

# ***REFGOV***

*Reflexive Governance in the Public Interest*

## ***Institutional Frames of Markets***

**The “Reflexive Governance” in the area of services of economic general interest and competitive reforms of network industries in the European Union.**

ADIS – University of Paris Sud XI (France)

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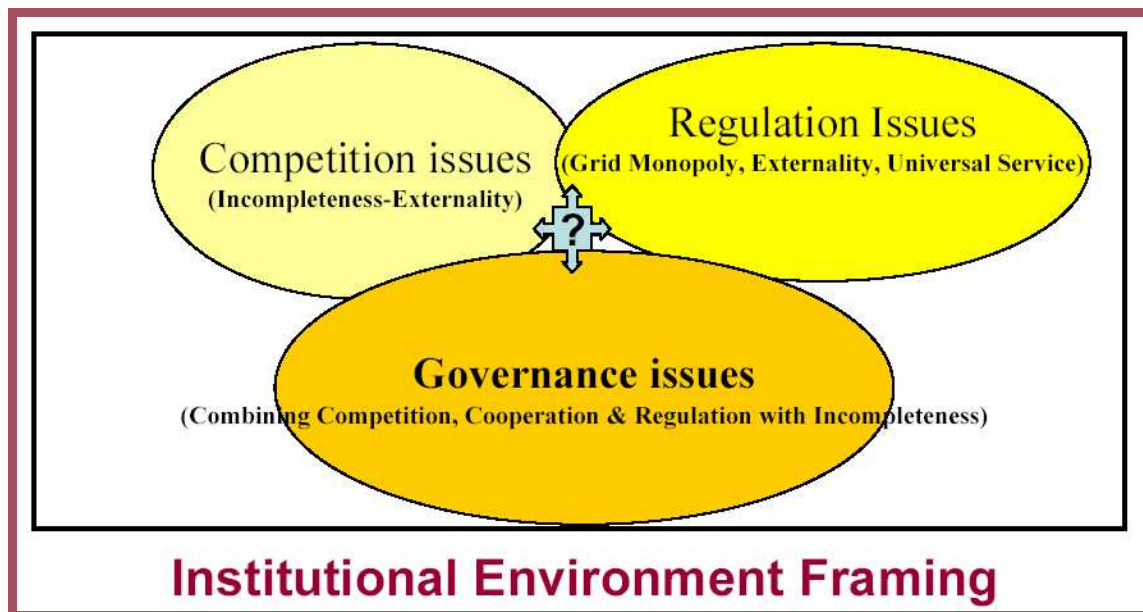
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This report presents the research undertaken for the RefGov project at the University of Paris Sud XI (ADIS research center) from June 2005 to May 2006. It consists of nine pieces of work: *a general overview* giving the main results of the research; plus *eight particular applied research topics* which cover \*the governance of competitive changes in the electrical industry at the EU level (Annexes 1 to 3); \*\*the governance of competitive markets in the electrical industry, both at the retail and the wholesale level (Annexes 4 to 6); \*\*\*the governance of the electricity transmission business in the context of competitive markets (Annexe 7); \*\*\*\* and a comparison of the governance of change in the electrical and the water industry (Annexe 8).

**General Overview :**  
***The Reflexive governance issues:***  
***from market design to institutional endowment***

Traditionally in economics, network industries and services of economic general interest have been dealt by a set of national monopolies within a public regulated frame. In the last 15 years this tradition has been deeply contested and the emphasis has been put on the development of market mechanisms in this formerly monopolized and regulated area. In this change, the initial aim was to replace the “visible hand” of public authorities by the “invisible hand of the market”. Therefore the governance issue was conceived as the replacement of a particular set of public interventions by the impersonal game of markets.

The actual experience we have seen stays far from this ideal. While the creation of new market mechanisms has really been the core goal of the new era of governance, the achievement of the implementation of the new markets seems to be a daunting task, both at the national and at the European level (Europe being restricted here to the European Union). What was conceived like a “Competition” vs “Regulation” change is more and more perceived today as a triangular issue where governance matters as much as competition and regulation and where all three are constrained by the exiting institutional environments (characterized by their intuitional endowments).



