

# New Institutional Economics

*A Guidebook*

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## A Road Map for the Guidebook

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*Eric Brousseau and Jean-Michel Glachant*

New Institutional Economics (hereafter NIE) is the outcome of an evolutionary process, not a planned refoundation. Consequently, unlike Neo-classical Economics, it is not an integrated theory based on a set of common hypotheses, but rather a combination of bricks coming from different traditions. NIE scholars quote great minds as contrasted as Kenneth Arrow and Herbert Simon, or Friedrich von Hayek and Armen Alchian, or Mancur Olson and Sidney Winter. They borrow concepts from, and contribute to, many literatures and traditions, among which Law and Economics, Organization Theory, Industrial Organization, Economic History, Development Economics, Public Economics are not the least. NIE is nevertheless built around a backbone of some fundamental and original contributions proposed, in particular, by Ronald Coase (1937, 1960, 1988), Douglas North (1990, 2005) and Oliver Williamson (1975, 1985, 1996). Together, these contributions are not fully consistent, and many debates opposed the three scholars quoted above. They are, however, complementary in the sense that they fit together to compose not a general theory, but rather a frame proposing a new way of analyzing economic phenomena.

To NIE scholars, (economic) agents use resources and play games on the basis of rights of decision. Those rights are defined, allocated and re-allocated by various types of devices, in particular contracts, organizations and institutions. Analyzing these devices highlights a new level of interactions among agents seeking to influence the way the rules of the games are built and evolve. These games are played either on a very local level — in bilateral

interactions — or on a global level — in interactions encompassing all human beings — and on many intermediary levels between the two: communities, industries, countries, regions, etc. The strength of NIE lies in its proposal to analyze governance and coordination in all sets of social arrangements: a vision in terms of design and enforcement of systems of rights (of decision, of use, of access) which result in the implementation of orders allowing agents to coordinate when using or producing resources.

Another powerful characteristic of NIE is its evolutionary perspective. This is a consequence of human nature and of the complexity of social systems comprised of numerous interacting agents, whose behavior cannot be fully anticipated (partly because their rationality is bounded, partly because they are innovators). Thus the games mentioned above are not played by agents benefiting from perfect information and infinite computation capabilities enabling them to optimize and establish, in one shot, the optimal system of rights. The design of institutional systems is not based on optimization computation but on trial and error, on the implementation of solutions that should be recognized as imperfect and temporary (hence the concept of ‘remediability’). In such a context, it is essential to take into account the management of changes together with the processes of evolution.

This vision has two important methodological consequences. Firstly, NIE is built from an applied perspective. Because scholars believe they should learn from facts due to the complexity of the problems they are dealing with. It leads NIE scholars to focus on issues, and their research is strongly oriented toward decision-making. Secondly, it makes NIE “open minded”. NIE is open to the “importation” of any contribution that may be relevant to dealing with the above mentioned issues. As an example, scholars as different as Georges Akerlof, Jean-Jacques Laffont, Jean Tirole, Reinhard Selten, Vernon Smith, Ariel Rubinstein were involved in conferences held by the International Society for New Institutional Economics (ISNIE). More fundamentally, scholars trained in different traditions and recognized as key contributors to other domains have made distinguished contributions to the field. This is the

case, e.g., for Masahiko Aoki (2001) or Avihash Dixit (2005)<sup>1</sup>. Also, NIE strongly relies on multi-disciplinarity to benefit from fertilization from political sciences, anthropology, sociology, management sciences, and law in particular.

This openness of NIE results in a certain degree of heterogeneity. The literature pools a wide set of very different contributions that include in-depth case studies (with important benchmarks by Coase and Williamson), historical analysis (North, Greif, Weingast), econometric tests (Joskow, Masten), experiments (Smith, Fehr), and modeling (Kreps, Milgrom, Hart), etc. As a result, while rich, at first sight, the contributions in NIE taken as a whole may appear inconsistent and lacking in identity (see Ménard, 2004). This heterogeneity is further strengthened because a growing body of research continues to explore how institutions evolve, how they could be enhanced through better design, how they impact on human behavior and economic performances. However, this eclectism is serving a clearly established scientific program aimed at identifying stylized facts, highlighting general causal regularities, building theoretical logic and verifying and confronting theoretical propositions.

This complex nature of NIE explains why we felt a “guidebook” could be useful. It aims to clarify the unity and diversity of the field, to highlight established knowledge and point out future developments. The book seeks to provide the reader with a guide to link up the many developments carried out in the field. And this introductory “road map” aims to highlight the relationship between the chapters.

In his introduction to our book, Paul Joskow provides an historical overview of how NIE emerged in response to the shortcomings of traditional micro and macro-economic analyses. He insists that NIE brought essential issues that were neglected or not sufficiently taken into account due to lack of analytical tools to the attention of the economic profession and decision makers. This resulted in some original and major achievements. However the main success of NIE is due to the fact that issues originally highlighted by NIE scholars — e.g.

coordination costs, design and allocation of rights of decision, credibility of rules and commitments, complex multilayer games among stakeholders, and many more - now lie at the heart of most developments of economics.

