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Modes of Organization in the New Institutional Economics

Edited by **Claude Ménard**

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Edited by

Claude Ménard

Professor of Economics
and Director of ATOM (Center for Analytical Theory of Organizations and Markets)
University of Paris Panthéon-Sorbonne, France

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General Introduction

Claude Ménard

A Remarkable Development

From a historical standpoint, the New Institutional Economics (NIE) is a very young theory. With the exception of the now famous article from Ronald Coase, 'The Nature of the Firm' (1937), this new approach slowly took shape in the 1960s, but really took off in the 1970s, with major contributions from Alchian, Coase, Demsetz, North, Williamson, and many others. It was only in the 1980s and 1990s that it established itself as a fully developed and acknowledged research program.[1] Looking retrospectively at this short period of time, the accomplishments are quite remarkable. The contributions collected in these seven volumes illustrate the variety and richness of the analyses elaborated during that period. The difficulties in selecting the articles reprinted in the series provide an indication of the quality of these contributions.

The developments occurred mostly along two complementary and interdependent axes; one oriented towards the analysis of the modes of organization, while the other focused on the institutional environment in which these arrangements are embedded.

The transaction costs analysis of the tradeoff among modes of organization, the explanation provided to vertical integration, the centrality of contractual arrangements, and the insights on some fundamental characteristics of the different modes of organization have all become standard references in economics (and beyond), even among those who do not share the NIE interpretation. Similarly, the recognition of the central role played by the institutional environment in making possible the development of market economies, the importance of laws and political rules in order to have lower transaction costs and a larger volume of transactions, and the comparative analysis of the impact of different political regimes on development and growth, have now permeated all social sciences as well as mainstream economics. The present series is intended to show how NIE has contributed to these developments.

Main Axes of Analysis

In a recent synthesis reproduced in the last volume of this series,[2] Williamson proposed a distinction between four levels of analysis, corresponding to different time perspectives. Although the chronology suggested may be debatable, the general scheme provides a helpful framework for encapsulating the varied set of contributions that developed under the NIE umbrella.

In the *very long run*, spanning over centuries, customs, traditions, and beliefs tend to predominate. Although they change very slowly, they contribute to shaping the institutional environment, as illustrated in many articles of this series. Their importance comes from their role in defining rules and support in the organization of transactions and in contributing to the determination of the level of transaction costs, particularly in environments with no public enforcers or very weak ones. However, they can also create obstacles to the development of transactions, as with customs that isolate a social group from its environment. Douglass North has repeatedly brought attention to the importance of these factors for understanding the evolution of transactions over time and, ultimately, on development and growth. Several recent researches, particularly by historians and anthropologists, have substantiated this view and some of them are presented in the following volumes.

Over a more restricted time span, but still in a *long run* perspective, political and legal institutions define rules within which transactions can develop, thus creating possibilities or inhibitions for trading activities. Coase has opened the way here in showing the significance of laws and the legal regime in a world with positive transaction costs. Three aspects have particularly captured the attention of new institutionalists in that respect. First, a comparative approach to political systems, using transaction costs and contractual lenses, has allowed substantial progress in our understanding of how the polity interacts with the organization of exchanges. At the same time, Douglass North has also played an important role here, by showing the way political systems operate can be analysed as a 'market' of a specific type, on which political transactions occur that explain the adoption of certain forms and the reasons why some have been more successful than others in supporting development and growth. The many articles on federalism collected in this series illustrate this.

Second, parallel to and interacting with political institutions, the legal system also plays a major role in determining how transactions can be organized and at what costs. Legal issues have been part of the research program in NIE from very early on, particularly under the influence of Ronald Coase. One important lesson of these studies is that they tend to show that no legal system is superior to another one per se, contrary to what has been suggested by competing theories. What really matters is the fitness of a legal system, that is: (1) its adaptation to what we can call the institutional endowments of a society at some point in its history, particularly its endowments in public servants and personnel with legal competences; (2) its relevance to the nature of transactions at stake, since institutions adapted to some activities, for example the financial system, do no necessarily correspond to those needed for regulating other activities, for example markets for perishable goods; (3) its reliability in defining, implementing, and enforcing property rights.

