NELLCO
NELLCO Legal Scholarship Repository

New York University Law and Economics Working Papers | New York University School of Law

12-1-2009

Institutions and Economic Performance: An Introduction to the Literature

Kevin E. Davis
NYU School of Law, DavisK@exchange.law.nyu.edu

Follow this and additional works at: http://lsr.nellco.org/nyu_lewp

Part of the Comparative and Foreign Law Commons

Recommended Citation
Davis, Kevin E., "Institutions and Economic Performance: An Introduction to the Literature" (2009). *New York University Law and Economics Working Papers.* Paper 202.
http://lsr.nellco.org/nyu_lewp/202

This Article is brought to you for free and open access by the New York University School of Law at NELLCO Legal Scholarship Repository. It has been accepted for inclusion in New York University Law and Economics Working Papers by an authorized administrator of NELLCO Legal Scholarship Repository. For more information, please contact tracy.thompson@nellco.org.

Institutions and Economic Performance:
An Introduction to the Literature

Kevin E. Davis[*]

Forthcoming in *Institutions and Economic Performance,*
Kevin E. Davis (ed.) (Edward Elgar, 2010)

Abstract

This essay serves as the introduction to a collection of critical writings on the relationship between institutions and economic performance. The essay not only provides an overview of the field but also explores some of the thorny questions surrounding the definition and measurement of institutions.

Introduction

In 1993 Douglass North won the Nobel Prize for a body of work suggesting that a great deal of the variation in economic performance, across both space and time, can be explained by variations in institutions (see generally, North 1990). The influence of the 'new institutional economics' pioneered by North has been profound. Not only has it attracted the attention of a large portion of a generation of social scientists, it has also influenced the amount of attention devoted to questions of institutional design. This is particularly true in countries whose economic performance has lagged. Rather than attributing poor economic performance to factors such as climate, endowments of minerals or arable land, or the genetic makeup of the population, it is now standard to search for institutional causes and solutions.

---

[*] Beller Family Professor of Business Law, New York University Law School. I am grateful to Lewis Kornhauser for comments and to the Filomen D'Agostino and Max E. Greenberg Research Fund at NYU School of Law for support. All errors are my own.

This collection presents some of the critical writings in the field of institutional economics, with particular emphasis on works concerned with substantial cross-country variations in levels of economic performance. Although one example of work in the original 'institutional economics' tradition has been included, the focus is squarely on the 'new institutional economics,' with a bias toward more recent works. Unfortunately, since the selections are limited to articles, important contributions contained in book-length works have been neglected (see, for example, Acemoglu and Robinson 2001, Aoki 2001, Fafchamps 2004, Greif 2006, Hall and Soskice, 2001, and North 1990, 2005). It has also turned out to be impossible to provide a collection that offers comprehensive, in any sense, coverage of the field. Instead the aim of collection is to provide a selection of papers which not only gives a sense of the most important findings in the literature, but also demonstrates a variety of ways of approaching the general topic of the relationship between institutions and economic performance.

This introductory essay defines the scope of the collection by discussing alternative ways of defining the concepts of "institution" and "economic performance" and providing an overview of the main potential lines of inquiry about the relationship between these concepts. (For an earlier and more extensive survey see Lin and Nugent 1995.) The final section discusses some of the challenges that are inherent in this program of research.

What is an institution?

We need to begin with a definition of an institution. Unfortunately, there is no consensus about the appropriate definition. There is, however, a broad consensus about

what institutions are not. They are not features of the natural environment, like arable land, minerals, a temperate climate, or navigable rivers. They also are not man-made physical objects, like roads or dams or factories. Instead, institutions are features of the human population of a society. But, they are not just any features of the population. The concept of an institution clearly does not include purely physical characteristics of a population such as height, weight, physical strength or number. Nor does it include purely mental phenomena such as mathematical ability or preferences over consumption goods.