This book is divided into six sections. It starts by analyzing the origins of NIE, based on contributions focusing on coordination means — organizations, contracts and institutions — neglected by mainstream economics until the 1980s, which originally only focused on market mechanisms. A second section focuses on the methodology of institutional analysis. The peculiarities of the performance of case studies, econometric tests, experiments and modeling are discussed. Sections 3 to 5 explore the development of NIE in various fields of applications. The third section deals with issues related to management, particularly strategic reasoning and organizational design. Section four deals with the organization of industries. The fifth studies the complex issue of the design of institutional systems, which is a major policy tool, whether a matter of regulating business activities or promoting development and growth, or dealing with many other policies (education, crime, etc). Taking stock of the progress — while recognizing the shortcomings — of current developments in the economics of institutions, the sixth section comprises three chapters highlighting some of the research directions to be explored in the future.

## **A. Foundations**

New Institutional Economics started with studies of three categories of coordination devices: organizations, contracts and institutions. In each case, the main challenge was to understand the very nature of these phenomena by explaining how they impact on the performance of economic activities and how they are designed. In many respects, these devices are different — organizations are collective and consciously designed, contracts are bilateral and consciously designed, and institutions are collective and self-organized — which leads to different analyzes, refers to different traditions and relates to different issues. However, they

all frame the behavior of economic agents and influence the results of their interactions. Economists have been progressively paying attention to these devices to gain better theoretical foundations for analyzing economic issues and also to benefit of a more consistent theory of coordination in a decentralized economy. They progressively understood that the characteristics and the very limits of humankind explain why we need institutions and organizations. The latter allow coordination and cooperation, which enable human beings to surpass the limits of their individual capabilities, in particular, their limited cognitive capabilities.

Historically, however, NIE did not start with concerted scientific initiatives. Several waves of applied and analytical developments, driven by specific issues, led to the development of three main bodies of literature, initially relatively separated from each other. One is the economics of the firm and organizations. It started in the 1930s (with major development in the 1950's) due to the development of large firms and their strong influence on the economics of markets and industries. Another one is the economics of contracts initiated in the 1970s (with major development in the 1980s and 1990s). Both lines of thought led to a more consistent framework for studying coordination in a decentralized economy and addressing essential policy issues (see Brousseau and Glachant, 2002). The final literature is the economics of institutions initiated in the 1990s and inspired by the need to manage development and transition processes<sup>ii</sup>. Following this sequence, our book starts by pointing out the contribution of NIE to the economics of firms, contracts and institutions. Rather than following the path of the history of economic thinking, the four chapters in this section highlight the specificities of the NIE approach when it deals with its core subjects.

The chapter on the economics of the firm by Pierre Garrouste and Stephane Saussier starts by pointing out that most of the fundamental questions (but not all the answers) structuring the economics of the firm were already raised in the contribution by Ronald Coase in 1937. This outstanding scholar delivered perfect insights into the nature of the firm. At the same time,

these insights explain why building a theory of the firm is inherently difficult. Everything depends on the fact that organizations and markets are at the same time both substitutes and complements. Firstly, the firm is sometimes an alternative mode of coordination that enable the same activity as markets — i.e. enabling transactions among individual agents providing/benefiting of services — as proven by the divestiture of large firms and permanent movement of mergers and acquisition. However it is sometimes an inherently different mode of coordination, as proven by the need to separate certain collections of resources (physical assets, financial means and knowledge) from markets in order to generate new activities, build new capabilities, etc. (see the internalization of start-ups, the movement of alliances, and these large innovations often linked to the emergence of large firms). Second, hierarchical coordination is a way to avoid the drawbacks of independent decision makers driven by their self-individual interests. This separation from the logic of market and competition creates principal-agent type incentive issues. The employer (she), as residual claimant, needs to extract information from the employee (her agent) and to incite him to act according to her will. Incentive mechanisms are thus created by reintroducing market-like mechanisms within the firms either by transmitting market pressures (e.g. bonuses indexed on sales) or by organizing competition (e.g. rank order tournament). This double-face of the firm highlights a key task for new institutional analysis: to identify interdependencies between alternative modes of coordination as complementary components of economic and social systems.