Last, a flow of recent studies has substantiated this concern for the long-run impact of political and legal regimes through the analysis of the successes and failures of regulations, with a special attention to the reform of public utilities. All these faces of the durable influence of institutions on the way transactions are organized are represented in this series. They constitute the hard core of that part of the NIE research program that North and Davis have synthesized as the 'institutional environment'.

In the *medium* and short run, the analysis concentrates on the variety of modes of organization that shape an economy and that North and Davis encapsulated as 'institutional arrangements'. These arrangements are embedded in existing legal and political institutions as well as in ideologies and traditions that shape the behavior of transactors. However, their time horizon is shorter and they are more malleable, and more prone to voluntary changes. Coase opened the way to the analysis of these modes of organization that provide differentiated supports to transactions, and Williamson has become the leading figure here.

By using a transaction costs lens, this approach has exhibited the diversity of ways in which to organize trading activities in order to take advantage of specialization. The booming literature on modes of organization has switched us from a bipolar perspective, focusing on the tradeoff between markets and 'hierarchies' (or integrated organizations), to a multi-polar vision with the increasing acknowledgement of the importance of intermediate or 'hybrid' forms. However, and even more importantly, NIE has provided a theoretical framework that has become a point of reference for explaining the tradeoff among these modes of organization, that is, why one form is preferred to another one under the specific attributes that characterize a transaction. The initial attention went to the explanation of vertical integration, as an alternative to market solutions, and it is now widely acknowledged that this represented both an important theoretical breakthrough and an empirical 'success story'. More recently, the attention has turned to ways of organizing transactions that correspond neither to integration nor to the usual features characterizing market relations. The analysis of these non-standard contractual relationships has become an important component of the NIE research program.

Also related to a medium-run perspective, there is an increasing interest for identifying and examining the internal structures and characteristics of alternative modes of organizations. The idea here, reflected in many articles in this series, is that using the concepts developed in NIE could help to understand better why one mode fits better than another with the attributes of transactions at stake. One important issue concerns the theoretical status of these factors in the effort to explain the tradeoff among modes of organizations. Are these factors orthogonal to an explanation of the tradeoff, for example are costs of bureaucracy orthogonal to transaction costs? If they must be mobilized for substantiating the transaction costs explanation, how can we model them so as to avoid getting trapped into a tautology, that is, a mode of organization prevails because it has a superior mode of organization!

Lastly, *short run* elements and variations also influence the way transactions are organized, and the way relative costs are incurred. According to Williamson, and most new institutionalists would likely agree on this, the short-run perspective focuses on marginal adaptation, as in the price theory or with incentives issues, and it prevails in mainstream economics. NIE has surely contributed less to this aspect than other theories, for example agency theory. However, it has paid attention to the role of these variations in comparing modes of organization. It has also contributed to refocusing on the short perspective in pointing out the need to examine how these variables of adjustments are embedded in specific modes of organizations. One illustration, developed in this series, concerns the role of organizational motivations and values, beyond monetary incentives and their variations.

All these developments result in a complex and highly diversified research program, as illustrated by this series. At the same time it is a unified research program.

A Unifying Set of Concepts Paired to a Methodological Vision

Indeed, a striking aspect of the NIE research program is the presence under this diversity of object and levels of analysis of a coherent set of concepts that provides unity to the whole. Transaction costs, contracts, and property rights form the core of this analytical apparatus.

Within this triad, *transaction costs* occupy a very central position, for historical as well as theoretical reasons. The historical priority goes back to the pioneering role of Coase's article on 'The Nature of the Firm'. The theoretical centrality of the concept refers to more subtle reasons, as so many misinterpretations testify (for example the idea that transaction costs would at best neglect, at worst ignore production costs). Several chapters in this series explicitly point out why transaction costs matter so much in the NIE perspective. It all boils down to an argument rooted in Adam Smith: there is no possibility of taking advantage of the division of labor and of specialization without organizing transactions, and all arrangements that can be implemented for doing so have a cost. This approach gives its full sense to the definition of transaction costs as 'the cost of running the economic system' (Arrow, 1970).

