The Transactions Costs Approach to International Institutions

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Introduction

In a well-known edited volume of *International Organization* Robert Keohane asked:

> Why should it be worthwhile to construct regimes (themselves requiring agreement) in order to make specific agreements within the regime frameworks? Why is it not more efficient simply to avoid the regime stage and make agreements on an ad hoc basis? In short why is there any demand for international regimes apart from a demand for international agreements on particular questions? (1982, p. 334)

Keohane's answer to these questions, which employed insights from the work of Coase (1960), Williamson (1983) and others, pointed to the importance of *transactions costs* as an independent variable in understanding international cooperative phenomena. Keohane's approach explicitly focused on the *institutional* features of international cooperation, which distinguishes it from the more abstract game-theoretic treatments of the subject. The standard game-theoretic account of international cooperation, which Snidal (1996) and Abbot and Snidal (1998) call "*decentralized cooperation theory*," cannot answer Keohane's questions because in that theory institutions are not necessary to facilitate international cooperation.

One of the purposes of this volume is to " show the progress that has been made in [the neoliberal research paradigm] and discuss areas where it has encountered new problems."[1] This chapter contributes to that joint enterprise by returning Keohane's insight about the role transactions costs play in the creation of international institutions. I

[*] I would like to thank Duncan Snidal for his very insightful comments on an earlier draft of this piece.
[1] Quoted from Helen Milner's introduction to this volume.

will make the case that the international institutions literature has failed to fulfill the great promise of the research agenda suggested by Keohane's thought-provoking questions because systematic empirical tests of the theory have yet to be conducted. If this gap in the transactions cost research program is to be closed several methodological challenges must be met. I highlight two: measurement of key variables and selection problems. I then offer some suggestions about how to deal with these challenges.

In making these arguments I will draw heavily on an analogy to the contributions that transactions cost economics (TCE) has made to the standard study of economic transactions both theoretically an empirically. Transactions costs theory in economics arose out of a desire to explain the emergence of the firm and other economic institutions—something which the standard treatments did not address. By analogy decentralized cooperation theory can explain why countries choose to cooperate, how they arrive at their cooperative agreements and how they enforce them in the anarchical international system, but they do not address why countries create international institutions in the process.[2] The transactions cost approach to international institutions can help explain that puzzle. The empirical transactions costs literature from economics also offers insights into how to proceed with more systematic tests of transaction costs theories of international institutions.

The chapter is organized as follows. In the next section I discuss how decentralized game-theoretic accounts of international cooperation cannot explain the

[2] Space limitations prevent me from going into constructivist explanations of international cooperation, however I would argue that the point I making *a propos* decentralized cooperation theory is equally applicable, *mutatis mutandis*, to the normative constructivist account of international cooperation. Specifically constructivists have failed to ask why formal institutions are necessary to create international norms. Indeed the constructivist literature leaves the distinct impression that formal institutions are less important at fostering norms than are nongovernmental organizations. Some recent examples include Klotz (1995), Florini (1996), Finnemore (1996), Legro (1997), Finnemore and Sikkink (1998), Keck and Sikkink (1998), Price (1998), Clark (2001) and Rudolph (2001).

presence of international institutions and the contribution of the transaction cost approach in explaining that puzzle. Section three reviews existing empirical applications of the transactions cost approach and points out that, while enlightening, these studies are not really systematic tests of the theory. I address two challenges to systematic testing of transactions cost theories: measurement and selection issues, and offer some solutions to them. Section four concludes.