The NIE approach to contracting points out such interdependencies (Chapter 2, by Eric Brousseau). Since early developments in the economics of contracting centred on a fully decentralized economy, scholars focused on understanding pure bilateral tools for coordination. It resulted in the theory of incentives that analyze self-enforcing coordination mechanisms. It defines highly sophisticated mechanisms that would be too costly to implement in the real world where decision making is onerous. NIE and also Law and Economics, proposes an alternative vision based on a more applied approach. Individuals

have a bounded rationality and are already embedded in an institutional framework. The latter empowers them to interact with the others while, at the same time, limits their ability to do so. Institutions indeed grant them property rights and collective rules framing the exercise of these rights, and with coordination means (starting from market places facilitating meetings between traders or dispute resolution devices ensuring enforcement of commitments). Contracting allows agents to redesign and transfer their rights among each others. Those contracts are embedded in the institutional framework — social customs, laws, judiciary, etc — simply because agents' ability to contract and the cost of contracting depends on it. The institutional environment is therefore the primary factor for agents' contractual choices. The latter are based on trade-offs between the costs and benefits of relying on alternative coordination mechanisms either designed by agents (contracts) or provided by the society (institutions). These tradeoffs rely most of the time on a combination of mechanisms that complete with each other, leading to the idea that coordination is ensured by multilevel governance... and the consequent necessity to analyze institutional and contractual coordination together.

However, building an economics of institutions forces a change of vision from that of institutions as the result of rational design. While the purpose of new institutional economics is to apply rational choice to the understanding of coordination devices, John Nye and Benito Arrunada explain in two stimulating chapters why it is misleading to consider institutional systems as the result either of efficient coordination decisions aimed at optimizing the collective economic outcome, or as the result of a process of selection allowing more economically efficient social arrangements to surpass alternatives.

Because social systems are made up of heterogeneous individuals interacting through a wide diversity of coordination mechanisms that change, and whose combination evolves with the passing of time, John Nye recommends analyzing them as biological systems, rather than mechanical devices. This puts the focus on the diversity of the processes of evolution, since

efficiency is not synonymous with the ability to survive. As pointed out in biology, but also in history, what is “efficient” at a given point of time can evolve the wrong way, and inefficient but evolving, or invading, arrangements can surpass “efficient” ones. Biological analogies have, however, their own limits when it comes to understanding the dynamics of institutions since the interacting units in a social system are capable of reflexive analysis, which leads to innovation. Thus, on the one hand, to economize on cognition capabilities — and on coordination costs — agents can rely on routines and beliefs to coordinate. This is one of the major factors of institutional stability and the slow pace of change. On the other hand, since they are able to analyze the shortcomings of a given equilibrium, and if some specific conditions arise, they are sometimes able to switch to a new equilibrium. This is why endogenous radical and quick changes may occur in social systems. Consequently the complex interplay between trends to stability and trends to change calls for in-depth analysis at the frontier of several social sciences: anthropology, sociology, politics, history, etc.

This is the kind of exercise proposed by Benito Arrunada. He explores the features of institutions on the basis of very long-term historical analysis, cognitive sciences, and anthropology. Institutions have to be understood as tools built by humanity to coordinate, despite the inability of human beings to be perfectly rational. They succeeded in domesticating nature thanks to technology. In doing so they dramatically changed the material and social conditions of their lives, and they did it at a pace that totally surpassed the biological pace of evolution, in particular the capability of the brain to evolve. Institutions must therefore be understood as tools built to overcome the cognitive limits of humankind. They constrain behavior to allow individuals to behave — individually and collectively — more rationally than they could otherwise. They are able to do so because institutions are the products of a long process of trial and error. However, since this process is not perfect, since formal institutions are designed and run by individuals with bounded rationality, and since

technological and social changes are constantly accelerating, institutions are never neither fully adapted to coordination needs, nor fully efficient.

## **B. Methodologies**

The economics of institutions deals with complex issues due to the complexity of social systems. While rooted in economics, it calls for analytical innovations to better grasp the specificities of dynamic social interactions, the games played by agents around rules they might decide to comply with or not, complementarities among different types of coordination devices, etc. This is why NIE relies on a combination of several methodologies, whose usefulness and specificity are discussed in the second part of the guide.

Being a scientific movement, NIE aims to identify and control causal relationships. Because the devices and issues dealt with are numerous and because there are many differentiating factors among them, one size does not fit all and several methodologies have to be combined.

Of course mathematical modeling is a key tool. It is a way of making progress since modeling allows for the systematic checking of logical consistency and tracking of chains of cause and consequence. However, in its current state of development, the economics of institutions still has to identify the regularities and the causal relationships to be examined to check whether the burgeoning theories fit the facts. Indeed, rational choice analysis led to the development of a wide corpus of recommendations on supposedly “efficient” rules and coordination devices. However, most of these propositions are based on over simplified assumptions, on biased equilibrium analysis, and on over-static reasoning. It is thus important to assess whether these unavoidable assumptions are satisfactory heuristics or not, and if not, how they should be reshaped. To make progress, various methodologies must be combined.