How exactly to pin down these costs and how to approximate them is a more complex question, and is one that is discussed in several chapters of the series. At least two different views have developed. One considers that transaction costs make sense only for analysing market exchanges, thus transaction costs are what it costs to trade on markets. A more extensive definition considers transaction costs as the costs of transferring rights of usage, which makes the concept a relevant tool for analysing modes of organization alternative to markets as well. However, whether the restrictive or the wider interpretation prevails, the concept remains a powerful tool for examining micro arrangements as well as global institutions and for exploring the interaction between these levels. At the same time, the issue of measuring transaction costs remains an open one, that is, whether it is relevant or not to try measuring them remains debatable; and if it is relevant to measure them, then the question arises of how this can be done. Again, several chapters in the series discuss these issues.

Whatever are the answers to these important and difficult questions, there is a general agreement among new institutionalists that transaction costs particularly matter when in comes to the establishment and transfer of *property rights*. Identifying the different types of property rights and the consequences of their allocation has been on the agenda of NIE since very early in its development. Indeed, in a world of positive transaction costs, the distribution of rights and the devices for transferring them are of the utmost importance and have a significant impact on the performance of the alternative modes of organization as well as on growth. Therefore, the two concepts of transaction costs and of property rights have been linked from the very beginning of the research program, as is already visible in 'The Problem of Social Costs' (Coase, 1960). NIE has continuously contributed to a better understanding of the nature and role of property rights. It has also continuously emphasized the centrality of their enforcement, that is, the need for institutions to implement and secure property rights, thus reducing contractual hazards and risk of opportunism. In doing so it establishes a link with the microfoundations of transaction costs, as well illustrated with the credibility issue, discussed in several papers of this series.[3]

In a developed market economy, *contracts* represent one of the major supports for transferring property rights and, more generally, for organizing transactions. Coase had the intuition of the importance of contracts in his pioneering discussion (1937) of the integration issue and of what differentiates the allocation of resources and tasks in a firm by contrast with markets. However, Williamson deserves the main credit here because he has led the crowd in establishing the centrality of contracts for organizing and coordinating transactions. In an apparent paradox he has done so while exhibiting the incompleteness of contracts. In a world in which uncertainties combine with positive transaction costs, contracts remain inevitably incomplete, thus generating hazards that require safeguards. These safeguards may be entrenched in the contracts themselves; they may also rely on complementary governing devices or on external enforcers, among which courts and governments are major actors. An entire branch of NIE has developed this research program and is well represented in this series.

One element that contributes to explain the incompleteness of contracts, besides the importance of unanticipated events, may lie in the *behavior* of parties to contractual arrangements. NIE paid early attention to the strategizing behavior of agents and, more generally, to exploring a more complex representation of agents than the one dominating the standard approach in economics. References to bounded rationality and to opportunistic behavior may be considered as relatively primitive efforts in this direction. They have been seriously substantiated by more recent researches, mainly coming from two different perspectives: experimental economics on the one hand, and cognitive sciences on the other hand. Several chapters of the series illustrate this movement. Among others, Ostrom provides particularly important insights based on experiments and field studies; and North indicates how cognitive sciences may help in developing sound microfoundations to the analysis of organizations and institutions through the analytical explanation of how agents combine rational calculation and beliefs in their behavior and their choices.

Hence, the NIE research program reposes on a solid and dense web of concepts tightly interwoven. These fundamental concepts and assumptions, and their refinements developed in numerous chapters in the series, are complemented by a *methodological approach* quite universally shared among new institutionalists. Indeed, the NIE approach is deliberately and systematically comparative. Institutions and modes of organizations cannot be assessed in isolation; they can only be evaluated through comparison. New institutionalists go even further in considering that all institutions and all modes of organizations have their own flaws. This happens quite naturally from the concepts introduced above. As soon as the existence of positive transaction costs is acknowledged, and that the efficiency in the allocation and reallocation of rights depends on the characteristics of the devices required by these transfers, no one optimal solution that could serve as a benchmark exists. The only way to assess successes and failures, and to estimate costs and benefits, is through comparisons.

An Open Approach

In implementing this comparative approach on these kinds of issues, NIE has necessarily developed major intersections with other disciplines. Among the different and often competing paradigms that characterize modern economics, NIE figures as exceptionally interactive with legal scholars, social scientists, management scientists, and so on. Because NIE regards agents and organizations as socially embedded in institutions, the intersection with non-economic disciplines has become increasingly significant. Since it acknowledges the fact that agents are calculators and that costs matter in their choice, bridges have also remained open with mainstream economists. NIE is all but an isolated and closed paradigm.