The Transactions Cost Approach to International Institutions versus Decentralized Cooperation Theory

My argument about the transactions costs approach to the study of international institutions hinges on an analogy to the contributions of transactions costs economists to the traditional study of markets, exemplified by the Arrow-Debreu approach. Thus it may be worthwhile spending some time distinguishing between these two approaches to economic transactions. The unit of analysis, naturally, is the transaction. In the Arrow-Debreau approach these transactions are completed via "contingent contracts" in a market where the price at which suppliers are willing to supply the good or service in a given state of the world equals the price at which consumers are willing to buy it in that state of the world. Uncertainty over future states of the world is factored into the price. Allocations resulting from these transactions are efficient including regarding who bears the risk arising from uncertainty about the realization of the state of the world when the contract is executed.[3]

[3] The classic work on the Arrow-Debreu approach can be found in Arrow (1964) and Debreu (1959. A textbook treatment such as Mas-Colell et. al. (1995) offers a thorough review of the topic.

If the price mechanism is as efficient as this theory claims why are not all transactions conducted by it? Many transactions are conducted not within markets via the price mechanism but are undertaken within organizations (typically *firms*) at the direction of a manager. As Coase (1937) put it:

> Those who object to economic planning on the grounds that the problem is solved by price movements can be answered by pointing out that there is planning within our economic system … which is akin to what is normally called economic planning.

The free market of neo-classical economics does not exist in an unadulterated form—within free markets exist pockets of central planning within firms.

Why are some transactions conducted within markets while others are organized within firms? The Arrow-Debreu approach, which does not admit a role for organizations, is incapable of answering this question, as well as questions like "How do transactions within organizations differ from behavior within markets?" "Are there ways to design organizations to make them more efficient and/or effective?" Coase's (1937) answer to the question "Why do firms exists?" or "Why are some transactions conducted impersonally via the price mechanism while others are conducted within organizations (firms)" was of course "transactions costs." Coase posited that there are costs to concluding transactions via the price mechanism—negotiation costs, contracting costs, costs of monitoring and enforcing the contract and so on. Coase and his successors argued that, by concluding these transactions within firms, economic agents are able to reduce or eliminate these costs. The notion of transactions costs is, by design, as comprehensive as possible, a feature which can imbue the concept with a frustrating vagueness. North (1990, 27) defined transactions costs as "the costs of measuring the valuable attributes of what is being exchanged and the costs of protecting rights and policing and enforcing agreements." Williamson (1989, 142) defined them as "comparative costs of planning adapting and monitoring task completion under alternative governance structures."

Coase's answer to the question of why firms exist only begs the next question: "Why then are not all transactions conducted in one big firm?" Coase's response was that inefficiencies arise when resources are allocated by managerial fiat within an organization rather than in response to relative prices.[4] In such a case resources are no longer necessarily allocated so that their marginal costs equal their marginal benefits. Coase was able to use his transactions costs approach along with simple notions of marginality to speculate about the size of firms. Firms would increase in size until the marginal cost of the inefficiencies of conducting a transaction within an organization were equal to the marginal cost of conducting that transaction with an outside agent.

To illustrate, suppose a firm makes a product that requires a specialized part. This is an example of the "make or buy" decision that is paradigmatic to the TCE literature. The manager of the firm has one of two options in acquiring these parts. She can either 1) contract with an outside manufacturer to produce them or 2) purchase the necessary machinery and hire the necessary workers to her own firm make them, or, what amounts to the same thing, purchase the outside manufacturing firm, that is vertically integrate. Option (1) itself has a vast variety of forms of contracting, ranging from simple arms-length spot market transactions to much more complicated contracts that may include renegotiation provisions, dispute resolution mechanisms and so on. Coase is simply

[4] Milgrom and Roberts 1990 refer to them as "influence costs."

claiming that the manager will choose the lowest cost option taking into account the costs of contracting.

The literature has posited that costs of using the price mechanism should be higher, and therefore we should observe more institutionalized transactions when two factors are present. First Arrow-Debreu-type contracts must impossible, either because agents are *boundedly rational* and therefore cannot specify all possible contingencies *ex ante* or because it is impossible to independently verify when a specific contingency has occurred. Second, the transaction must require investment in some *specific asset*, meaning an asset that has substantially lower value outside the transaction in question. If these two factors are not present either contracts will be able to be written to cover all contingencies or the threat of finding an alternative partner for the transaction will keep both sides of the transaction honest. However if these factors are present the owner of the specific asset may fear being held up by the other party to the transaction when some unforeseen contingency that changes the value of their exchange arises (Williamson 1983, 1985, and 1989).