An initial stage is identifying the most relevant regularities to be explained — the “stylized facts” — and carrying out a preliminary test of the complex interrelation of causal

relationships. This calls for the collection of wide sets of qualitative and quantitative data. This can be done through the systematic performance of case studies — which are of value in themselves, and which also gain value as they are accumulated by the scientific community. In his chapter, Lee Alston, illustrates how, and in what conditions, narratives can become insightful from an analytical point of view. It is indeed often forgotten that the revolutionary and fundamental contributions by one of the founding fathers of the discipline, Ronald Coase, are all based on the accumulation of careful observations of how real world problems are actually arise and are dealt with.

A second stage comes when stylized facts are identified. Then, economic modeling and especially the one carried out by game theory, are good ways of exploring their rationalization. Thierry Penard explains in his chapter why this type of analysis fits well with the analysis of institutional systems because we are dealing with interacting agents playing rules. Moreover, the flexibility of game theory makes it a useful tool for analyzing issues that are fundamentals when dealing with institutions such as credibility or the convergence of equilibria. Path-breaking contributions, such as those by Aoki or Dixit, demonstrate how game theory is a fundamental fuel for developing institutional economics.

Thirdly, to control possible explanations, econometrics is a vital tool since it allows for the control of various alternative explanations and for the impact of multiple factors that interrelate (interdependence tests). The contribution by Michael Sykuta details the specificities of the constraints of econometrics with regards institutions. Firstly, one processes qualitative rather than quantitative data. Secondly, since the issues raised by institutional scholars are relatively new, most statistical systems are not capable of providing scholars with relevant data. Efforts are therefore oriented not only towards processing existing data, but also towards the development of new data sources. While wide scale systematic data collections would be needed, most current knowledge relies on ad-hoc, incomplete and partial databases, raising concerns of replicability and insufficient controllability of results. Despite these

boundaries, great progress has been made and further progress is expected due to the increase in attentions paid by decision makers to institutional drivers of economics performances. Indeed, increasing means and efforts are being dedicated to measuring institutions, their outcomes, and to improving methodologies (see also the contribution by Stefan Voigt, Part 5). However, although plenty of work remains to be done, past research has already provided valuable knowledge.

Fourthly, since we are dealing with human behavior, the complexity of which is still poorly taken into account in the core of economic theories, experimental economics is one way of improving our knowledge. It reveals how “agents” behave in socio-economic interaction situations, with the scientist in a position to control the parameters of the rules of the game to check the effects of some of them. Moreover, laboratories allow the actual decision made by agents, and sometimes their motivations, to be observed. Stéphane Robin and Carine Staropoli provide the reader with insights into the possibilities offered.

So the second part of the book explains how developments in the economics of institutions should be expected following the presentation of new theories. The latter will be drawn from the accumulation of narratives aimed at identifying stylized facts, combined with studies inspired by game theory reasoning. They should result in testable propositions that would have to be more systematically tested through econometric efforts — conditioned by the development of relevant databases — and the design of ad hoc experiments.

### **C. Organization, strategy and management**

In the third part of the book, the unit of analysis is the firm, where many of the “strategic” decisions are organizational in nature. Firms choose how they organize their internalized activities and how they coordinate with others within alliances, partnerships and networks.

It is generally assumed that NIE, and especially Transaction Cost Economics (TCE), offers a simplistic analysis whereby simple optimal static solutions meet transaction situations. Transaction attributes would call for a single optimal governance mode. On the contrary, the accumulation of results and recent developments show that this approach first takes stock of the need for dynamic adaptations and therefore focuses on managing change; second, it reveals how governance relies on the complex combination of various means that cannot always be “aligned” and efficiently managed; and third, that organizational performances are strongly dependent upon the institutional context in which alternative organizational tools are implemented.

TCE cannot be static. The problem is not to minimize transaction costs in a static perspective, because (i) the strategic environment of a firm is mobile, and because (ii) costs are generated by organizational changes, while (iii) lack of adaptability associated to routinization generates costs (due to i). This gives rise to three insights developed in the contribution by Jackson Nickerson and Lyda Bigelow on the state of the art in organization and strategy. First, organizational design refers to the ability to minimize dynamic misalignments (because i; see Williamson, 1991). Second, one of the advantages of hierarchy as compared to market is its inertia in an unstable context (because of ii). Third, organizational vacillation (among alternative designs) can be optimal in a stable environment (because of iii).

TCE develops the idea that governance is a complex matter since it results from the combination of various mechanisms. This can be interpreted in two ways:

First, analysis of the discrete governance mechanism reveals that problems as “simple” as incentive issues call for a combination of mechanisms to deal with vertical and horizontal interdependencies (as pointed out by Emmanuel Raynaud in the case of governance of distribution channels). The incentives approach is reinforced by the knowledge perspective, which points out the perils and virtues of authority in managing knowledge. Market supplants hierarchies to solve cognitive problems in some cases, but the reverse is true in alternative

contexts (Jackson Nickerson and Lyda Bigelow). As a result, there is no one best way to organize firms, either from a transaction or from a problem solving perspective. This is why firms have to rely on hybrid modes of governance and on a combination of hierarchy, market and networked-long-term-cooperative relationships to manage complex problems raised by innovation, fragmented markets and transaction chains. Hierarchies and Hybrids can be considered complementary tools, either because they enable the management of different types of transactions (as developed by Joanne Oxley and Brian Silverman on inter-firm alliances and management of innovation) or because hybrid-governance allows reliance on complementarities between modes of governance in managing a given type of transaction (Emmanuel Raynaud).