This general result will be reached following a five steps analysis.

The first step (I: *Signs of paradigm shift in “Public interest”*) will actually show that the traditional paradigm of public control as the best remedy to “market failures” (monopoly, externality or merit goods) is more and more contested, both at the theoretical and empirical levels.

Therefore it opens [in Step Two (II): *“Market design” as remedy to market failure*] a wide window opportunity for the rise of “new remedy” where “market designed remedies” are thought to be the most accurate remedy to existing market failures.

The third Step (III: *“Market building” as alternative to market design incompleteness*) will examine the actual difficulty of building markets when markets mechanisms are not complete and therefore cannot be spontaneously built by market participants as a common institution to trading their existing property rights. Market building is there a policy aiming at defining property rights which will be quite tradable in the frame of market mechanisms specially designed to make them quite tradable.

The Step Four (*“Institution building” as remedy to market building failure*) deals with the delicate issue arising when “some institution” has to voluntarily design the institutional foundations of a new “quasi market” to make a competitive reform working. It appears to be a

typical “Governance Design” issue because we are examining here the proper governance of the long process of building new market foundations.

The fifth and last Step (“*Institutional Endowment*” as a hard or a soft ultimate constraint?) will show that all the process of building new market mechanisms as an alternative to public control is deeply rooted in the existing institutional frame which explain why it is so difficult to simply export or import “blocks of competitive reform mechanisms” from one country to another one, from the USA to the EU (and vice versa), inside the EU, as well as from the Member States level to the EU level.

### ***I: Signs of paradigm shift in “Public interest”***

The traditional economic remedy to market failures has been along the XXth century the public control, and frequently in Europe the public ownership; at least in the network industry where monopolies seemed difficult to avoid (Stuart Mill tradition from 1860).

It is then striking that the monopoly of the railway and its possible nationalization by the State has been the typical network case discussed from 1840 (Jules Dupuit) to 1940 (Hotelling & Meade). While the typical case of monopolization in this XXIst century is that of Microsoft and the typical remedy discussed by official is its “open sourcing”, or that of majors of the entertainment industry to whom radicals oppose the “peer to peer individual right to exchange”. We see the debate properly shifting from “pro-state remedy” to “individual rights & free exchange remedy”. What a shift!

In the same vein, we have seen other massive social contestation of existing “public remedy” to supposed “market failure”. It has been the case with the “cow disease” which has not been stopped easily while occurring in a deeply subsidized and regulated industry (both at the

national and at the EU level –Farming being the biggest post of the EU budget since decades). Other failures of public policy of general interest have been noticed as particularly severe, notably in the asbestos case, in the tobacco case, in the “Bad Food Disease & Obesity” case; which cause hundred of thousands of evitable deaths or disables each year.

New ideas and new tools entered the European debate on the “failures remedies”.

*1°- The EU Public Interest is not restricted to the area of public provision or the prohibition of trade*

The typical merit good of renewable energy is looked after in a frame of private ownership and private undertaking, all operating in a decentralized manner, and being literally spread by market forces themselves (wide usage of the “feed in tariff” tool to subsidize renewable). In the same vein the merit good of CO2 reduction is giving birth to a new market based on a new market instrument (the tradable allowance). Another typical good, being energy efficiency, is itself supposed to answer to the incentives provided by the allocation of “white certificates” tradable on a new appropriate market.

*2°- The EU Public Interest is found in particular type of market enhancement*

In Mergers & Acquisitions, the consumer welfare loss is a key criterion of the EU Competition policy exerted against many national monopolies or incumbent companies. Cracking cartels, splitting monopolies, capping market shares, and the like, become an increasing policy of public interest. It is particularly striking in the area of telecoms or newly in the area of energy (DG COMP sectoral enquiry).

## **II: “Market design” as remedy to market failure**

The “old” economics of network industry (1920-1980) were typically centred on the type of ex post remedies described by A. Pigou in his “*Welfare Economics*”. It was suggested to keep

the network industry as a monopoly and to encapsulate it in a political economy of redistribution where public provision of the good went with quality and price cross-subsidies among consumers. The theoretical “second best” remedy designed and applied by Marcel Boiteux in France at EDF (on four decades: 1949-1989) staid in the same vein.

