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The Economics of Governance: Transaction Cost Economics and New Institutional Economics

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Governance: Economic Organisations and Institutions

Governance of economic exchange or transactions is at the core of the growth and development of the economy. Sharing similar intellectual heritages, transaction cost economics (TCE) and new institutional economics (NIE) both seek to understand how exchange is conducted. An economy can be conceptualised as a range of organisations, within each and between each there are a nexus of transactions. Such transactions or exchanges involve the transfer of some or all of the property rights in goods, services, knowledge and assets. Without the ability to engage in economic exchange, a society’s growth is limited. While all societies undertake individual (or private) economic exchange, even if the exchange is in the form of barter, individual exchange limits the scale and scope of a society’s economic development. Economic development requires multilateral exchange to facilitate the complex division of labour and specialisation of economic activities, where gains from economic exchange in assets (comprising assets, goods, services and knowledge) deliver sustained economic growth.

Economic exchange is organised through governance structures, which comprise markets, firms and intermediate economic organisations, such as franchises, licenses, alliances and long-run contracts (see Figure 1.1). TCE matches transactions to their optimal governance structures. NIE places governance structures in their wider institutional context, constraining (or facilitating) the choice of governance structure. Both governance structures and institutions safeguard exchange. To understand the growth of societies, transactions, governance structure and institutions are matched in a discriminating way. When NIE (and increasingly TCE) economists study
governance, they analyse how transactions are organised within their institutional context.

Transaction Cost Economics: Transactions, Transaction Costs and Governance Structures

TCE takes the transaction as the unit of analysis. A transaction is an exchange of property rights in assets, where the property rights gives the owner the right to exclude others from use of the asset, to appropriate rents from the assets and to sell the asset. An economy can be depicted as a nexus of transactions, where transactions are governed by governance structures. There are three categories of governance structures: markets, firms and intermediate contractual arrangements (including franchises, licenses, alliances, long terms contracts etc), as shown in Figure 1.1. TCE uses several words interchangeably, including governance structure, economic organisation, contract and contractual arrangement.

The theoretical basis of TCE lies in the work by Coase and the economic literature on externalities, which explains the early focus of TCE on firms and markets. Transaction costs are the cost of operating the market system, including costs related to the search for a party with whom to transact, costs of negotiating the terms of transacting, and costs of ensuring (i.e. monitoring and enforcing) the parties fulfils their exchange obligations. Coase’s work sprang from the problem of externalities and social costs, which analysed how competitive firms and individual maximising actions resulted in suboptimal social outcomes. In the absence of transaction costs, Coase
showed that externalities are costly negotiated away, but in the presence of transaction costs then non-market governance structures were alternatives to the market. The Coasean theorem states that when the costs of organising a transaction in the market are greater than organising transactions inside the firm, then the transaction is organised in the firm. The Coasean approach emphasise the binary choice between two governance structures, firms or markets, for organising transactions. As shown in Figure 1.2, this binary choice was expanded to include intermediate contractual arrangements, such as licenses, franchises, long-term contracts and alliances (Williamson, 1979).

****FIGURE 1.2 ABOUT HERE****

**Sources of Transaction Costs**

Transaction costs arise due to incomplete and asymmetric information. When information is perfect, costlessly operating markets mediate away any externalities. Further, transaction costs arise from human behavioural assumptions: bounded rationality and opportunism. Relaxing the assumption of perfect rationality, the less extreme notion of bounded rationality recognises that individuals are “intendedly rational, but only limited so” (Simon, 1976: xxviii; as quoted in Williamson, 1985). The computational power of individuals is constrained by their capacity to receive, store, retrieve and process information (Williamson, 1979, 1985). Individuals are unable to predict or know all future states of the world and to solve complex equations with multiple variables.
Coincident with these cognitive limitations is the ability of individuals to exercise choice or freedom of will in electing among a range of behaviours. Conscious choice of behaviour creates problems for exchange because of the possibility that individuals may engage in incomplete or distorted disclosure of information. They may intentionally mislead, disguise or cloud their intentions or motivations. The introduction of an assumption of opportunism does not presuppose that individuals seek to cheat others all of the time, it simply recognises that the possibility for such behaviour exists, requiring appropriate monitoring devices for successful exchange. The acknowledgement of conscious choice of behaviour introduces not only opportunism as a variable but also tactics, strategy, honesty, openness, trust and reputation (Demsetz, 1997).