Second, within a firm, various levels and problems of coordination have to be managed, from shop floor to shareholder and manager relationships, and including R&D management and coordination with suppliers. Interdependencies of governance exist among these levels together with coordination problems, which might explain why governance solutions fail to perfectly meet governance needs at the transaction level.

Finally, TCE points out that any reasoning on the choice of a governance mode should be institutionally contextualized. First, the institutional environment influences the relative efficiency of alternative organizational arrangements. Indeed, the quality of property rights, the design of laws, mutual trust among agents etc, are the foundations on which arrangements are established. Agents rely simultaneously on both levels of governance that interplay; and sometimes they build hierarchies and hybrids to compensate for the insufficiencies of the institutional environment. Transactions with the same attributes may be optimally governed by alternative organizational arrangements in contrasted institutional contexts (known as Williamson's shift parameter). Second, the institutional environment establishes the selection mechanisms that make alternative governance arrangements viable or not. Indeed, contractual and organizational viability does not depend on a "natural" (or physical") law that eliminates

less efficient solutions. It depends on humanly-built institutional rules and the convergence of anticipations to set the boundaries of socially acceptable behaviour and arrangements (see Jackson Nickerson and Lyda Bigelow, and also Brousseau, 2000).

From a methodological point of view, the NIE approach to organizational issues imports insights drawn from an evolutionary perspective. In particular, to understand firms and inter-firm networks, the “resources based view” (RBV) is essential since it points out the specificity of knowledge as a common asset built by non-market forms of organizations, because rights of access and use over such intangibles are difficult to secure and manage. Also, a lot has to be learned from the evolutionary analysis of selection processes.

#### **D. The organization of industries**

Applying NIE to management issues highlights how the institutional environment is an essential variable of organizational strategies. The contribution of NIE to industrial organization is to further explore the nature of the constraints faced by firms when building organizational arrangements. Firms are constrained, first, by the nature of their coordination needs. The latter — which relate to the notion of transaction attributes — are both the consequences of some “natural” constraints and the unintended results of past technological and relational choices. These choices determine how tasks are presently divided among firms. Past choices influence, in particular, the fragmentation of the production process into separated tasks, the interdependences among them, and the degree of standardization of interfaces along transactions chains (which relates directly to the notion of asset specificity). The second constraint is the shape of the institutional environment, which sets the existing nature and distribution of (property) rights among economics agents, which opens or closes opportunities in terms of organizational design. The resulting complex interplay between individual choices and collective constraints explains the organization of industries and is a subject studied by NIE scholars.

Manuel Gonzalez-Diaz and Luis Vazquez clearly illustrate this in their chapter on the “make or buy” decision. TCE claims that the governance of transactions and of transaction chains is, at first sight, the result of the will of agents who simultaneously choose transaction attributes and modes of governance. More recent developments insist on the fact that relevant transactional features (interconnectedness, risk, measurability, etc) are the results of systemic constraints due to choices made earlier by other agents in the industry.

Cases of industries dealing with natural resources also reveal systemic constraints framing organizational choices. They also highlight that these constraints are less “natural” than “institutional”. Indeed, the characteristics of transactions (measurability, risk, etc) calling for the implementation of alternative governance solutions fully depend on the division of labor mentioned earlier, and on the development of institutional solutions aimed at alleviating these problems by providing economic agents with credible measurement means, solutions to socialize risks, etc. This is particularly well developed in the contribution by Gary Libecap on the management of a resource — water — generally considered a “public good”. He shows that the notion of rivalry/non-rivalry and excludability/non-excludability are not natural but result from the institutional framework, which first establishes, or not, rights over it — property rights, but also right of access and use —, and second, allows or not their redistribution.

NIE goes further by comparing alternative institutional arrangements. When rights are poorly established, a decentralized system of negotiation among users of a resource cannot operate properly, and the resource is de-facto managed through a political and bureaucratic process. This induces biases in decision making since decision rights can be totally unrelated to (individual and collective) economic interests. Moreover, these processes tend to lack flexibility since those benefiting from established advantages have a de facto veto power against any attempt to change the principles according to which the resource is managed. On the other hand, establishing a decentralized and flexible process of collective management

necessitates the establishment of an adequate institutional framework consisting of (costly) mechanisms to establish property rights, and of (costly) devices aimed at fluidifying and oversighting the performance of the market through which they are redesigned and redistributed. The choice between two institutional alternatives should balance the cost of the under-performance of political and bureaucratic management processes with the costs of implementing and running a market. This last point illustrates one of the main lessons drawn from NIE. Institutional frameworks should be considered processes for producing coordination capabilities among economic agents. Alternative “technologies” deserve to be compared in terms of overall costs and benefits.

