Institutional Economics & Network Industry Policy

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Introduction

More than 25 years of deregulation policies…

4 deregulation waves':

1st Wave early 80' *US-UK* Reagan-Thatcher; *Chile*

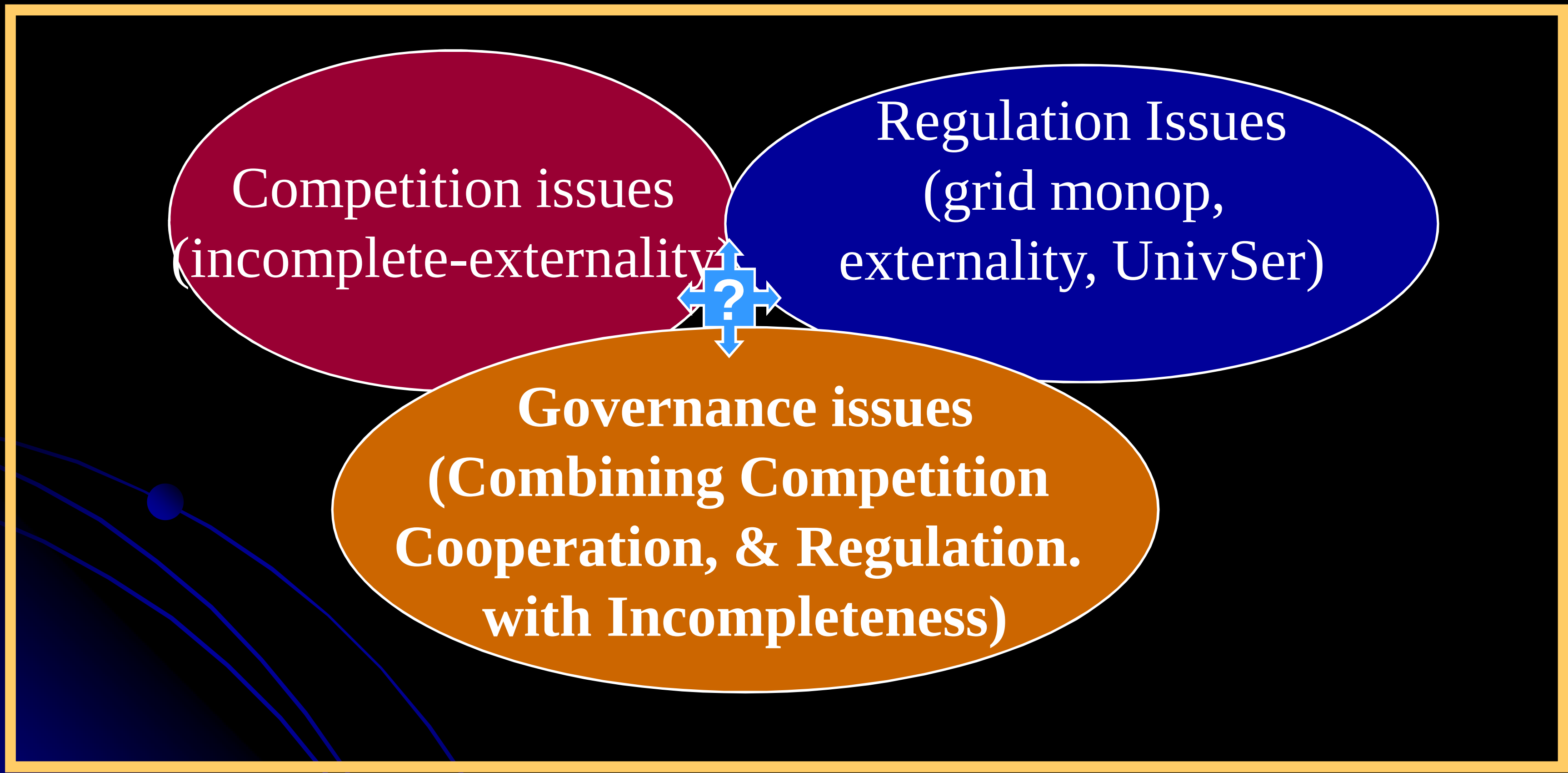
2nd early 90' European Nordic Social-Democracies *Norway, Sweden*