On the contrary the new economics of network industry, while being pushed by various pioneers (from R. Coase -1959- and H. Demsetz -1968- to S. Littlechild, J-J Laffont & J. Tirole in the 80’), typically recommend combining ex ante and ex post tools to better remedy the initial market failures. As ex ante tools, we have a wide range of competitive or pro competitive tools, particularly auctions which include the auctioning of rights to serve customers or to use congested network or other essential facilities. Such ex ante tools can be combined with ex post pro competitive tools like “smart procurement contracting process”, “smart externality management pricing”, and “incentive regulation” which now can replace detailed cost based regulation of service by many type of pro-competitive regulated contract (from Price Cap and Menus of contracts, to pure “Yardstick Competition” based on “Benchmark” delivered by DEA techniques or parametric techniques).

As a consequence, to remedy actual market failures by a better market design, which was seemed to be a mere joke forty years ago, or a very particular component of the “Reaganomics & Thatcherism” of the early 80’, became a common plate of the European public policy in the late 90’, both at the Member States level and at the EU level. The deliberate use of “smart” competitive tools can improve quality, price and efficiency in the use of resources as well as increase openness to adaptation, innovation and invention.

However this “market design” policy still claims for a deeply specialized governance structure. It comes from \*the imperfect encapsulation of monopoly features and of externality characteristics in the “network monopoly infrastructure” component of the industrial chain; \*\*

from the imperfect definition and allocation of the new property rights along the chain of users; \*\*\* from the imperfect framing of transactions by combining ex ante & ex post new smart tools. As a result, the newly created “market designs” stand as instable combinations of market & non market mechanisms which ask for bigger and deeper governance requirements, being sometimes “public” (like those delivered by sectoral regulators or competition agency) and sometimes “private” or mostly private (like those delivered by designated “system operators” -in transmission or distribution network-; organized bourses, pools or exchanges; or self-regulated business associations or committees).

It can be seen as the revenge of the “ex post remedies” advocated by O. Williamson as soon as 1976 and 1985 while R. Posner (named as Judge by the Reagan administration) and others thought that the market mechanisms will provide a self sustained type of governance centered on ex ante competition.

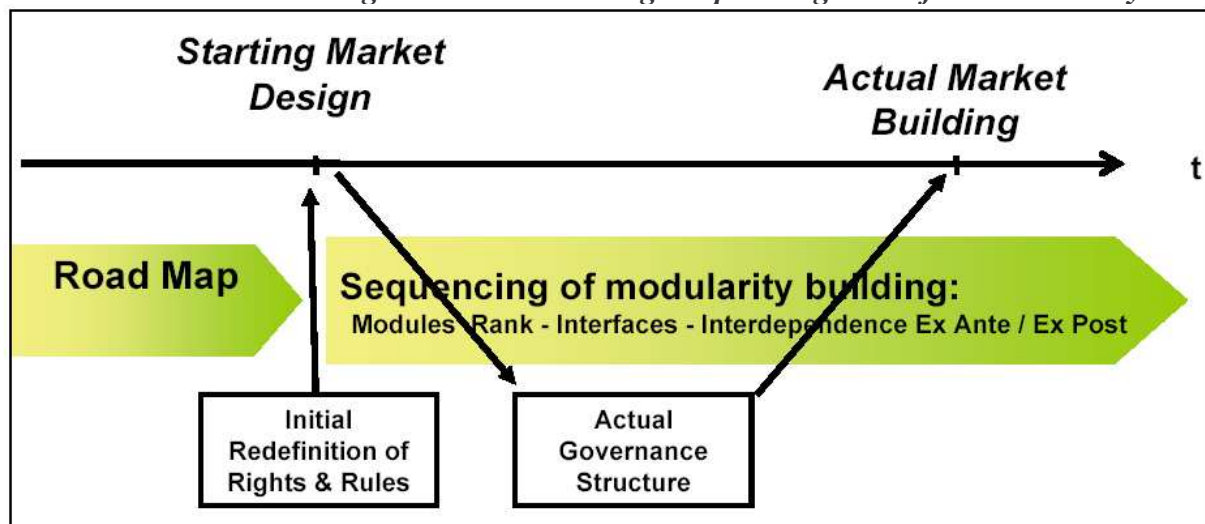
### **III: “Market building” as alternative to market design incompleteness**