So what remains to qualify as an institution? What is left are aspects of the human population reflected in their behaviour. The most popular definitions of an institution have at their core *social factors that influence, to some extent, human behavior*. So for example, one of the earliest institutional economists, John Commons, chose to define institutions as a form of collective behaviour that achieves the "control, liberation and expansion of individual action" (1931). Douglass North (1994) defines institutions as "the humanly devised constraints that structure human interaction. They are made up of formal constraints (rules, laws, constitutions), informal constraints (norms of behavior, conventions, and self imposed codes of conduct), and their enforcement characteristics." Elsewhere he speaks more succintly of institutions as "the rules of the game." In a similar vein, Avner Greif defines an institution as "a system of social factors that conjointly generate a regularity of behavior," where by 'social factors' he means, "man-made, nonphysical factors that are exogenous to each individual they influence," including "rules, beliefs, norms and organizations" (2006: 30). Glaeser et al. speak simply of "constraints" that are "reasonably permanent or durable" (2004: 275).

As North and Greif make explicit, the emphasis here is generally on *social* factors which influence behaviour, as opposed to, say, features of the natural environment (such as winter winds that induce people to wear fur coats) or factors purely internal to individuals such as whims or fancies. But this still covers a vast terrain. Sometimes institutions create material incentives, sometimes they play on emotions, sometimes they provoke moral sentiments; on other occasions they play on desires for social status, and sometimes they even manipulate people's ability to conceive of alternative courses of action. Identifying and mapping out all of the social factors that influence behaviour is an ongoing enterprise.

There are, however, some important differences between the definitions cited above. North's definition implies that institutions are conceptually distinct from the behaviour they influence – the rules of the game are distinct from the way the game is played. Greif does not draw such a sharp distinction. He refuses to regard institutions as exogenously specified rules. Instead he insists that the behaviour of actors who promulgate and enforce the rules of the game must be explained by institutions, just like other forms of behaviour. In other words, he treats institutions, as well as actors' motivations for conforming to them, as endogenous rather than exogenous; institutions represent equilibria of a game rather than the rules of the game (see also Calvert 1995). In this respect Greif's definition of an institution is similar to Commons' idea that institutions represent necessarily changeable manifestations of collective action.

Greif also takes the position that to qualify as an institution a social factor must exert some observable influence on behavior. "A legal rule, a constitutional provision, a moral code, or beliefs that do not influence behavior are not components of institutions."

(30) This approach has the drawback of ruling out studies of the relative importance of institutions, since it cannot comprehend circumstances in which the effects of institutions on behaviour are overridden by non-institutional factors. On the other hand, it is dificult to see the outer bounds of more expansive definitions of institutions. If noone obeys a rule is it really a rule?

Another divergence lies in Glaeser et al.'s insistence that institutions must be relatively durable. This leads them to draw a distinction between "institutions" and "policies." When they speak of "institutions" they have in mind things like property rights and the basic structure of government. When they speak of "policies" they seem to have in mind things like exchange rates, interest rates, levels of taxation and government expenditure, state ownership of enterprise and wage and price controls. If institutions are defined as rules of the game then some of these policies clearly qualify as institutions. State-imposed restrictions on the wages people are allowed to pay their employees, the prices they can charge for goods and services, and the amount of tax they are required to pay to the government are quintessential examples of state-endorsed influences on behaviour. The main difference between these sorts of institutions on the one hand, and property rights or political structures on the other, is that the latter are often constitutionally enshrined and therefore more durable. But even that distinction is dubious because constitutions are also subject to revision (and in some jurisdictions property rights are not constitutionally protected).

Glaeser et al.'s definitional approach also calls into question the feasibility of drawing a distinction between institutions and the behaviour which they influence. They refuse to treat patterns of government expenditure and practices regarding state

ownership of enterprise as examples of institutions. If we pretend that the entire executive branch of government is a single actor then it seems fair to characterize these actions as ways of playing the game rather than as ways of setting the rules. However, this means ignoring the fact that practices like government subsidies or nationalization can be designed deliberately to influence the behaviour of other actors in society. Think of subsidies for environmentally-friendly automobiles, or the use of state-owned oil companies to influence market prices for gasoline and thus, indirectly, patterns of automobile use.