3rd *mandatory in European Union*. European 'Single Act' 1986 > Goal of an EU internal Market in all industries for 1992! >> work still in progress…

4th *World Wide* >> *World Bank*

Competition, Regulation, Governance

Structure of the Problem



Institutional Environment Framing

4 steps to do « empirical studies in Economics of regulation »

1. "***Market design***" as remedy to classical market failures
2. "***Market building***" as remedy to market design incompleteness
3. "***Institution building***" as remedy to market building failures
4. Institutions building within "***Institutional Endowments***"

STEP1-
“***Market design***”
as remedy to classical
« market failures »

How to deal with externalities, natural monopoly & public goods?

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Theories applied to network industries

1- *Very Old Companion of Standard Economics*

- Network Regulation was defined as Optimal Pricing Problem for Infrastructures since 1840' (F, J. Dupuit) 1880' (UK, A. Marshall);
- 2nd wave 1930' (Hotelling, Lerner -Marginal Pricing-);
  - « Old Network Monopoly Economics » centered on Pigovian Ex Post remedies to market failures
  - Solution : "*Keep Network industry as a monopoly and encapsulate it in a "political economy" of redistribution*" (public provision with quality & price cross-subsidies)
- 3rd wave 1980' incentive regulation (Laffont-Tirole –Littlechild Price Cap-)

Theories applied to network industries

3- NIE scholars contested OPS in standard Regulation Network Economics

- **Coase**
  - (1946) The Marginal Cost Controversy
  - (1959) The Federal Communications Commission
  - (1974) Light House
- **Demsetz** (1968) Why Regulated Utilities?; Franchise bidding could be a solution

Theories applied to network industries

- **Goldberg** (1976) & **Williamson** (1976) : Regulation and Deregulation of Networks « *Pricing or Contracting problem?* » with quality concerns, location, time reaction… need of an ex post approach.
  - Externality problem can be solved by different allocation of rights than state monopoly allocation.
  - Provision of public goods is not all the time made by public entities, other providers do exist.
  - And even the "natural monopoly" can be put under competitive pressure by the Demsetz solution

Theories applied to network industries

4- **North** (1990) claim: « *institution matters* plays a role in Network industry reforms as work driven by **Spiller** (1994, 1996, 1999, 2006) demonstrates.

- Famous 1996 Levy& Spiller results:
- “most efficient way of reforming telecoms industry depends of the nature of the country institutional endowment
- Shirley & Kieffer: political economy of sustainable network reforms
  - > reform feasibility in the short run
  - >> reform credibility in the long run

But "*Market design*" still claims for deep specialized governance structure

- As noted by Wilson (2002) and Newbery (2005) Market design Innovations are not perfect in theory & practice:
  - Imperfect encapsulation of « natural monopoly & externality » in few particular modules of the Industry Chain
  - Imperfect definition & allocation of new property rights along the chain of users
  - Imperfect framing of transactions by combining "ex ante" & "ex post" new competitive tools
  - Market power of incumbents & national Champions

But "*Market design*" still claims for deep specialized governance structure

- **Market Design** is an instable combination of market & non market mechanisms and requires

More robust & deeper governance requirements to solve market design incompleteness and adaptation trough time.