Open to other disciplines as well as to other approaches in economics, new institutionalists naturally acknowledge weaknesses and problems in their paradigm. Numerous articles selected for this series identify problems and flaws; some even challenge corner stones of the edifice. This is precisely what in my view makes NIE a 'progressive' research program, that is, a research program turned in the direction of problems to be explored further and of domains to develop. Understanding institutional and organization changes, establishing more rigorously the channels through which modes of organization and institutions interact, and integrating the analysis of technology and technological dynamics are some of the challenges facing NIE. Several contributions show that these issues, and others, are high on the agenda of NIE researchers. If one main goal should be assigned to this series, it is to help the readers identify these terrains that are open to future research.

Organization of the Series: Some Caveats

The series is organized in seven books structured by themes so that each one forms an autonomous entity. Volume 1 collects articles that provided foundations to the field and opened the domain of NIE, and more recent articles that identify the major axes that have since developed and review some important issues, many of which remain under-explored. Volume 2 summarizes the behavioral assumptions that distinguish NIE from other approaches. Then, it proceeds to examine two building blocks of the theory: the nature and role of transaction costs, and the status of property rights. Volume 3 completes the golden triangle of NIE by thoroughly reviewing what contracts are, their characteristics, and how they are enforced. Volume 4 assembles articles on a leading theme in NIE, that is, the existence of alternative modes of organization and the tradeoff among them. The emblematic case of vertical integration definitively occupies a central place here. However, I have also included some exploratory articles on hybrid arrangements. Volume 5 develops the specific case of large modern corporations, since this case provides the support of most of what has been published in a NIE perspective on the internal characteristics of firms, an underdeveloped topic in NIE (and more generally in economic theory). Part of this volume also explores the impact of institutions on structural choices made within or among modes of organization. In Volume 6, I have assembled a set of articles focusing on the analysis of institutions, with a particular attention to what relates institutions to development and growth. Therefore, the emphasis here is less on the general impact of institutions at the organizational level, as in the previous volume, and more on the impact of political institutions and legal systems on the dynamics of transactions over time. Volume 7 concludes the series with articles examining critical issues in NIE and, for some of them, challenging the relevance of the approach. The confrontation of these different and often controversial perspectives should not only help to determine some of the main problems and flaws in NIE, but also identify where the action is or should be expected.

Through all seven volumes, I have selected articles that emphasize the testability of the theory. Indeed, one major characteristic of NIE from the very beginning has been its reluctance towards 'blackboard economics' and its emphasis on the urgent need to build a theory that continually confronts facts and adjusts to observed realities.

One last thing deserves clarification here. The introductions to the different volumes are intended to explain the logic underlying my choices. Ordering the chapters and suggesting specific links among them obviously involves interpretation. I have done my best to not distort or bias the main messages the authors wanted to get across. However, I have put the articles in a perspective that authors may not always share. Moreover, there is clearly a selection bias. Although the series is quite extensive, I was forced to discard some articles that would have deserved being here.

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Notes

1. The creation of the International Society for New Institutional Economics at a Conference held in St. Louis in 1997, with almost all major contributors to the field attending, can be considered as the institutional consolidation of the developments of the previous period.
2. Williamson (2000); Chapter 30, Volume 7.
3. All these aspects clearly distinguish NIE from the so-called 'new' property rights theory in which the existence and definition of these rights as well as the institutions required are assumed as given and costless.

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Introduction

Claude Ménard

The analysis of alternative modes of organization has had a special status from the very beginning of the development of New Institutional Economics.[1] First, the paper that can be considered as the initial step in that direction raised the central issue of the nature of the firm, particularly in relation to markets (Coase, 1937; see Volume 1, Chapter 3). Second, the pioneering empirical studies derived from NIE were about organizational issues, from the analysis by Coase of the telecommunications industry to Williamson's *Markets and Hierarchies*.[2]

In the 1980s discussions and developments in NIE regarding modes of organization focused essentially on the paradigmatic case of vertical integration. Hundreds of case studies and econometric tests have been published on these issues that continue to inspire researchers. In the 1990s the heuristic model was extended to incorporate institutional arrangements that did not correspond to integrated firms, but that could not be described as usual market relationships either. The concept of 'hybrid' was developed and an abundant literature is now available on these non-standard agreements.