While institutions matter, “natural” constraints nevertheless exist. As pointed out by Michael Cook, Peter Klein and Constantine Iliopoulos, agriculture, not because it deals with “the” nature, but with hazards and team production, tends to maintain small entrepreneurship firms like family-owned farms. Indeed the activity is characterized by multiple, interrelated, seasonalized, localized and difficult to observe tasks, which are poorly adapted to a taylorization of the production process, which raise complex issues in terms of coordination and incentives. Family-based teams seem to be a good second best solution because solidarity among members can align the interests of the team members and the “natural” structure of authority allows decision making. However, family businesses remain inherently small. To collectively face natural and coordination hazards and to benefit from economies of scale, both up- and downstream, operations are managed by cooperatives (of farms). Cooperatives are nevertheless inherently inefficient — especially in accumulating capital and reacting quickly to shocks — due to difficulties in making decisions and managing incentives in a group of “peer residual claimants” with diverging interests. So this chapter clearly illustrates the combination of constraints and the systemic effects framing the design of industries.

Reciprocal interdependencies are one of the reasons why organizational and institutional arrangements can persist over time. In response to the lack of an existing coordination

framework, agents can develop ad hoc complementary coordination devices. The latter hinder incentives to reshape the inefficient framework, and even might raise barriers to change, since ex-post, both the weak framework and its organizational cure must be transformed. Such institutional complementarities explain stability and difficulty to change, while they can also be considered drivers of change when certain conditions are met.

### **E. Institutional design**

At first sight, the idea of institutional design does not fit with the “evolutionary” nature of institutional frameworks characterized by reciprocal interdependencies and a chain of strategic reactions to existing rules or changes. At the same time, since policy making aims, to a large extent, to reshape a given institutional system to improve its capability, it is crucial to better understand how institutional changes can be influenced, taking into account the fact that existing institutional frameworks are the unintended collective outcomes of deliberate attempts to improve efficiency locally.

The existing institutional framework is to a large extent mandatory and not optional or voluntary. One can analyze its properties, but it is difficult to make changes because this induces redistribution of decision rights (then power) and of use and access (then wealth). Any “social planner” faces the unavoidable constraint of being both a long- and short-termist. He has to develop a long term and general vision to propose solutions to better deal with collective problems — both social coordination and collective action — and a pragmatic approach. Pragmatism is a response to the ability of agents to behave strategically and bypass collective constraints to protect their interests and enhance their individual wealth. Here, NIE first provides a better understanding of how institutional frameworks produce economic outcomes by analyzing how individuals and groups play with and bypass them. Second, it analyzes the processes by which changes occur, often by accumulation and propagation of micro-institutional reforms for fixing local problems.

Pablo Spiller and Sanny Liao point out that business regulations and competitive policies are influenced by the way interactions among groups of interest take place. Those in charge of designing rules framing business activities need to access relevant information and knowledge. The various groups of interests are motivated to provide this of course biased according to their particular interests. “Rulers” and “Arbitrators” are therefore motivated to gather information from different groups. The way interactions between rulers and arbitrators and those groups occur depends on the structure of the political institutional environment. The respective organization and the interactions between legislative, courts and bureaucracy explain how the various stakeholders select the most relevant communication strategies and targets to promote their interests. These games of influence occur in any institutional settings, not only in “corrupted” countries. Only modalities differ across socio-economic systems. They result in complex combinations of strategies among the different players — holders of interest, but also the general public, politicians, bureaucrats — inducing processes of evolution that are highly unlikely to be driven by the desire for efficiency and to converge toward similar (and even compatible) equilibria across countries<sup>iii</sup>. While perfection is out of reach, more transparent political institutions and checks and balances should lead to more efficient changes, because the ability to identify weaknesses is enhanced and greater incentives to cure them exist.

In a complementary approach based on a survey of the process of regulatory reforms in network industries, Jean-Michel Glachant and Yannick Perez highlight other reasons for the path dependency characterizing the processes of institutional redesign. Managing reforms does not involve designing, from scratch, optimal market and ideal industry structures that would depend on “natural” conditions or on the “technology”, for two reasons. First, technology is endogenous, as pointed out by the fact that past reforms in those industries has led to many technological changes — standardization, measurement techniques, structuration of networks in “hub and spokes”, etc — to comply with competitive logic. Second, reforms

are most of the time hardly politically sustainable since they result in the redistribution of power and wealth. There are few chances of benefiting from a perfect alignment of stakeholders' interests with adequate incentives for political or judicial authorities to allow for consensual reforms. Rather the institutional protection of existing rights always allows some parties to exercise veto (also because some bureaucrats and politicians may have an interest in maintaining the status quo or in protecting groups harmed by the reform). Reforms are inherently progressive and generate political games at each stage, with outcomes that are difficult to predict because the various institutional decision makers are loosely coordinated (both for good reasons — separation of powers – and bad ones — divergence of interests). Such conditions hardly guarantee efficiency and can even lead to inconsistent new regulation regimes submitted to potential major failures (like electric black-outs or financial crises). Step by step implementation of “institutional patches” aimed at fixing the worst effects of institutional regimes do not guarantee success, but limit the danger of major failures because adjustments to the reform can be made (leading to the concept of remediability).