We may fruitfully compare decentralized cooperation theory with the Arrow-Debreu approach to markets. The "transaction" at issue in the international political context is simply an agreement or treaty. I will be more specific about this definition below, but this definition will suffice for now. Understanding international agreements as transactions is straightforward: two (or more) countries agree to change their policies in exchange for changes in policies another country (or countries). Examples might include:

1) The Kyoto Protocol in which the transaction is "Our country will reduce our of CO_2 emissions by *x* percent if your coutnry will reduce your CO_2 emissions by *y* percent."

2) The North American Free Trade Agreement in which the transaction is "Our country will eliminate barriers on trade in your goods and services if you do the same for ours."

3) The North Atlantic Treaty in which the transaction is "Our country pledges to come to your aid with *x* troops if you are attacked as long as your country pledges to come to our aid with *y* troops if we are attacked."

Obviously there are countless other possible examples of such arrangements. The point is that international agreements can be thought of as straightforward barter arrangements—a service for a service.[5]

Decentralized cooperation theory relies heavily on game theory, typically characterizing an international cooperation problem as a prisoners' dilemma where Pareto inefficient mutual noncooperation is the single-shot equilibrium.[6] Choosing to cooperate offers a Pareto improvement. Cooperative agreements are created by states via bargaining (Gilligan 2004, Fearon 1998). Decentralized cooperation theory posits that the enforcement/compliance problem that arises from the anarchical nature of the international system is solvable because the games are repeated—as long as actors do not discount the future too heavily they will comply with their international agreements.[7] Decentralized cooperation theory has offered convincing answers to a certain set of questions (when will countries cooperate? how will they enforce their agreements?) and it continues to offer new an important insights today.[8] However, it is incapable of

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[5] The legal instruments that facilitate the transaction are, of course, quite arcane, but the transaction itself requires no new or special terminology.

[6] There are other types of cooperation problems, coordination games for instance. I focus on the prisoners' dilemma for illustrative purposes only.

[7] Simmons (1998) offers a helpful review of the compliance literature.

[8] Early examples of this approach include the articles in the Oye (1986) edited volume, Stein (1982) and Snidal (1985). A by-no-means-exhaustive list of a few of the more recent extensions might include: Downs Rocke and Barsoom (1996) who discuss selection bias in the compliance record of international agreements, Fearon (1998) who elucidates the dual roles of states' discount rates in both bargaining and enforcement, McGillivray and Smith (2001) who augment the basic repeated prisoners dilemma with an agent-specific framework.

answering a different set of questions about the effects of institutions because institutions play no role in that theory.

In decentralized cooperation theory, international cooperation can occur in an institutionless void. Cooperative policies are decided upon by states via international bargaining and enforced via trigger strategies. The details of the institutional structure are unimportant—thus the puzzle that motivated Keohane's questions quoted at the start of the chapter. By invoking Coase, Williamson and the others, Keohane pointed the way to an explicit focus on *institutions*—not just cooperation (whether countries do it or not and whether countries comply with their agreements or not) but on the *institutional features* that make cooperation possible by removing some of the impediments to it.

In a purely economic setting Coase's argument implies that we would expect transactions with relatively low costs to take place via arms-length transactions. Transactions with relatively high costs should be undertaken within the confines of an organization—the firm—or should not be undertaken at all. By analogy international cooperative transactions with relatively low transactions costs should be undertaken via relatively simple negotiated agreements without any need to create an international regime. International cooperative transactions with high relative transactions costs, if they are undertaken at all, should take place within international institutions. These institutions themselves must be negotiated, of course, and so we will only observe such institutions if the relative transactions costs of creating them, amortized over the expected lifetime of the regime, are also sufficiently small. It is important to recognize that in all cases the concern is with transactions costs *relative* to the total value of the transaction. States may be willing to pay enormous transactions costs if the value of the treaty they are negotiating is even more enormous, and negligible transactions costs may be sufficient to induce states to forgo negotiations altogether if the expected value of the treaty is sufficiently small.