This volume assembles a small subset of the vast literature now available on these issues. It does so with a view to illustrating the major problems that continue to feed research. Part I focuses on the theoretical characterization of the modes of organization identified in the literature. Part II contains some of the most significant papers in the initial wave of studies on vertical integration. Part III sheds some light on the under-researched domain of non-standard agreements.

Part I: Markets, Hierarchies, Hybrid Forms

Part I collects contributions that identify and characterize different 'institutional structures of production'. It includes papers from authors who are not new institutionalists, but whose views have been deeply influenced by the ideas of Coase and Williamson on organizations.

The Nobel lecture delivered by Coase (1992, Chapter 1) is a perfect opening to this part. The paper adequately summarizes the facts and arguments that convinced Coase to look at firms as an alternative to the organization of transactions through markets. The paper also identifies some questions that remain high on the agenda of new institutionalists. Let me emphasize two of them. First, the paper correctly points out how little we still know about the institutional arrangements needed for markets to work. Second, it sharply criticizes the lack of interest by economists in the internal arrangement of firms, although it is crucial for understanding how economies work. Things may have evolved somewhat on these issues, but resistance persists. The good news is that transaction costs provide a powerful tool to go further. Coase also reminds us why they matter so much: they result from assigning rights to those who can use them productively, and from transferring these rights.

Williamson's paper (1991, Chapter 2) is complementary to Coase's – it expands the analysis of institutional structures of production to cases that are neither markets nor hierarchies – cases that he calls 'hybrids'. Therefore, we end up with three generic modes of organization that can support transactions. The presumption that needs empirical confirmation (see Part III of this volume, and also Parts I and II of Volume 5) is that each mode has characteristics of its own, particularly with respect to contract laws and governance attributes (with specific attention to adaptation). Williamson provides insights on these characteristics and reassesses the 'discrete alignment principle', according to which the choice of a specific arrangement can find its explanation in the search for the mode that fits relatively better with the attributes of the transaction at stake. The model he proposes also helps understanding of how shifts in parameters – for example, institutional changes – have an impact on transaction costs, and therefore on the tradeoff among modes of organization. Therefore, this framework introduces the major themes developed in the rest of this volume.

The next five papers focus on specific modes of organization, three on firms and two on inter-firm relationships (hybrids). The first one, by Cheung (1983, Chapter 3), somehow challenges the vision of the firm as a discrete structure proposed by Coase and Williamson. Indeed, it develops the idea of the firm as a nexus of contracts. This conception extends the analysis initially proposed by Alchian and Demsetz (see Volume 1, Chapter 8), making the examination of the internal characteristics of firms a relatively minor issue. What really matters for understanding market economies is the diversity and complexity of contractual arrangements. This approach represents an important trend among new institutionalists.

Holmstrom (1999, Chapter 4) would likely not identify himself as a new institutionalist, but his paper shows, beside its own interest, how much his vision of the firm is influenced by transaction cost economics. His paper is an attempt at integrating this theory with the so-called 'new' property rights approach developed by Hart *et al.* (see Volume II, Chapter 21). In Holmstrom's view, what matters is not the allocation of property rights *per se*, as in Hart *et al.*, but the power that unified ownership confers over deciding who should do what and how. Ownership gives control on (physical) assets, providing the firm leverage over human assets, which is what essentially characterizes a firm and determines its boundaries. In that perspective, contracts are incomplete and they offer only limited means for guiding the action of employees. The paper also explores how the combination of high ownership incentives with low-powered employee incentives for encouraging cooperation might allow a better overall design of activities.

In that context, firms can be interpreted as complex coalitions of interest in which parties play complex games. In a pioneering paper, March (1962, Chapter 5) anticipated several related themes that are making their way on the agenda of economists. By adopting a decision-making approach, he emphasizes the nature of business firms as conflict systems, with dispute solving a main activity since it determines the capacity to coordinate. Firms can thus be interpreted as political coalitions, and entrepreneurs or executives as political brokers. Two consequences are of particular significance in a new institutional perspective. First, this characterization gives a positive role to managers as conflict solvers. Second, it explicitly introduces the role of institutional constraints in the formation and stability of the coalition that gives a firm its identity.

