub-logic. These issues were selected because they had been identified as two of the three main objectives, together with environmental sustainability, of EU energy policy (European Commission, 2014) and because in combination with environmental sustainability they formed the 'Energy Trilemma' identified by the World Energy Council (2013). The focus on beliefs and practices related to environmental sustainability, security of supply and energy affordability allowed us to conduct a first exploration of the sustainability-related institutional complexity faced by electric utilities. Yet, as shown in chapter 2 (see table 2.2), electric utilities are called to address other social and economic sustainability issues as well, that were not examined in chapter 5. Follow-up research could explore electric utilities' responses to a wider range of sustainable development-related demands. This would allow the sustainability-related institutional complexity faced by electric utilities and their responses to be captured more comprehensively. It might help to understand how electric utilities deal with tensions not only across sustainable development sub-logics but also within a specific sub-logic to be examined, for example the conflict between employment and health within the social sustainability sub-logic. Second, the study focused mainly on E.ON's responses to sustainability-related institutional complexity at the corporate level, with limited attention for the firm's responses to sustainable development-related institutional complexity within each country in which it operated. Yet, some findings, e.g. those indicating the prioritization of specific sustainable

development sub-logics depending on the field, signalled the presence of interesting cross-country dynamics deserving further investigation. The adoption of an international business perspective with a cross-country comparison of E.ON's responses would add to the understanding of how the company has addressed sustainability-related institutional complexity. It would also, more widely, provide worthwhile insights on whether and when MNEs adopt a global vs. a local approach in their responses to sustainability-related institutional complexity. Third, while the study adopted an institutional logic and corporate sustainability lenses to the study of E.ON, the strategic change adopted by the company in the last years signals its engagement in an increasingly radical business model innovation. We thus posit that future research could add a business model perspective to the institutional logic and corporate sustainability lenses. This would allow to define more specifically the strategic changes undertaken by E.ON, in terms of value proposition, value network and revenue-cost model (Bohnsack et al., 2014) and to relate them to the firm's responses to sustainability-related institutional complexity.

Furthermore, it should be noted that the two empirical studies included in this dissertation are exploratory studies, focusing on a relatively limited set of firms and countries (chapter 4) or adopting a single case study research design (chapter 5). This points at ample opportunity for further empirical research to test the findings presented in chapters 4 and 5 and their generalizability to other contexts.

Finally, the study presented in chapter 6, while providing insight on how the irruption of the sustainable development logic may affect the market-state logics relationship in/across deregulating fields, it does so through a conceptual approach. The topics discussed in the chapter thus deserve further investigation through empirical studies, with the EU and/or its member states as focal setting(s). Indeed, extant literature on institutions, sustainable development and the electricity sector adopted almost exclusively a single-country focus, with particular attention for the US (cf. sections 2.3.3. and 3.3.3.). This has left the EU context largely unexplored, despite it encompassing unique features as regards the market-state-sustainable development configurations, due to differences between national organizational fields and (mis-)alignments between national and the supranational fields (see section 6.6.3). Empirical research within the EU context would be particularly valuable with regards to three main topics.

In particular, future research could explore the adoption of state-market-sustainable development configurations in national fields such as France or Sweden that are still home countries and major markets of electric SOEs. This focus would allow the implications of national SOEs' presence for the way sustainable development is addressed in a deregulating field to be explored. Also, in keeping with the increasing

internationalization of SOEs and the significant interest this phenomenon has raised among scholars, it seems very interesting to investigate how state-owned multinationals affect the market-state-sustainable development logic configurations in the host countries where they operate.

In addition, as illustrated in chapter 4, electric utilities are not confronted with a single 'monolithic' sustainable development logic, but with multiple sustainable development sub-logics, often in conflict with each other. While in chapter 4 the focus was on investigating empirically this type of institutional complexity, which we called 'intra-institutional complexity' (see section 6.6.2), chapter 6 highlighted the interactions of the sustainable development sub-logics with the market and the state logic in a field. Future studies could then explore the dynamics involving the market, state and sustainable development logics in an electric field which is experiencing intra-institutional complexity within the sustainable development logic. In keeping with the illustrative examples provided in section 6.6.2, a the UK electric field would be a very suitable setting. As E.ON operates in the UK, an interesting possibility would be to extend the study of E.ON made in chapter 5 by integrating the market and the state logic.

Moreover, in keeping with the observations made in chapter 6, studying the state-market-sustainable development configurations in the context of cross-field relationships would be particularly interesting. Empirical research would be particularly valuable for shedding light on cross-field dynamics involving the state, market and sustainable development logics within the EU context. In particular, empirical studies could explore the mechanisms through which electric utilities tackle the (mis-)alignment between the EU and national fields and the process(es) leading the national and the EU organizational fields to converge or diverge on specific state-market-sustainable development logic configurations. Furthermore, future research could investigate how electric MNEs, operating in multiple national fields within the EU, address the (mis)alignment across national fields as regards the dominant state-market-sustainable development configuration.

Finally, similarly to chapter 4, chapter 6 focused on the relationship between two main actors in the electricity field, i.e. governments and business. Given the institutional agency role that can be played by civil society, including the media, NGOs and domestic audiences (see table 3.5), we posit that these field constituents need to be taken into consideration in future studies. This might include, for example, an examination of the state-market-sustainable development configuration(s) adopted by civil society actors and the impact on the electricity field. Also, given the increasing 'global reach' of NGOs and their role in the global political economy (Teegen et al., 2004), it would be particularly relevant to examine how NGOs deal with state-market-

sustainable development configuration(s) across national fields, how they address local idiosyncrasies as regards the market-state relationship and whether and how they attempt to establish a globally accepted state-market-sustainable development configuration for specific sustainability issues.

To conclude, the electricity sector has been undergoing considerable transformations in the last decade which are far from being concluded. The next years will feature new stages in electric utilities' strategic change process. The record net loss of €7 billion reported by E.ON for the year 2015 (Andresen, 2016) signals how complex strategic renewal is for EU electric utilities and poses dilemmas not only to their managers but also to policy-makers, due to the importance of these companies for the electricity system. Moreover, we will see the progresses made in the creation of the European Energy Union, following the acceleration given by the launch of the Energy Union Framework Strategy in February 2015. The creation of an "integrated continent-wide energy system" (European Commission, 2015c) will drive additional transformations in the electricity sector and thus will create new challenges and opportunities for electric utilities, that need to be monitored. In addition, the Paris Agreement signed in December 2015 in the framework of the 2015 United Nations Climate Change Conference, although subject to criticisms and still to enter into force, is nevertheless likely to put additional pressures for CO<sub>2</sub> emission reductions on national governments and business actors globally. These are only some of the transformations that are going to shape the electricity sector in the next years. This dissertation helped to shed light on some of the major changes occurred, but we argue that research interest in the electricity sector needs to remain high also in the future. Indeed, further investigation of the sector is needed both to advance management theories, in keeping with phenomenon-based and problem-driven approaches, and to help policy-makers and managers tackle an increasingly more complex electricity world with substantial economic, environmental and social implications.