The virtue of the transactions costs approach is that it not only tells us that states may, under the right circumstances, cooperate, but it gives us insight into the great varieties of forms that that cooperation may take (what Lake has evocatively called “the varieties of international relations”). Consider two countries each of which has a policy that produces some external cost in the other country (think of it as a level of pollution). Roughly speaking we might say that the two countries have four classes of options: 1) do nothing 2) negotiate a single treaty that reduces their level of pollution by some specified amount, perhaps for some specified period of time 3) negotiate a treaty to reduce the pollution and in addition create a more formal international organization and conduct future negotiations under the auspices of that organization or 4) integrate, that is create a supranational institution that sets a level of the policy for them.

Item (1) is particularly important because it reminds us that if the costs of a cooperative transaction are too high relative to the value of that transaction the two countries will simply forego cooperation. This has important methodological implications because it indicates that we cannot really infer much about the presence of transactions costs from observing international negotiations—if transaction costs are too high countries will not even bother to negotiate, as I will discuss in greater detail later. Both items (2) and (3) represent fairly large categories; indeed casual empiricism would suggest that almost all of the international cooperation that we observe falls into these categories. Breaking them up in two categories is thus somewhat artificial—even within these intermediary categories international cooperation can take any form along a continuum of one-time agreements where two countries merely agree to alter a particular policy all the way to more complicated agreements where new organizations may be created with explicit dispute resolution procedures, renegotiation provisions, "escape clauses" provisions and so on. Instances of (4) are, of course, not unheard of in international politics as the creation of the Common External Tariff and the recent events in the creation of the European Monetary Union attest. Lake (1996) makes a compelling case that empires are essentially an example of (4) whereby a powerful state integrates the security policies of weaker states into its own.

Testing

In his review of the new economics of institutions and transactions cost economics literatures, Herbert Simon remarked:

> the [new economics of institutions] suggests a whole agenda of … empirical work that must be performed … Until that work has been carried out the new economics of institutions and related approaches are acts of faith, or perhaps piety (1991, p. 27).

A quarter-century after Keohane's seminal insight the same statement could be made about the transactions cost approach to international institutions. Several studies employ transactions costs arguments to understand particular cases, but there is only one study of which I am aware that attempts to test the implications of a transactions cost approach to international institutions, and that study claims to refute the importance of transaction costs in the creation of international institutions (Moravcsik 1999, reviewed below).

Existing Studies

The transactions costs approach to international institutions has been fruitfully applied by a variety of scholars all of which I unfortunately cannot review here. Some of the best insights have come in the field of international security particularly in the way alliances are organized. Lake (1996) offers a fascinating study in which he uses the transactions costs approach to explain why some security relations are organized as alliances while other are organized as empires. Weber (1997) also applies these concepts to international security relations to explain the level of what she calls “bindingness” of alliances and she discusses NATO and plans for a European Defense Community using these concepts. Abbot and Snidal (1998) focus on formal international *organizations* rather than on the broader category of institutions referred to by Keohane and they provide a long list of possible functions for such organization. International trade policy has been a particularly common area where the approach has been applied. Dixit (1996) provides a case study of some GATT rules within the context of the transactions cost approach, as do Yarborough and Yarborough (1992), who also extend their analysis to regional trade agreements.