The next two papers turn to what Williamson called 'hybrids'. Using the model developed in Chapter 2 and in several empirical studies, Ménard (1997, Chapter 6) explores some characteristics of these arrangements by differentiating them from firms and making them viable substitutes to pure market agreements. The paper suggests that three elements are of particular importance for understanding hybrids: the combination of autonomous property rights, the pooling of substantial subsets of decisions, and the implementation of coordinating mechanisms that do not rely on prices. It also assesses some properties of these mechanisms, particularly the delineation of a domain of 'tolerance' allowing adjustments, provisions for anticipated renegotiations, contractual safeguards against risks of free riding, and the design of endogenous coordinating bodies.

Baker, Gibbons, and Murphy (2002, Chapter 7) go in the same direction, although from a different perspective. By acknowledging the diversity of arrangements for coordinating activities across firms, they focus on devices developed for monitoring externalities (spill-over effects) and *ex post* behaviors of partners. They concur with the idea that contracts do not do the entire job, which in their view explains the key role of relational adaptation among firms mutually committed; thus, strategic alliances provide a good illustration. This relational dimension would summarize the fundamental difference between inter-firm agreements and an integrated firm.

Part II: Vertical Integration

Integration is precisely the object of the set of papers in Part II. This theme is a landmark, or a 'success story', in the development of NIE.

Indeed, in identifying vertical integration as a way to model and to test the intuition of Coase regarding the tradeoff between make or buy, Williamson (1971, Chapter 8) gave a major impact to the development of the new research program. By taking exception from the dominating view of the time that vertical integration was an anomaly when not justified by technological considerations, this paper posited integration as an efficient response to 'transactional failures' – that is, to market transaction costs high enough to make the internalization of the transactions advantageous. In the process of explaining how this could happen, the paper also introduced some themes that later became central pieces of the NIE program: the advantages and limits of internal organization, the role of contracts and their incompleteness, and the need for a comparative approach in assessing the costs and benefits of alternative modes of governance.

Klein, Crawford, and Alchian (1978, Chapter 9) complemented this view, but also introduced considerations that reoriented part of the research program thus defined. Their paper caught on the idea that the 'action' in a contractual arrangement is mostly *ex post*, when opportunistic behavior can emerge. By focusing on the role of relationship-specific investments, they emphasized the risk of 'hold up', which is one party trying to take advantage of that dependence to absorb the quasi-rent. By circumventing this risk, agents have different possibilities. One is the implementation of long-term enforceable contracts. However, this can be too costly due to the importance of unanticipated contingencies, of the social loss that the threat of termination could represent, and/or of the high costs of arbitration. Vertical integration is another response. The authors then illustrate the tradeoff between these solutions with the now famous case of the integration of Fisher Body by General Motors in 1926. This potential role of misbehavior ('hold up') when specific assets are made or needed has generated a heated debate (see Volume 7, Chapters 10 and 11).

In the next papers tests of the model underlying the previous two papers are presented. Five papers focus on upstream integration, while two look at downstream integration. Like most of the tests based on transaction cost theory so far, the papers use sector data.[3]

Monteverde and Teece (1982, Chapter 10) delivered one of the very first econometric tests of the transaction cost explanation to vertical integration. By using qualitative data based on the evaluation of engineer-specific components in the automobile industry, they measure the importance of know-how in the development of all components in order to show its high correlation with the decision to 'make' or to 'buy'. The test was very corroborative.

Not long after, Masten (1984, Chapter 11) examined a similar question through the case of procurement practices in the aerospace industry. One characteristic of some defense-related production is the importance of specialized design and the limited alternative value of investments. According to the theory (Williamson, 1971, Chapter 8; Klein *et al.*, 1978, Chapter 9), the degree of specialization of assets involved should be closely related to the decision to make internally rather than dealing with an external organization. It should also reflect in the contract provisions if externalization is chosen. Using data provided by questionnaires about the specificity of the design, the site specificity, and the complexity of 1887 components, the study showed that notwithstanding some reluctance to internalize, the choice to make rather than buy prevails when exposure to hazards of market exchanges become too high, which happens with complex and specialized assets.