- ***<u>"Market Design" is ex ante centred</u>***
- ***<u>Market building is ex ante + ex post</u>***

STEP 2-
« Market Building »
as a remedy for
« Market Design» failures

"*Market design*" becomes an imperfect outcome of a new governance activity: "*Market building*"

"Market Design" is generated by a <u>sequential</u> combination of market & non market mechanisms on several modules of the industry

"*Actual timing and sequencing of Market Building matters as much as "the initial map of the Design"*

Millàn (2003)

Market design" becomes an imperfect outcome of a new governance activity: "*Market building*"

- 3 definitions of « market building activity » are needed :
  - « *Competititon where possible* »
  - « *Modularity* »
  - « *Sequentiallity* »

1-« *Competition where possible* »

- « Competition where possible » gives us the basic boundaries of competitive and non competitive mechanisms
- Littlechild ex with the Electricity industry
    - Generation & retail are competitive activities ;
    - Transmission & distribution still need to be regulated in a way
  - As Littlechid (2006) beyond regulation presentation shows, Regulation should facilitate market activities, not subtituting it
- Yes but : « Where are the boundaries? »

2- Boundaries are set by « modularity »

- Separating 'Tasks AaAa" from 'Tasks BbBb' by hermetic interface framing their interaction is typically "Industrial Modularity"
- according to Baldwin & Clarck (2000) : *« **Modularity** is a particular design structure, in which parameters and tasks are **interdependent within modules** and **independent across them** ».*
- Not very far from Williamson & Joskow work on technological separability

2- Boundaries are set by « modularity »

- 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. »*
- => Imperfect modularity

« Modularity » set of concepts

- **Modularity Rules for a perfect design** :

Independent task bloc

\+

clean interfaces

\+

separation of hidden and visible information

2- Boundaries are set by « modularity »

- **Modularity does 3 basics things**

1. It increases the range of manageable complexity
2. It allows different parts of a large design to be worked on concurrently
3. it accommodates uncertainty

« Modularity in network industries» is becoming an unfinished games of « modules » & « interfaces »

- Midttun (2005) for each « competitive module » different competitive mechanisms can be tested.
- *« For each module it is possible to conduct a number of parallel, uncoordinated experiments ».*
  - *For market mechanisms : Chao & Peck (1996) & Oren (1998) show that you could use : Mandatory markets, voluntary or bilateral contracting*
  - *As for regulatory task « In the case of electricity market deregulation, one could see the split-up into various functional regulatory specialities… as regulatory modularization.* » Midttun (2005)

Ex of modularity in natural monopoly electricity grid

- Electricity Grid Transport System Operator :TSO
  - Own
  - Build
  - Manage internal congestion
  - Manage connexions with other systems
  - Settle the disputes
  - Inform
  - UK, France, Spain
- Electricity Independent System Operator ISO
  - Don't own
  - Don't Build
  - Manage internal congestion
  - Depending of the cases, not always
  - Depending
  - Inform
  - PJM, California…

3- « Sequencing of decision matters »

- Newbery (2002) *« Choosing the right reform strategy is more challenging than early optimists claimed*".
- Definitions of the reform strategy :
  - privatisation decision;
  - level of unbundling,
  - creation of specific regulator with Power and resources
  - Initial design of some modules in the chain
  - Further reform of other modules
  - Mutual adaptation of former & new modules…

3- « Sequencing of decision matters »

- creates new stakeholders in the regulated game with new decision rights on the network activities …
- Rufin (2003) *"in theses industries, the institutional framework plays such a crucial role that it provides an excellent setting for analyzing processes of institutional change"*

So market building activities are not perfect

- Modularity & sequentiality don't give us a perfect market solution for network industries… (externalities, market power…)
- So the problem becomes institutional… « how to cope with theses imperfections? » because « keeping the lights on » is a decade long process of reform?
- Try to **build institutions** and governance structures to deal with it?

STEP 3-
« Institution building »
as remedy to
« market building » failure

Why not to design Ex Ante a perfect “Governance Structure” ?

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Perfect *ex ante* “***Governance design***”a dream?