We have just seen that “Market Designs” are instable combinations of market & non market mechanisms on several components of a given network industry which ask for bigger and deeper governance requirements than initially thought. We are now facing it as the consequences of the fact that these Market Designs are generated by a sequential combination of market & non market mechanisms on several modules of the industry. No “market design” can instantaneously and simultaneously address all the problems existing at the start of the competitive process. As a result the actual timing and sequencing of “Market Building” matters as much as “the ideal Map of Market Design” exhibited at the start of the competitive reform as its ultimate goal. We have to take seriously into consideration the fact that any actual “Market design” is the imperfect outcome of a governance activity. We propose to name this governance activity as “*Market building*”.



“Market Design” is generated by a sequential creation of market & non market mechanisms built for several modules interacting all along the chain of products, services and transactions of the network industry. That is why the actual timing and sequencing of “Market Building” matters as much as “the initial map of the Design” [Millàn (2003)]. Three dimensions of the pro competitive “market building activity” are combined here: \*Competition where possible; \*\* Modularity; \*\*\*Sequentiality.

**STEP3- From Market Design to Market Building: Sequencing the Reform Modularity**



**1°- Competition where possible.** As emphasized by S. Littlechild (2006), the former British energy regulator and the founding father of the concept of “Price Cap”, “Competition where possible” is thought to give the basic boundaries separating the competitive and the non competitive modules within the reformed industries. As an example, in the Electricity industry, Generation & retail are competitive activities ; Transmission & distribution still need to be regulated in a way. And Regulation should facilitate market activities, not substituting it. Yes but : “Where are the boundaries given?”

**2°- Boundaries are set by the “modularity” decision.** Boundaries between monopoly and non monopoly activities, as well as boundaries delineating this or that externality between

agents or tasks or transactions or markets, are not given at the start of the competitive reform. They are designed by the reform. They are the results of defining the modules within the industry. According to Baldwin & Clarck (2000): “*Modularity is a particular design structure, in which parameters and tasks are interdependent within modules and independent across them*”. This definition of modularity is not very far from Williamson & Joskow work on technological separability. Baldwin & Clarck add “*but in a complex design, there are often many levels of visible and hidden information*”. Baldwin & Clarck define “*The ideal of perfect modularity is full ‘plug and play’ flexibility.*” In competitive reforms this ideal of “perfect modularity” is far from being implemented. Frontiers between modules literally leak and modules stay interdependent in different ways while, of course and by design, interdependence is more deep and more frequent within a given module than between this module and any other one.

However it is still useful to keep in mind what a “perfect” modularity does in a perfect design when disaggregating - reaggregating a chain of tasks (or a chain of transactions). A perfectly designed modularity defines “*independent task blocks*”, sets “*clean impermeable interfaces*” and separates “*hidden and visible information*”. As a result, “modularity” brings three precious characteristics in the process it organizes. It increases the range of manageable complexity. It allows different parts of a large design to be worked on concurrently. It accommodates uncertainty when it is of a local kind.

By comparison, we literally see what “Market Building” intends to do and fails to do: Modularity of competitive reforms in network industries stays an unfinished and imperfect creation of “modules” and “interfaces”. For each “competitive module”, different boundaries can be traced and different competitive mechanisms can be implemented. In each module it is possible to conduct a number of parallel, uncoordinated experiments.

In electricity markets by example, Chao & Peck (1996) & Oren (1998) showed that you could use: mandatory multilateral markets, voluntary multilateral markets, purely bilateral contracting, or a mix of voluntary multilateral markets and bilateral contracting.