The articles in the “rational design” school of international institutions (Koremenos Lipson and Snidal 2001 and sources therein) employ some transactions costs ideas and they attempt to test them via a set of case studies provided by contributors to the volume. However the rational design research program is an entirely new theoretical venture. While it does address questions regarding international institutions it is not a transactions cost approach to international institutions. The dependent variables that the rational design school seeks to explain such as size of membership and degree of centralization are different than the international cooperation equivalent of the “make or buy" decision, namely whether to conduce a cooperative venture inside an institution or outside of it. Furthermore the independent variables used to explain those outcomes are not typical to transactions cost explanations which focus specifically on asset specificity, as well as complexity and frequency of a transaction.

These studies while enlightening and generally supportive of the transactions cost approach cannot be thought of as real tests of it as much as applications of transactions cost concepts to understand particular cases of institutionalized international politics. As Masten et. al. (1991) state in their discussion of the empirical TCE literature "claims that observed institutions minimize transactions costs were easy to make and impossible to refute (p. 3)." It is difficult to see how the research designs of these studies could have produced evidence that would have refuted the claim that the institutions under examination were chosen so as to minimize transactions costs. True testing should at the very least establish the hypothesized correlation (recognizing that this does not prove causality) between the presence of transactions costs and the degree of institutionalization of international cooperative episodes.

By this standard the only study of which I am aware that attempts to test the hypothesized correlation between the presence of transactions costs and the institutionalization of international politics is offered by Moravcsik (1999), and he argues that the evidence is not supportive of the transactions cost approach. Employing case studies of the negotiation of five major European integration treaties, Moravcsik concludes that EC/EU staff did little to further integration and in some cases even lagged behind the efforts of state leaders in bargaining the agreements. By his account, states seemed to have little trouble making agreements on their own, and so he concludes that ex ante transactions costs are generally unimportant impediments to international cooperation. However before we accept Moravcsik’s findings as the final word we should address some methodological challenges that affect Moravcsik’s analysis and attempts to test transactions cost theories generally. I will return to Moravcsik’s analysis shortly because it exhibits some of the pitfalls of conducting empirical research in transactions costs approach, however I will first address a more fundamental impediment to empirical tests of transactions costs theory—operationalization and measurement of key variables.

Methodological Challenges

One of the greatest difficulties in testing transactions costs theories in economics has been measurement of key variables and this difficulty is no less present for international institutions. However before we can even begin to discuss measurement we must be clear about what we seek to measure. Some clarification of the key concepts of *transaction* and *institution* is required. Frequently these concepts (especially “institutions”) have been defined as broadly as possible. The urge to create all-encompassing definitions with which all scholars can agree, regardless of theoretical orientation, is understandable but such a definition may not useful for the purposes of testing a particular theory. “Transaction” and “institution” are phenomena that play specific roles in the transactions costs theory. Including phenomena in one’s definition that do not play these roles will only dilute the power of one’s tests. My purpose in proposing my definitions for these concepts is not to achieve consensus but to motivate testing of the transaction cost theory if international institutions.

In the economic context it is fairly obvious what is meant by the term "transaction." It is the exchange of one good or service for another (typically money). In the international cooperation context the meaning is perhaps less clear. I suggest that a transaction is a specific, agreed-upon change in the policies in one country in exchange for specific agreed-upon changes in policies in another country or countries.

This definition avoids confusion generated by other definitions. Trachtman (1996) for example says that states are transacting *power*. This terminology confuses the issue in my opinion. States are merely agreeing to alter their policies by a specified degree for some specified period of time as long as the other state also alters its policy by some specified degree for some specific period of time. They can continue the transaction as long as they benefit from it and they can withdraw from the transaction as soon as they see fit. No *power* actually exchanges hands in these transactions. States retain sovereign power after the transaction as before. International transactions, as I understand them, are nothing more arcane than a simple exchange of services.

An *institution* in the transaction cost framework is an agreement about how to *govern* transactions—transactions are agreements to change policies and institutions are agreements about how to govern transactions. Examples of the provisions of such "agreements that govern agreements" might include "dispute settlement procedures" that is agreements about what to do if two or more of the parties disagree about whether the others are changing their policies in the ways they said they would. Other such provisions might be about what the parties will do if unforeseen circumstances arise that alter the benefits that the parties obtain from the agreement—so-called "escape clause" provisions.