- Governance Design is mainly defining & allocating “**rights**” on implementing the design chosen.
- *By doing so, this Governance design mixes “**defining & allocating New rights**” within a nexus of **existing rights** protected by other institutional guaranties (Pagano (2000, 2002)).*
- *The perfect ex ante governance structure is then a dream, because various Private & Public agents & the new Governance Structure is being “**sequentially**” called to **intervene…***
- *… and to **interact** in a process of **sequential discovery** of actual rights limitation and evolution by their implementation (Prosser 2005).*

Perfect ex ante "***Governance design***"a dream?

- In an institutional world "à la North (1990, 2005)", it's Impossible to redesign all existing rights "at the beginning" to run after a Market Building activity in a perfectly designed Institutional frame.
- Actual Governance Design evolves due to the transformation of **veto power allocation** emerging with the building of new market modules.
- This evolution raises unforeseen problems due to **institutional endowment** characteristics…

STEP 4-

« institution building »

within given

« Institutional Endowment »

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A look on Institutional Endowment literature

“Existing Institutional environment makes impossible to redesign all existing rights “at the start” to begin Market Building in a perfectly designed Institutional frame of governance”.

Basically you can’t do what you want.

« government strong enough to protect property rights is also strong enough to confiscate the wealth of citizens »

Weingast (1995)

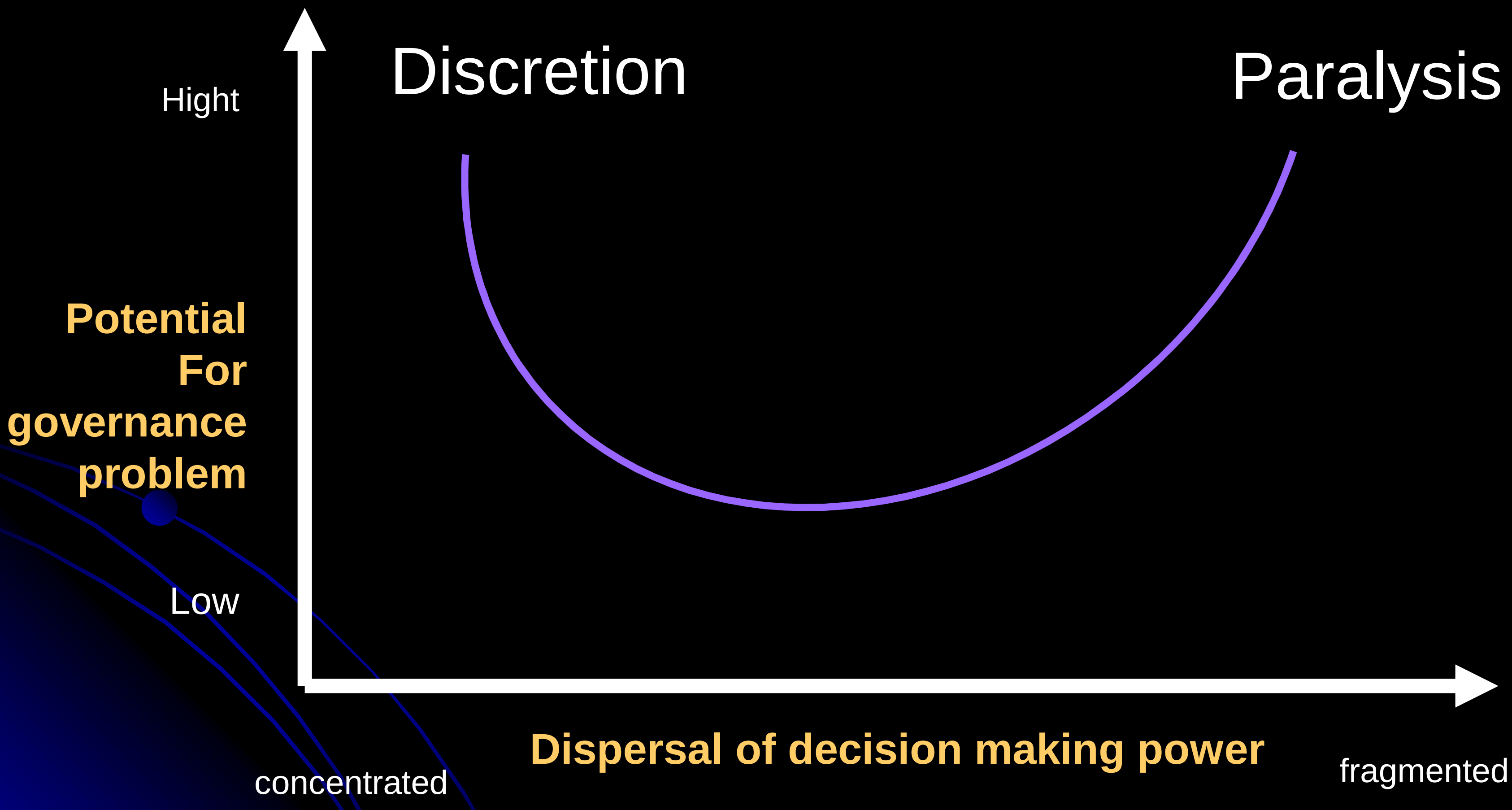
Strong governments can change all the rules => PB of discretion in regulation