**TCE and Safeguarding Economic Transactions**

Governance structures safeguard transactions through contract provisions, credible commitments and dispute resolution. Contract provisions are promises about how parties behave during economic exchange. Due to bounded rationality and asymmetric information, contract provisions are incomplete, which means contracts are designed before both the behavior of the parties and all future events are known (MacNeil, 1981; Williamson, 1975, 1979, Luo, 2005). To safeguard transacting, exchange partners rely on ex post contract renegotiation to re-design incentive and enforcement mechanisms and resolve disputes. (Macauley, 1963). This is the concept of relational contracting.

Credible commitments are those tangible or intangible investments that bond transactors, safeguarding exchange from opportunistic behavior (Williamson, 1983).
Credible commitments take two forms: transaction-specific assets required to support exchange and relation-specific assets that bond one or both parties to the exchange relationship, but are not necessary for transacting. Not all assets owned by contracting parties are credible commitments. Only assets with a low return on second-best use or with scrap value make the owner ‘hostage’ to the transaction and/or the contractual relationship, acting as a credible commitment (Klein et al, 1979). Like contract provisions, credible commitments can be either formal contractual terms or informal contractual understandings implicit in the contract. While encouraging contract compliance, credible commitments are themselves vulnerable to opportunistic behaviour when rent-seeking partners in a transaction appropriate the rents from each others’ relation and transaction-specific investments (Williamson, 1993). Being ‘hostage to the hostage’ is mediated through the (in)formal contract and contract renegotiation.

Finally, governance structures safeguard transaction by dispute resolution, which may involve contract termination, contract renegotiation or third part enforcement of the contract.

*Matching Transactions to Governance Structures*

Given imperfect knowledge, uncertainty, bounded rationality and opportunism, governance structures comprise a spectrum of contractual arrangements for organising transactions, as shown in Figures 1.1-1.2, including markets, short-term forward contracts, long term intermediate contracts, equity joint ventures and firms. The differences between forms depend on:
i) the bundle or set of property rights transferred from one party to the other (Cheung, 1970)

ii) the duration of the arrangements and, therefore, the potential for divergence of goals over time (Macneil, 1974)

iii) the degree of relations between the parties, to mediate the effect of the time element on the protection of property rights from incursion by the other party.

Representing one of the contractual poles, pure spot market transactions commence sharply, are short-lived and end sharply, either from clear performance or clear breach. Planning, such that there is, focuses on price and payment terms, and occurs almost instantaneously between autonomous parties. Property rights in the asset(s) are permanently transferred from the seller to the buyer, between whom there will be no future relations and whose identity is immaterial to the substance of the exchange.

Movement along the spectrum is distinguished by increasing interaction, or relations, between parties, increasing duration of the arrangement, and the delegation, rather than transfer, of property rights. For example, in licensing agreements, the licensor delegates only partial rights to use a patented technology and earn income from it, by withholding, for example, the rights to transfer the technology to third parties and to transform it (without transferring technical improvements back to the licensing company). All delegated rights are subject to a period of expiry (Matthewson and Winter, 1984).

Intermediate and hierarchical arrangements, in Figure 1.2, rest on the concept of bilateral governance or self-enforcing relational contracts, whereby the parties to the
agreement create an incentive structure for performance (Williamson, 1979, 1985). Moving away from market exchange, the effect of the time element becomes critical. Once exchange is of an extended and potentially undefined duration, ex ante planning cannot be fully binding on the parties (Macneil, 1974, 1981). Flexibility is required to enable adaptation at some future point to events that could not have been foreseen. The task is to write or create an incentive contract that inhibits potential opportunism, while recognising the constraints imposed by cognitive limitations and the excessive time and, hence, costs of specifying a contract covering all possible future contingencies (Kreps, 1984). To operate successfully, the incentives need to be such that at any stage during the life of the contract the ongoing relationship makes the parties better off than breaching.