Comparing two examples may clarify the difference between transaction and institution. Consider the Marrakech Agreement of 1994, which regulates global trade. Specific trade policy commitments by member states are not even listed in the treaty itself because they would comprise a document of approximately 30,000 pages. The text of the treaty and its annexes is well over 400 pages long. Elaborate dispute resolution mechanisms and "escape clause" provisions are specified as well as membership rules and voting procedures.[9] There is a transaction—states are agreeing to set their trade barriers at specific levels in exchange for similar commitments from other members—however there is also an institution. The way in which the transaction will be governed is spelled out in great detail.

The "Convention Providing for the Protection of Migratory Birds and Game Animals" concluded between the United States and Mexico in 1936 is rather different.[10] The treaty concerns the exploitation of a common pool resource. It specifies the birds that are to be protected, the length of hunting seasons for these birds and so on. The transaction in this case is "The United States will regulate its hunting of these birds according to these rules as long as Mexico does and vice versa." The entire text of the treaty is two pages long. The signatories did not create a "North American migratory bird regime" nor did they even specify the consequences if one of the parties failed to comply with the treaty. Presumably the signatories understood that if they failed to regulate the hunting of the specified birds as mandated by the treaty in a way that harmed the other party there would be diplomatic protests which if left unheeded would lead to noncompliance by the other party. In such a case both parties would be worse off than if

[9] These facts are taken from http://www.wto.org/English/docs_e/legal_e/legal_e.htm. Accessed July 13, 2007.
[10] There are thousands of similar examples but this will suffice for the purposes of illustration.

they had complied with the treaty and so governance structures were unnecessary. Decentralized cooperation theory is perfectly adequate for understanding this treaty.

By my definition the “Convention Providing for the Protection of Migratory Birds and Game Animals” and agreements like it are transactions but not institutions while the Marrakech Agreement is an institution. Many agreements will be both, that is they will include both quid pro quo changes in policies (a transaction) and provisions for how to govern that transaction. Thus to measure whether or not a transaction is conducted inside or outside an institution one would need to code the variable “institution.” My definition suggests that this variable is measured from the treaty text itself. Does the treaty contain governance provisions about how dispute will be handles, escape clause provisions and renegotiation provisions? If cooperation is conducted within a framework such as this it should be considered institutionalized cooperation.

A successful confirmatory test of the transactions cost approach to international institutions would show that cooperation problems cases like the “Convention Providing for the Protection of Migratory Birds and Game Animals” discussed in the introduction are characterized by relatively low levels of transactions costs while highly institutionalized cases of cooperation like the Marrakech Agreement are characterized by relatively high level of transactions costs. But how do we measure transactions costs? Unfortunately transactions cost cannot be directly measured. Transactions cost economists have dealt with this problem by gathering data on the *covariates* of transactions costs. Transactions costs are said to be greater in the presence when transactions are 1) *frequent*, 2) *complex* and 3) *require transaction-specific investment*, (that is, asset specificity). Economists have used measures of these variables as proxies of transactions costs.

"Frequency" might be captured by the geographic proximity of countries, suggesting that the cooperation of neighbors should be more institutionalized than that countries that are farther. Economic integration may play a similar role. Geographic proximity has the virtue of being exogenous so we do not need to be concerned with reverse causality between frequency and institutionalization. The same cannot be said for economic integration, however we do not need to be overly concerned about reverse causality (is greater frequency causing institutionalization or is institutionalization increasing the frequency of transactions?) because causality in both directions is consistent with the theory.

The term "complexity" is meant to capture the assumption that individuals are boundedly rational in transactions costs theory. If individuals could see all contingencies in advance they could include them in the contract (treaty) and they would not need an institution. The constraints of bounded rationality is hypothesized to be more binding in complex transactions. Multilateral agreements are probably more complex than bilateral ones.[11] Complexity may be mitigated when countries have similar domestic political systems.