As for the allocation of tasks between the government, the regulatory body, the system operator, the competition authority, one could see the split-up into various functional entities... as ‘*regulatory modularization*’. [Midttun (2005)]

***An example of sub-modularity applied within the module “monopoly network operator”***

● *Electricity Grid Transport System Operators :TSOs (typical in Europe)*

- *Own the transmission assets*
- *Build, upgrade and expand the transmission grid*
- *Manage congestion of electricity flows within its control area*
- *Manage its side of the border with other TSOs’ control areas*
- *Manage its side of congestion of electricity flows on its interconnexions*

● *Electricity Independent System Operators: ISOs (typical in the USA)*

- *Don’t own the transmission assets*
- *Don’t build, upgrade and expand the transmission grid*
- *Manage congestion of electricity flows within its control area*
- *Co-Manage with other ISOs the interconnexions around its control area*
- *Co-Manage with other ISOs the congestion of electricity flows on the interconnexions*

As the modules created cannot be “perfectly designed” and still influence each other, the order in which they are created matters and the sequencing of decision matters [Newbery 2002 emphasizes the definitions of the reform strategy: the initial market design, the privatisation process; the type of unbundling between monopoly and competitive activities, the duty and resources of the sectoral regulator, etc.). In particular, the reform sequencing is critical in creating new stakeholders in the regulated game with new interests in and decision rights on the network activities [Rufin (2003) “*in these industries, the institutional framework plays such a crucial role that it provides an excellent setting for analyzing processes of institutional change*”].

#### **IV: “*Institution building*” as remedy to market building failure**

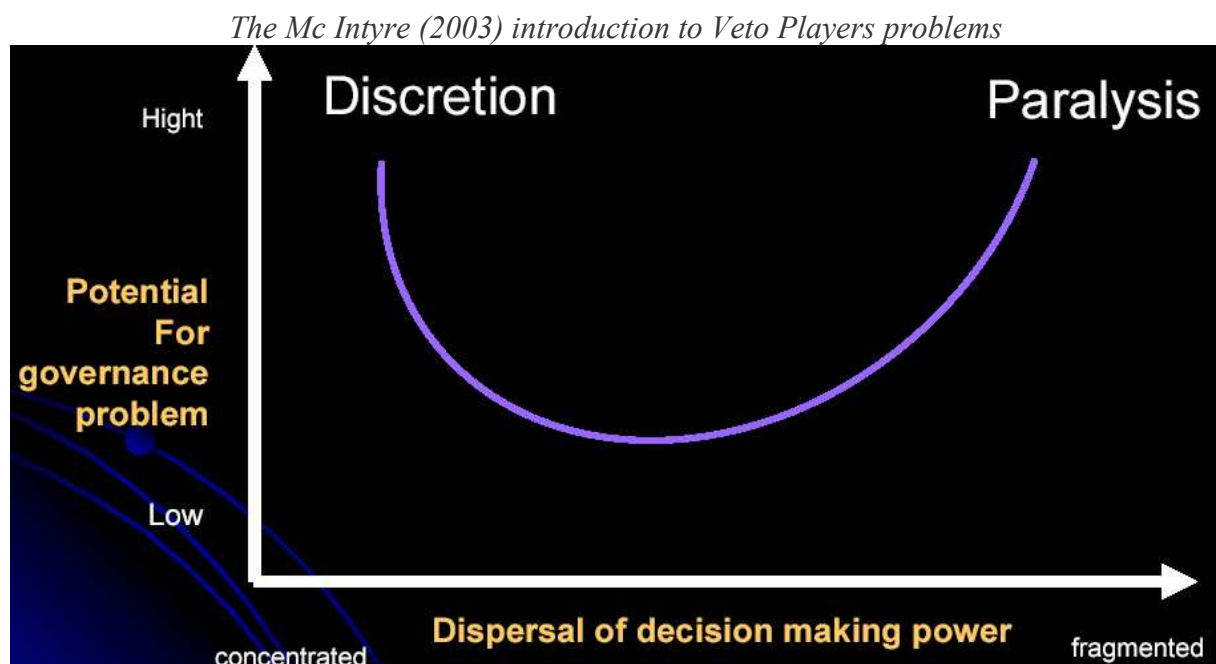
The governance structure being in place all along the long period of “market building” will necessarily deeply influence the actual features of the design being implemented. However, since it is acknowledged, why not to design since the beginning a robust and reactive governance structure which will be able to perfectly manage the numerous iterations needed to achieve the perfect market building? This aim of a perfectly designed governance structure of competitive reforms seems too to be a new dream.