When elaborate incentive contracts are necessary to protect against potential opportunism, the firm is the most efficient contractual choice. The hierarchical structure of the firm is a series of structured agency relations designed to constrain opportunism and economise on bounded rationality, through promoting incentives and information flows among members of the firm (Cheung, 1970; Jensen and Meckling, 1976; Williamson, 1985). In place of the market’s price mechanism, the firm relies on behavioural constraints (Hennart, 1991). As shown in Figures 1.1-1.2, governance structures closer to hierarchy than pure-spot market exchange, rely on rich information flows, achieved through high degrees of interaction, to ensure cooperation. (Hennart, 1982; Williamson, 1979, 1985).

Williamson set down three conditions for matching transaction to governance structures: transaction-specific assets; frequency of transacting; and uncertainty.
Figure 1.3 shows the matching of the most economic governance structures to the nature of the transactions.

**********Figure 1.3 about here**********

**New Institutional Economics**


As shown in Figure 1.4, the scaffolding of NIE has evolved into three core branches, anchored by an overarching research question of what explains the differential growth and development of societies across time and across geographic space. The framework cascades from a central theory of institutional change, or economic growth, which defines the key relationships linking individuals, governance structures, institutions and the long-run economic evolution of societies. The three branches of analysis are delineated by theories to explain the main forms of exchange conducted by societies: political, economic and social.
Analysis of political exchange builds from the basic premise that complex institutions and organisations evolve from the willingness of individual members of society to cede freedom of action and choice in return for guarantees of freedom from violence. This branch of analysis incorporates theories from political science, political economy and transaction cost economics (Olson, 1965, 1982; North 1990b; Buchanan, 1980; Buchanan and Tullock, 1962; Krueger, 1974; Dixit, 1996). The creation of the property rights system is a key focus of research, drawing a link between the political structure of a society and the system of rights to wealth-creating assets. Analysis encompasses models that consider, for example, representative government, military dictatorship, collective choice, corruption, voting systems, and social welfare (Weingast and Marshall, 1988; North and Weingast, 1989; Krueger, 1996; Shleifer and Vishny, 1993).

Figure 1.4 considers social exchange through organisations, such as marriage, religion and family. These organisations affect economic and political exchange through, for example, religious values on the rights of women to work; environmental activism on the use and ownership of resources, such as air, old-growth forests and rivers; and ideology on the rights of the state to tax and compel military service. Informal ordering within social groups may also substitute for costly and possibly ineffective enforcement of economic contracts through the courts (see Macmillan and Woodruff, 1999).
Finally, economic exchange in Figure 1.4 is the necessary counterpart to the specialisation of labour, including corresponding innovations in technology, which facilitates improvements in living standards. The property rights system provides the incentives for economic activity and the allocation of productive effort. For example, when an innovator cannot secure rights to new knowledge, due to weaknesses in the legal system, individuals and organisations shift their efforts away from innovation. Similarly, competition policy, deregulation, privatisation and the introduction of market-based pricing in socialist economies affect economic choices (see, for example, Joskow, 1999; Oi and Walder, 1999).

The following sections set-out NIE’s core theory of institutional change and then focus specifically on economic governance structures.

**NIE and Safeguarding Economic Exchange**

NIE also analyses mutually beneficial exchange, which relies on co-operation and co-ordination (North, 1997b:1149). Transaction costs lie at the centre of NIE, but, as North (1995: 259) noted, “whereas Coase [and Williamson] was concerned with the transaction cost that determined the existence of firms, I was concerned with the transaction cost that determined overall economic performance”.

As shown in Figure 1.4, NIE analyses the differential growth and development of societies across time and across geographic space (North, 1997a: 5-6). As societies grow and become more complex in terms of the degree of interdependence, more complex institutions – rules – are required to co-ordinate production and exchange. NIE posits that societies generate formal and informal institutions to provide certainty
and structure to human interaction by inducing – or incentivising – co-operation and co-ordination of effort. Formal institutions encompass political, judicial and economic rules, such as legislation, common law decisions, and government competition and welfare policies. Informal institutions are the conventions or codes of behaviour in a society, including religious rules governing food consumption, respect for the elderly and sharing of common resources among indigenous communities. The need for rules arises because individuals have limited and differing cognitive abilities and integrity.