The proxy for transactions costs that has garnered the most attention from transactions costs economist is asset specificity. For example some economists have used research and development expenditures as proxies (Armour and Teece 1980, Globerman 1980, Joskow 1985, and Pisano 1990). Others have conducted surveys of engineers in a particular industry to ascertain how specific certain parts are to the relevant industrial

[11] These same predictions are mirrored in the "rational design" volume cited above.

process. These studies have typically shown that transactions that require specific assets are more institutionalized.

The equivalent of asset specificity in the political context would have to capture the extent to which countries were "locked-in" to a particular policy (and therefore more susceptible to opportunistic behavior) once they had signed on to the agreement. Scholars may be able to obtain some leverage from differences between domestic political systems. Perhaps it is more difficult to change policies in a democracy than a non-democracy, federal system and separation of power systems also probably make it harder for countries to change policies. Do countries characterized by these feature demand greater institutionalization of their agreements? Alternatively executive agreements are presumably easier to change than full-fledged treaties. Are executive agreements less institutionalized than treaties?

A further methodological challenge facing testing of transaction costs theories of international institutions concerns *selection bias* at several levels of analysis. First we must be careful about making inferences that transactions costs are negligible from cases where states are in the forefront of negotiating agreements. First we should expect to observe governments negotiating in cases where transactions costs are low and/or organization costs are high relative to the surplus to be divided by the treaty. If that were not the case, states would simply forgo negotiating altogether because the value of the transaction would not cover the transaction costs. The fact that we even observe governments negotiating on these matters suggests that they are cases where transactions costs were low relative to the surplus to be divided.

This is quite plausibly the case in the negotiations that Moravcsik (1999) examines, which were major events in the formation of the European Community/Union. Transactions costs even if they were high in some absolute sense, were quite low compared to the surplus to be divided by the treaties which was probably huge. The types of *major* institutional innovations that Moravcsik examines are precisely the sorts of situations where stakes are high and as such states are probably willing to pay the transactions costs of negotiating these treaties, particularly when one considers that once the new institutions are created the transactions costs of creating them will be amortized over a long period of time.

Indeed Keohane (1989) himself recognized this methodological problem and its implications for regime creation:

> If transactions costs are negligible it will not be necessary to create new institutions to facilitate mutually beneficial exchange; if transactions costs are extremely high it will not be feasible to build institutions … Therefore according to this theory one should expect international institutions to appear whenever the costs of communication monitoring and enforcement are relatively low compared to the benefits to be derived from political exchange. (p. 166-67)

The lack of close study of the characteristics of these institutions been raised by Abbot and Snidal (1998) and Trachtman (1996) who both cite Rochester (1986). Incidentally both Abbot and Snidal (1998) and Trachtman (1996) in part blame regime theory developed by Keohane for the unwillingness to delve into such detailed studies. My argument suggests that that criticism is unfair and that the transactions costs research program calls for precisely such studies.

Second institutions may be created to lessen the costs of expected *future* transactions. Again we can see this problem manifest itself in Moravcsik's test of transactions costs in the development of the European Union. Moravcsik's cases are all examples of major *institutional* innovations in the process of European integration. If transactions costs are generally negligible one must wonder why the members of the EC/EU deemed it necessary to create these institutions in the first place—to paraphrase Keohane's questions from the prologue why not simply skip the institution creation and innovation stage and make agreements on an ad hoc basis? Even if Moravcsik is correct that transactions costs were not insurmountable to states without the help of supranational entrepreneurs in these particular negotiations, the question remains why the countries felt the need to create these institutions in the first place. According to the transactions costs approach the very institutional innovations that Moravcsik describes were undertaken to reduce costs on *future* transactions conducted within the framework of those institutions. In other words Moravcsik could be accused of changing levels of analysis. He looks for transactions costs in the *formation* of institutions but the claim of the transactions costs school is that these institutions reduce transactions costs of other cooperative ventures in the future such as engaging in trade negotiations with outside states and setting common agricultural and monetary policy.