Designing a Competitive Reform Governance Structure is mainly defining and allocating “rights” on the implementation of the reform design. By doing so, this “Governance design” mixes “*defining and allocating new rights*” within a nexus of existing rights still protected by other institutional guaranties [Pagano (2000, 2002)]. The perfect ex ante governance structure is then a dream, because the various Private and Public agents and the new “Governance Structure” constituencies are sequentially intervening in a process of discovery of the actual consistency and robustness of their old and new rights and of their evolution in the reform implementation (Prosser 2005).

Therefore, in an institutional world “à la North (1990, 2005)”, it is truly impossible to redesign all existing rights “at the start” to run thereafter a Market Building activity in a perfectly designed Institutional frame. Furthermore, the actual Governance Structure evolves due to the transformation of “veto power allocation” associated with the building of each new reform module. The fact that the actual Governance Structure is not constant all along the building of new reform modules raises unforeseen problems linked to institutional endowment characteristics...

Basically you can't do what you want or what you would like to do like writing on a blank page: Existing Institutional environment makes impossible to redesign all existing rights "at the start" to begin the Market Building in a perfectly designed Institutional frame of governance.

Governments being strong enough to change all existing rules can have a discretionary power in designing competition and regulation governance structure. But such governments rarely conduct policy of competitive reforms in the network industry. Therefore « *Fragmentation and dispersal of power stemming from the interplay constitutional structure and party system leads to policy delay, gridlock, and immobilism* » [Tsebelis (1995, 2002)]. Existing types of weak governments can do almost nothing, conducing to the paralysis of the reform policy as soon as other Veto Players play against the reform.



As a consequence, to understand how competitive reforms evolve in the medium and long period it is necessary to combine the "*Institutional endowment*" perspective with a veto players analysis « à la Tsebelis » (2002). Veto Players are individual or collective actors whose agreement is required for reform policy decisions. They can be political parties (e.g., as

part of a coalition government) or institutions such as Legislature and Senate, or a pre-existing sectoral regulator, or a competition authority, or business associations of various kind [Holburn & Bergh (2004), Spiller & Liao (2006)]. The general claims can be summarized as: the institutional potential for policy inducing substantial competitive change – or, conversely, policy inducing stability and status quo – is a function of only three variables: \*the number of Veto Players, \*\*the distances between these players’ policy ideal points and \*\*\*the internal cohesion of each Veto Player being a collective entity.

The Veto Players theory brings important results in the understanding of the actual conduct of competitive reforms in formerly monopolized industries. 1° Increasing the number of VPs tends to increase *policy stability* within a system, and it will never (almost) decrease it. 2° High policy stability reduces the importance of players’ agenda-setting power, because there are not many agreeable policies from which agenda-setters can choose. 3° Policy stability may also lead to government instability in parliamentary systems, because governments may resign if they cannot get anything done. 4° High policy stability may lead public bureaucrats (particularly Independent Public Agencies as “Independent Sectoral Regulators”) and judges (including “quasi” judges acting in Competition Authorities) to be more active. While this theory rejuvenates the frame of analysis, its empirical application has its own difficulties. According to Ganghof (2003), three types of problems are occurring. 1° A problem of identification: scholars have to distinguish real VPs from actors being only potentially influential. 2° A problem of preference measurement: once the relevant VPs are identified, their preferences have to be determined (however roughly). 3° A problem of equivalence: are the relevant VPs really similar in all respects (other than their policy preferences), or is it necessary to distinguish different types of VPs according to their respective power of influence (ex. “Agenda setting” VPs vs “Reacting only” VPs).

### ***V: “Institutional Endowment” as a hard or a soft ultimate constraint?***

The “Institutional Endowment” appears as the ultimate constraint in successfully conducting policy aiming at building competitive market designs in network industry formerly monopolized. Given the fact that so many countries started such reform policy all around the world, is this ultimate constraint a rather hard or a rather soft constraint?