The complexity of managing institutional changes also lies at the core of development policies. In her contribution, Sonja Opper points out that besides the management of diverging interest, the necessary consistency among institutional components — i.e. the institutional complementarities — makes change difficult to manage. First, institutional components do not have the same degree of manipulability. While it might be possible in certain circumstances to transform certain formal institutional components, it is vital they remain consistent with other institutional components — especially informal ones — that cannot evolve or that do change at different paces. Second, complementarities among institutional components are complex to manage because the properties of alternatives are context dependent. For instance, a private body can do what a public one cannot perform in a specific environment. The same occurs for formal vs. informal institutions, and so on. As a consequence, any institutional framework is highly specific and the combination of

mechanisms performing well in a context can prove powerless in another. This means those in charge of managing processes of institutional face difficulties when trying to learn from other experiences; while they are managing complex systems where the consequences of changes are difficult to predict.

Thus the inherent difficulties of managing institutional change and implementing institutional frameworks promoting economic efficiency are partly due to a lack of knowledge about the complex interplay between institutional components. The same applies to knowledge on the way institutional constraints create socio-economic outcomes by taking into account the actual strategic reactions of agents to institutional constraints. In his essay on the state of the art of constitutional political economy, Stefan Voigt highlights how it is possible and worthwhile carrying out systematic positive analysis based on patient efforts to measure institutions and their impacts, and to unbundle the many components of the complex phenomena. Normative constitutional analysis, based on a contractual approach to constitutions (as developed by Buchanan), provides normative tools for judging the efficiency of alternative constitutional regimes. However the very nature of institutional frameworks — more in common with the spontaneous order à la Hayek than with a consciously designed order — means these criteria are irrelevant when it comes to studying existing institutional frameworks. To overcome these shortcomings, and thanks to new econometric methods and databases, several scholars have launched initiatives to measure how institutions impact performance. However, we lack knowledge of complex transmission mechanisms to explain the relationship between an observed outcome and observed formal institutions, and this makes it hard to learn any relevant “lessons” for directly building policies from results obtained over the last ten years. Nevertheless, on-going efforts to measure teach more about what needs to be further investigated via various methodologies (from econometric to anthropologic observations, and including experimentation), and opens up avenues for further research that should deliver useful knowledge for managing institutional changes.

## **F. Challenges**

One of the key views of NIE today is that the processes of institution building and institutional evolution do not guarantee the most efficient forms of governance are selected. Institutions can be durably inefficient. Even the notion of institutional efficiency is questioned. This is not only because selection failures occur. But also because institutions are made up of various coordinated equilibria among individual strategies in games played in a wide number of institutional arenas — the components of the institutional framework — that do not spontaneously match and lead to efficiency. This links up the viewpoint developed by Aoki — who sees alternative institutional arrangements as various combinations of equilibria in different institutional spheres — with the approach proposed by North — of a constant challenge to align various kinds of institutional components that do not evolve at the same pace (e.g. formal and informal institutions).

In such a context, it is useful to examine institutions, organizations and contracts through different lenses than those traditionally used. As illustrated by the evolution of the TCE approach to governance (see Part III), it is useful to remember that the primary purpose of coordination mechanisms is not to reduce — or even annihilate — transaction costs, but to empower humankind. Such an approach does not contradict the one that was dominant in the past, but enlarges the perspective and allows it to better take into account four dimensions

Institutional issues are inherently dynamic, and the processes of evolution characterized by path-dependency and tensions because of contrasted paces of changes.

Institutional systems are complex by nature and made up of interacting components that are both complements and substitutes, and whose regimes must be compatible. While they result from human action, some of these components — in particular informal institutions like beliefs, patterns of behavior, etc — are difficult to voluntarily change.

Any given design for an institutional framework establishes distribution of wealth and power. Vested interests render the management of institutional change inherently difficult, particularly because the high number of stakeholders makes it difficult to organize negotiation and compensation.

This is reinforced by the myopia of players — whoever they are, stakeholders, rulers or arbitrators — because bounded rationality and information costs prevent them from having a complete, and therefore common, vision of the whole game.

The last section of the book pools chapters on how to draw up the research agenda to be explored to develop the analytical tools linked to this enlarged vision.