In summary when looking for a link between transactions costs and cooperation negotiations may not be the best unit of analysis. The fact that negotiations are occurring at all probably means that transactions costs are relatively low compared to the value of the transaction and one must be careful about drawing conclusions from states' negotiations to create institutions. The very purpose of these negotiations is to ease the costs of transactions in the future. The relevant comparison in those cases is not the costs of the particular negotiation over the institution but the costs of all future negotiations that will (according to the theory) be lessened as a result of the creation of those institutions. To effectively test the predictions of the transactions cost approach in cases such as these a better tack might be testing if there was a statistically significant increase in the number of cooperative agreements following the creation of an international institution in the relevant issue area and whether these effects should be interactive with measures of the three variables mentioned above, such that increases in international cooperation were larger in percentage terms where those variables are more prevalent. Alternatively we might look across countries or types of agreements as indicated above—do democracies or federal systems demand greater institutionalization of their agreements, are executive agreements less institutionalized than treaties, and so on.

Conclusion

In the standard game-theoretic treatments international agreements are arrived at via decentralized bargaining and enforced with some form of trigger strategy in a repeated game. These studies have extended our understanding of international cooperation greatly, however they are incapable of answering why states bother to create international institutions. Why don't they just cooperate in the decentralized fashion modeled by the game theoretic treatments? This was the question Keohane asked a quarter century ago. His answer, which drew upon ideas from transactions cost economics, was that states create institutions when the costs of bargaining and enforcing agreements in the decentralized fashion are too high compared to the benefits of cooperation.

I have argued that the time has long since passed to subject these important conjectures to empirical testing. However there are some daunting obstacles that must be considered before undertaking that task. One must think carefully about the key concepts of *transaction* and *institution*, measurement of transactions costs is highly problematic, and one must be cognizant of selection effects when choosing case studies, because the transactions cost approach expects transactions costs to be low in cases where states are bargaining unaided by institutions. I offered a few ideas about how to address these issues. With regard to the definitional issue I suggested keeping a distinct between transactions which are agreements to change states policies and institutions which govern transactions.

Ultimately a positive correlation between institutionalization (provisions in agreements that govern transactions) and the presence of transactions costs must be exhibited if the approach is to be convincing. Measuring transactions costs directly, however, is impossible. I suggested taking a leaf from the transactions costs economists book and rather than attempting to measure transactions costs directly use variables that should be correlated with asset specificity and therefore transactions costs. I suggested that if perhaps policies were harder to change in democracies, federal systems and separation of power systems countries with such institutions may demand more institutionalized agreements. Furthermore executive agreements should be less institutionalized than treaties.

Selection effects will plague case studies of negotiations over institutions because the transactions costs that will be assuaged by the resultant institutions would have come in the *future* not at the time of negotiation. Thus it will be difficult to establish a correlation between the relevant transactions costs (those that would have occurred in the future had the institution not been created) and the institutionalization of the cooperative problem. Furthermore the transaction costs of the negotiation of these new institutions must have been relatively low or states would not have bothered to negotiate in the first place. These selection effects make tests that focus on negotiations unreliable. A better test of the transactions costs approach is not at the negotiation stage but to compare the number of cooperative transactions pre- and post-institution to see if their volume increased. An alternative test would be to see if the hypothesized correlation exists between covariates of asset specificity (as describe above) and the presence of governance provisions (institutions) in international agreements.

The field of international relations has barely scratched the surface in testing the implications of the transactions cost approach to international cooperation or employing them proscriptively. There are literally tens of thousands of agreements, the institutional characteristics of which have gone unstudied by this approach, and which could render numerous insights as to how best to craft agreements so as to bring about more effective international cooperation. My hope in writing the chapter is to encourage international relations scholars to return to the insights of the transactions cost approach and advance the important research program that Keohane began.

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