Obviously some type of institutional environment makes impossible to redesign all existing rights “at the start” to begin the Market Building in a perfectly designed Institutional frame of governance. It is normally typical of federal countries. In such countries institutional rights to redefine and to reallocate property rights are divided into several federal public bodies (like: Senate, Parliament, Government, Supreme Court, Federal Agency), plus local public bodies (being local parliaments, governments, local agencies). It makes quite impossible to have them coordinating so deeply on a unique and consistent single frame of new rights and new mechanisms in a strongly competitive reform for network industry, particularly when strong local rights exist on the distribution or production of related services. We may say that truly federal countries are structured to prohibit intentional “Smart Rational Redesign”.

Therefore it advocates for a Strong Path Dependency hypothesis if Veto Players cannot negotiate a “Path reorientation” on a voluntary basis (including “side payments” by private or by public agents involved: see the American Energy Bill in summer 2005!). It is probably typical of the USA or Germany power games in network industries, particularly in the electricity sector which is strongly local in these countries with very little Federal State ownership at stake. However we cannot forget that “exceptional” alignment of decision rights can occur from time to time (let say 2 to 4 times in a century) and that Veto Power allocation evolves with market building itself. ...

Comparatively centralized countries seem “structured” to permit some intentional “Smart Rational Redesign”. It then advocates for a Soft Path Dependency hypothesis ... if Key Institutions can implement an ex ante “local” Path change which cannot be vetoed by existing veto players. It is a typical “Weak Institutional Complementarity” hypothesis as it is typical of the UK power games in network industries, particularly in the electricity industry. The UK Government and Parliament have been able to design a sophisticated governance structure \*creating an independent energy regulator and \*\* encapsulating the pro competitive regulation in a private contract protected by the independent courts. Comparatively we can see that France cannot credibly commit in reproducing such a design as long as its State is still the main owner of incumbent companies. France Government stays as an Ex Post Key Governance agent.

Is “Institutional endowment” favouring the persisting diversity we see in the European Union network industry competitive reforms? It seems obvious that federal countries and centralized countries are badly equipped to easily converge on the same intentional “Smart Rational Redesign”. The “Hard” Path Dependency hypothesis explains that federal countries can implement deep competitive reforms in “strong network” industry only if veto players really want to negotiate a “Path reorientation” on a voluntary basis (including “side payments” by private or public agents involved). While the “Soft” Path Dependency hypothesis explains that some centralized countries can implement some deep competitive reforms in some “strong network” industry which cannot be vetoed by existing veto players. It shows a rare case of “Weak Institutional Complementarity” where a rather discretionary power can self defeat its discretionary power to construct a new governance structure protecting the process of competitive reform.



## Conclusion

This general conclusion reminds what are the main conclusions of the researches we conducted and which are reproduced in the annexes.

The relevant methodology to the study the “Reflexive Governance” issue in the new competitive reforms conducted in network industries, particularly in the energy sector, is a step by step approach distinguishing four layers of construction and constraints:

1. the “*Market design*”
2. the “*Market building*”
3. the “*Governance building*”
4. and the Governance building within the “*Institutional Endowment*”.

### *Annexes: the associated research papers*

The eight associated research papers come from the activity resulting from a monthly research seminar, plus our participation into 14 international workshops or conferences.

Their authors are the following members of our research team: Ute Dubois, Jean-Michel Glachant, Matthieu Mollard, Yannick Perez, Virginie Pignon, Vincent Rious, Roxana Saplacan, and Marcelo Saguan.

- 1- *La difficile ‘commoditisation’ de l’électricité à l’échelle européenne*
- 2- *La faisabilité technique et économique d’un marché unique européen de l’électricité*
- 3- *Institutional Feasibility of Achieving the EU Electricity Internal Market: the Modularity Approach*
- 4- *Electricity Retail Module: the diversity of the actual Market Foundations*
- 5- *Electricity Retail Module: the real competition outcomes*
- 6- *Electricity Wholesale Module: balancing arrangements comparison in a sequence of markets*
- 7- *Electricity Transmission Module: ideal and actual transmission arrangements*
- 8- *Comparing the Governance of Competitive Change in the Water and the Electricity Industry*