« Fragmentation and dispersal of power stemming from the interplay constitutional structure and party system leads to policy delay, gridlock, and immobilism ».

Tsebelis (1995, 2002)

Whereas weak governments can do almost nothing => PB of paralysis of regulation

The Mc Intyre (2003) introduction to Veto Players problems



“*Institutional endowment*”
&
veto players analysis « à la Tsebelis » (2002)

- *VPs are individual or collective actors whose agreement is required for policy decisions.*
- *VPs can be both political parties (e.g., as part of a coalition government) or institutions such as a second chamber, or regulator : Holburn & Bergh (2004) and Spiller & Liao (2006)*

- *Tsebelis' general claims can be summarized : a political system's potential for policy change – or, conversely, its policy stability – is a function of only three variables:*
  - *1) the number of VPs,*
  - *2) the distances between these players' policy ideal points and*
  - *3) VPs' internal cohesion.*

Importants results from VP theory

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 ».

1. « Policy stability may also lead to government instability in parliamentary systems, because governments may resign if they cannot get anything done ».
2. « high policy stability may lead bureaucrats and judges to be more active and independent from the political system » (typically EU Frame)

Empirical problems of VP theory

- According to Ganghof (2003), empirical VP studies have to deal with three types of problems:
  - 1. **Problem of identification**: Scholars have to distinguish real VPs from other potentially influential actors.
  - 2. **Problem of preference measurement**: Once the relevant VPs are identified, their preferences have to be determined (however roughly).
  - 3. **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?

So do institutional endowment matters?

- Some "*centralized countries" are "structured" to permit some intentional "Redesign"*
  - *UK Government & Parliament can create both * independent regulator and ** encapsulate pro-competitive regulation in a private contract protected by Courts in all network industries…*
- *Whereas some "decentralized countries" can't do it in "normal" time.*
  - *Designs are done "once for ever…" almost…*

So is "***Institutional endowment***" a hard constraint?

YES

IF numerous VETO PLAYERS CANNOT NEGOCIATE "Path reorientation" on a voluntary basis

NO

In single VETO PLAYER GAME

or

IF numerous VPs CAN NEGOCIATE or "enjoy" a "Window for reform" à la Keller (2003)

- As a consequence :
- *Decentralized and centralized countries are badly equipped to converge on the same "Redesign" because of their own institutional characteristics and distribution of VPs…*
- *>> Difficult to have EU really converging on the same "Market design" or "Market Building process & outcome" Even if "Big Players" play a similar market game*

Conclusions

The 3 sisters *Attractivity, *Feasibility, *Credibility >> to be supplemented by modularity, sequentiality

1. "***Market design***"
2. "***Market building***"
3. "***Institution building***"
4. Institutions building within "***Institutional Endowment***" resists completely intentional rational policy (von Hayek: French Disease)

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