According to Antonio Nicita and Ugo Pagano, it should be recognized that the legal order is inherently imperfect. There are always incomplete property rights, biased legal rules and flawed enforcement mechanisms because the process by which a legal order is built guarantees legitimacy, but not consistency and efficiency — members of the society accept to refer to it and use it. Boundedly rational agents that have vested interests accept to contribute to implementing changes in the pre-existing order, but do it sub-domain by sub-domain, both because of the complexity of a general reshaping and because of difficulties in reaching agreements. Any process of legal evolution should recognize this.

The many chapters insisting on the path dependency and the uncontrollability of institutional evolution could lead to the conclusion that processes of evolution are due to the combination of random changes — “small events” — and the dynamics of network externalities — path dependency — in a purely biological logic, if we loose sight of the figure of the “entrepreneur”. Nicolai Foss and Peter Klein opportunely remind us of the fundamental role this figure should play in the economics of the firm. And we think this role should be highlighted more generally in the economics of institutions to help understand the process of economic change. Entrepreneurship refers to this specific skill of identifying new opportunities and new combinations to realize them, especially when uncertainty prevents the

ability to predict precise results of decisions. Entrepreneurs build on the pre-existing coordination structure because the latter are the result of the accumulation of previous solutions to problems solved by human beings. And it would be inefficient to re-invent everything from scratch. Entrepreneurs are empowered by the knowledge embodied in social rules, which are the concrete forms of the collective capabilities put forward by the RBV. They are also empowered by the assets built thanks the pre-existing institutional structures (human capital, infrastructures, trust, etc.). Entrepreneurs are nevertheless necessary tools for change because the social selection processes do not spontaneously work and eliminate inefficient solutions. Therefore, understanding the process of institutional and organizational evolution requires in-depth analysis of the ways entrepreneurs invent, of their incentives to push for adoption of their inventions, and of their strategies for coping with the competition.

Beside drivers for change, analysis of the many factors hindering changes and evolution should also be developed, as reminded by Jean-Philippe Platteau, who surveys the state of the art on the matter. First, information and decision costs may conceal the fact that a given institutional framework is inefficient and that an alternative is feasible. In a large community, transaction costs for renegotiating a better “social contract” — to draft it and have it adopted by each member of the community — might be prohibitive. Second, a collective action problem occurs. Even if each member of the society is convinced that a better equilibrium exists and even if they all agree on its characteristics, it might be too risky for each member to switch unilaterally to the new equilibrium. The old, Nash equilibrium is inherently stable.

This dialectic between elements of change and stability explains why the economics of institutions is unable to propose clear political recipes for “rationally” building or rebuilding institutional settings and for “driving” institutional reforms. While institutional policies are increasingly recognized as the main policy tools, compared to direct governmental intervention or tax and subsidies, economists are only able to propose “insights” into running reforms.

While it is impossible to design “turnkey” policies based on present knowledge, it is nevertheless becoming increasingly obvious that, because of the interplay between informal institutions (in particular, beliefs and customs), formal institutions (laws) and strategic reactions of economic agents, two approaches to managing changes must be combined:

Changing or manipulating beliefs is essential since changes to formal rules are insufficient for impacting on actual business and social practices. While “standard” theory — e.g. North, 1990 — states that beliefs evolve very slowly, empirical evidence shows that they sometimes can change quite quickly (e.g. transition in eastern Europe, de-regulation of network industries).

Implementing “institutional patches” (such as ad hoc license, decree, administrative procedures, etc) can be efficient because attempting to directly overwhelm the distribution of property rights leads to clashes among group of interests, with incumbents able to protect their established right thanks to veto powers (either exercised thanks to political lobbying or judicial suits). Light and local reforms to procedures might result in “viral” effects generating major changes in the end.

Although this theory is missing, this guidebook shows that the logical foundations are almost in place.

As institutional economists, we are witnessing a kind of Hayekian revival today. NIE highlights the fact that instead of being constructed through a process of rational choice and efficiency driven selection, society has built its own rationality by building a social order on the basis of the definition and reorganization of rights and rules. The latter allow collective action and empower individuals, but there is neither any specific end nor stable final state to be reached. Like biological systems, institutional systems are out of equilibrium.

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<sup>i</sup> This, together with a new generation of young scholars — like Daron Acemoglu, Robert Gibbons or Andrei Shleifer to quote but a few — seems to meet the expectations of Ronald Coase, who predicted in 1998 that institutions being the main performance factors of an economy, all of economics is going to become what we now call “*New Institutional Economics*” (see Coase, 1998).

<sup>ii</sup> Of course, important bodies of literature, which strongly contributed to the field, were initiated before. Law and Economics, Economic History and Public Choice, in particular, were initiated in the 1960s; not to mention the various “institutional” schools of thought that developed in different countries — in particular France, Germany and the US — in the late 19th century and beginning of the 20th centuries.

<sup>iii</sup> This remains a differentiating factor across countries. Consequently, nation states remain relevant political arenas despite globalization of the economy and the collapse of barriers to trade and to trans-border financial flows.