Joskow (1985, Chapter 12) also tested the impact of specificity, but in a different context. Working on a highly regulated industry, electric power supply, which is the main consumer of coal produced in the USA (over 80 per cent at the time of the paper), he could not test directly the 'make or buy' tradeoff because of the regulatory constraints on integration. On the other hand, coal suppliers and electric-generating plants are interdependent, but with wide variations according to the type of coal used, the quantity needed, and the respective location of mines and power plants. Joskow then hypothesized that parties should be expected to implement contracts that minimize the reliance on the legal system and that minimize their transaction costs. In this paper, which is part of a set of contributions on this issue, he used the extensive set of contracts available (almost 300) to show the strong relation between the specificity of assets at stake and the choice of a governance structure approximated through the duration of contracts.[4]

Lyons (1995, Chapter 13) complements the previous studies; as in Chapters 10 and 11, he proceeded through a questionnaire (102 firms responded) in order to measure the specificity of assets approximated with the specificity of the technologies chosen. The test innovated in two aspects: it is one of the very first econometric studies based on European data, and it intended to evaluate the respective importance of specific investments and of economies of scale in the decision made. As such, it is an early effort to compare alternative explanations, including transaction-cost economics and the technological approach. The study confirmed the importance of specific investments, but also showed the significance of economies of scale in the decisions made. The paper also contains interesting remarks on the limits of tests based on questionnaires.

The next two papers turn to downstream integration. Anderson and Schmittlein (1984, Chapter 14) pioneered the transaction cost approach to integration in distribution. More specifically, they analyzed the tradeoff between employees and independent representatives as sales people. Starting from the attributes of transactions identified by Williamson, they found proxies for measuring the respective role of specific assets, uncertainty, and frequency. Data came from questionnaires circulated in the electronic components industry. The results show the importance of uncertainty, particularly in measuring individual performance, in the decision to 'integrate' – that is, to have house-based salesmen. Specificity of assets came second in the estimation, but may overlap partially with uncertainty, as discussed in the paper.

John and Weitz (1988, Chapter 15) similarly examine the role of transaction costs in choices made in distribution. Their paper focuses on the tradeoff between direct channels, with resellers employed by the firm, and indirect channels, in which independent resellers can sell to other resellers, to individual customers, etc. One puzzling result that re-emerged later in several papers on franchising is the coexistence of both forms in many firms. The study was based on data provided by 87 firms answering an extensive questionnaire. It also confirmed the significant effect of uncertainty and of the specificity of assets, although the latter is less significant when explaining mixed channels.

A synthesis provided by Joskow (1988, Chapter 16) concludes this section. Although the review dates back from the 1980s, it gives an interesting perspective on the early evolution of transaction cost economics. But more important, it identifies through the examination of the first generation of econometric tests some major problems that are still relevant. Measurement difficulties are particularly emphasized: difficulties of comparing alternative solutions, difficulties of evaluating the specificity of assets or measuring the other attributes, and difficulties related to the questionnaire method. These problems do not belong solely to NIE. They are of particular importance there, though, because the emphasis is put on empirical verification and interaction with the theory.

Part III: Non-Standard Agreements

The problems mentioned above become even more significant with the analysis of non-standard agreements, of 'hybrids'. Actually the analyses of the tradeoff between 'make' or 'buy' in the previous sections already identified arrangements that corresponded neither to full integration nor to standard market relationships. They signaled the presence of intermediate forms, the importance of which was not yet fully acknowledged though. It is in the 1990s that the analysis of these forms took off.

Two papers from the early 1980s particularly anticipated this movement. In a discussion of the Coase–Williamson explanation to markets and firms, Ouchi (1980, Chapter 17) vigorously supported the idea that a third form should be incorporated, that he called 'clans' (the literature later referred to these forms as networks[5]). Notwithstanding the positive role of 'bureaucracies' (integrated organizations) when markets fail to provide efficient tools for coordinating through prices, as established by transaction cost economics, there are situations in which ambiguity of performance evaluation may be significantly greater than what already caused market failures, so that hierarchies may fail as well. 'Clans' offer an alternative, based on reputation, on regular relationships, and on shared social norms.

Almost simultaneously, Eccles (1981, Chapter 18) published an empirical study illustrating the importance *and* stability of intermediate forms. Also referring to Williamson, he wondered what happens when investments are only moderately specific and when specialization is incomplete, while consequential uncertainty requires great flexibility. Through a detailed examination of subcontracting in the construction industry, he showed the role of networks of