The formal and informal institutions safeguard transactions by constraining the action of parties to economic exchange. For example, the legal system constraints opportunistically terminating a contract, just as do ethnic networks [REFS]. Further, at any point in time, the institutional environment defines the governance structures that will be viable. Governance structures are the players of the game, ranging from political bodies (such as the organs of government, regulatory agencies and political parties), economic groups (including firms and trade unions), to social bodies (such as churches, clubs and educational groups). As players, organisations form, shift and, sometimes, decay, in response to the opportunities created by institutions (North, 1990a). Governance structures in turn mould changes in the rules of the game in a complex process of institutional evolution. Change may be in the form of new legislation or gradual shifts in social attitudes towards, for example, foreign investment, racism or slavery, with the effectiveness of each new institution heavily dependent on its enforceability within a society.

Institutions are designed to decrease the costs and safeguard exchange. A common language or means of communication, standardised units of money and measurement,
and a system of order inhibiting violence are basic institutions that decrease transaction costs. In developed economies, contract law is a crucial, formal institution facilitating economic exchange. It reduces transaction costs by supplying contracting parties with a set of standard terms that, in the absence of law, the parties would have to negotiate for themselves, as well as supplying information concerning unforeseen contingencies that may stymie exchange. Transaction costs are further economised by the state imposing sanctions for breach of contractual commitments through the courts. Formal and informal institutions are designed by society to decrease the costs of all types of exchange – political, social, and economic.

**Dynamics: Interaction of Institutions and Governance Structures**

As we have seen, TCE argues that governance structures are selected to maximise potential rents on assets, where the size of transaction costs is a function of the ability to define rights to the assets; to separate (transfer) these rights from the original owner; and the owner’s ability to appropriate the return on the rights (the rent). Asset mobility can be identified by the extent to which property rights can be defined, separated and appropriated. Perfectly immobile assets are those for which the potential rent on any alternative use by another party is zero; imperfectly mobile assets are characterised by appropriable quasi-rents, or an excess value to the firm of an asset over its value to the second highest valuing use or user (Klein, Crawford and Alchian, 1978; Peteraf, 1993). The degree of asset mobility is determined by the technical attributes of the asset – whether it is tangible or tacit, or co-specialised with other assets – and the institutional setting.
The institutional context may prevent the separation of property rights in an asset from the firm, such as a government granted monopoly prohibited by statute from transfer to a third party. Institutional weaknesses may render a firm-specific asset perfectly immobile simply because a patent or copyright is unenforceable through legal means. In transitional economies, the intellectual property rights regime is often underdeveloped (Maitland, 2001), a deficiency exacerbated by an inexperienced, incompetent and, possibly corrupt, judiciary (Williamson, 1993).

As part of the institutional setting, informal norms may effectively substitute for formal constraints. Private ordering within close-knit groups often spontaneously generates rules that promote co-operative outcomes among group members (Ellickson, 1994; Landa, 1994). Non-legal sanctions within business communities or commercial networks are frequently complex and multidimensional, and include the desire to maintain reputation, profitable relationships and standing among peers (Macauley, 1963; Charny, 1990; Beale and Dugdale, 1975; Arrighetti, Bachmann and Deakin, 1997). By identifying and ostracising opportunistic agents (or identifying and rewarding trustworthy agents), such networks facilitate exchange by decreasing transaction costs for participants (Williamson, 1993).

Asset mobility is also affected by its technical attributes. Highly tacit and/or idiosyncratic know-how creates distinct property rights problems for owners. For example, when know-how is embedded in the firm’s human capital, it is difficult to separate the firm’s rights to the knowledge from the person or team of people, in which it resides, inhibiting market sale as a method for maximising rents on the know-how. Similarly, firm-specific know-how may have strong public good characteristics
affecting disclosure. The more innovative the know-how, the greater the cost of verifying assertions regarding its characteristics and, hence, the greater uncertainty surrounding its application (Magee, 1977; Davidson and McFetridge, 1984). Under such conditions transfer from the firm to another party, through sale or licensing, may be prohibitively costly. Even where knowledge can be codified into a form that can be patented, trademarked or copyrighted, weaknesses in the intellectual property rights regime may render know-how perfectly immobile.

Exploiting firm-specific know-how also turns on consideration of co-specialisation of assets. As Nelson and Winter (1982) argued, codified knowledge may not convey all necessary know-how. Specialist skill may be required to interpret and implement codified knowledge and may not exist outside the firm, limiting transfer when divorced from the accompanying tacit skill of firm employees. Co-specialisation, or the presence of transaction-specific investment, also extends to physical assets (Williamson, 1979, 1985; Masten, Meehan and Snyder, 1989; Stuckey, 1983; Lyons, 1996). In the presence of co-specialised assets, the firm faces a potential hold-up problem, in which, for example, suppliers or distributors opportunistically force ex post re-distributory negotiations (Goldberg, 1976). To avoid hold-up, the firm can internalise the transaction or, in certain institutional settings, rely on relational norms, such as reputation, to constrain opportunism (see Masten, Meehan and Snyder, 1989).

The institutional context shapes not only the appropriability of rents, it also conditions the nature of the firm’s knowledge base and innovative capacity. Learning is not only specific to the firm (or to its accumulated stock of knowledge) but also to the institutional context, in which learning and innovation takes place. Paths of
development are generated both internally and externally, with external paths shaped by, for example, shifts in scientific knowledge, government competition policy and consumer preferences. This means that differentiation between firms also occurs because of different institutional environments, such that Australian firms are different from American, and computer firms are different from steel firms. Clearly, international expansion represents an opportunity for exploiting existing advantages and developing new capabilities because the institutional environments in which firms operate and grow are different.

**Conclusion: Path Dependency, Governance Structures and Institutions**

The major contribution of TCE was to match governance structures with transactions. NIE showed that governance structures were dependent on the society’s formal and informal institutions, where governance structure, transactions and institutions needed to be matched in a discriminating way. This paper has not addressed how both NIE and TCE provide powerful lenses for looking inside governance structures, providing an analytical framework for designing incentive structures, monitoring and enforcement structures. Rather, we have shown governance structures to be inherently path dependent—history matters. Clearly, imposing governance structures or internal designs (rules and procedures) from one institutional environment to another are unlikely to be productive. This is not, of course, to deny the role of supranational laws, regulations and policies to govern international exchange. Perhaps the most important insight—and warning—is that American, western, Chinese or Asian models of governance share both similar analytics but profoundly different institutional settings. Governance structures will emerge and evolve differently, but NIE and TCE
provide the conceptual framework and theory to analyse how governance structures and the growth of whole societies can be understood.
Figure 1.2 Non-Market Contracting

Long-Term
Reciprocal Agreements
R&D Alliances
Joint Ventures
Licensing/Franchises
Supplier/buyer partnership
Technical
Wholly-owned subsidiaries
Figure 1.1: The Contractual Spectrum

1 Adapted from ideas presented in Macneil (1981)
2 As Macneil (1981) noted, the ultimate relational pattern of modern contracts in most respects is not the firm, small or large, but the nuclear family. Hence, the end of the spectrum is not delineated in the diagram.
Figure 1.3 Matching Governance Structures to Nature of Transactions

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Nonspecific</th>
<th>Mixed</th>
<th>Idiosyncratic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasional</td>
<td>PURCHASING STANDARD EQUIPMENT ↑ MARKET</td>
<td>PURCHASING CUSTOMISED EQUIPMENT ↑ INTER-FIRM</td>
<td>CONSTRUCTING A PLANT ↑ FIRM</td>
</tr>
<tr>
<td>Recurrent</td>
<td>CONTRACTING ↓ PURCHASING STANDARD MATERIAL</td>
<td>CONTRACTING ↓ PURCHASING CUSTOMISED MATERIAL</td>
<td>(HIERARCHY) ↓ SITE SPECIFIC TRANSFER OF INTERMEDIATE PRODUCT</td>
</tr>
</tbody>
</table>

Figure 1.4: New Institutional Economics: Three branches of analysis

**Economic Development of a Society**

Theory of institutional change
Assumptions = behaviour, cognition
Exchange to support division of labour
Institutions = formal and informal rules governing exchange
Organisations = the players

**Political Exchange**

*Actors* = government (inc. bureaucracy, judiciary, legislator, govt instrumentalities), unions, firms, pressure groups
*Rights exchanged* = human/social and property

**Economic Exchange**

*Actors* = private enterprise, unions, individuals, government (inc. bureaucracy, judiciary, legislator, govt. instrumentalities, state enterprises), pressure groups
*Rights exchanged* = property

**Social Exchange**

*Actors* = individuals, families, religious groups, educational bodies
*Rights exchanged* = human/social

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