The difficulty of distinguishing institutions from behaviour is also reflected in the differences of opinion over whether the term institutions encompasses "organizations." In everyday speech the terms are often used interchangeably. When people speak of Jamaica's 'strong legal institutions' they are referring not only to the laws on the books but also to the courts that apply them. North, however, objects to the conflation of institutions and organizations. He says, "If institutions are the rules of the game, organizations and their entrepreneurs are the players." (1994) North's basic point is well taken but should not be overstated because it is impossible to draw a sharp distinction between organizations and rules. To begin with, North himself contributes to the conceptual confusion by saying that institutions include both "constraints....*and their enforcement characteristics*." (emphasis added) When it comes to formal institutions such as laws, the relevant enforcement characteristics presumably include organizations such as courts. A second reason why it is difficult to draw a sharp conceptual distinction between institutions and organizations is that organizations are defined in part by rules which determine their membership and allocate authority to speak and act on their behalf.

At the same time, it remains true that an organization is more than a set of disembodied rules; it is also defined in part by the particular individuals who inhabit it at any given time, including their relationships with people both inside and outside the organization.

The issues of whether institutions ought to be defined to encompass 'policies' and 'organizations' both appear to be manifestations of a more fundamental question which is inherent in the idea of institutions as 'social influences on behaviour': should institutions be defined solely by reference to the patterns of behaviour which they tend to induce, or also by reference to the 'social' mechanisms by which they influence behaviour? Take for example the institution of 'French civil law'. Does this term encompass only the behavioural protocol set out in the Napoleonic Code, or does it also encompass the distinctive characteristics of the judiciary that was designed to administer it? There may good reasons to adopt one definitional approach rather than another, and those reasons may depend on the purposes for which the concept of an institution is being used. However, it is important to understand that these are distinct approaches. This is why Kornhauser (2004) develops terminology which distinguishes disembodied institutional forms ("institutional structures") from those embodied in a particular set of individuals ("realized institutions"). He goes on to describe institutional structurs which are not only embodied in particular individuals but also operating in a specific social and physical environment as "functioning institutions".

If the goal is to avoid confusion about the definition of an institution it can also be helpful to acknowledge that there are different kinds of institutions. To begin with institutions vary in terms of the kinds of behavior they influence. Perhaps most fundamentally, we can distinguish institutions that directly influence the behavior of

agents in a society from institutions that influence the formation of other institutions. So, for example, the norms that regulate the use of parcels of land can be distinguished from the norms that regulate the selection of people to adjudicate property disputes. This distinction corresponds to the legal philosopher H.L.A. Hart's famous distinction between primary rules and secondary rules (Hart 1994).

Legal scholars also often classify institutions, or at least the ones they consider to be legal institutions, based on how precisely they regulate behaviour (see, for example, Kaplow 1992). The issue here is how finely partitioned is the space that represents the feasible set of actions for the agent whose behavior is regulated by the institution. For example, in some societies the use of land by men and women may be regulated by different norms. In other societies, a single set of norms applies. Alternatively, in one society different bankruptcy regimes may regulate small and large firms while another society may have a single regime. Finally, in one society judges may be required to prescribe the death penalty for a wide swathe of crimes while another society may have a much more nuanced sentencing scheme.

Another point to bear in mind is that, at least from the point of view of the actors whose behaviour they govern, institutions vary in terms of their certainty. It is not unusual for a person's behaviour to be influenced by factors whose precise impact on them is uncertain at the time they act. For instance, a person may choose not to drive faster than 50 kilometers per hour based on their belief that this what the law requires, even if they are uncertain about whether that is in fact the law; if it is the law, whether they will be apprehended and prosecuted for violating it; and if they are prosecuted, what penalty will be imposed.

Last but not least, it is also often helpful to draw a distinction between formal and informal institutions. I like to rely on a simple way of drawing this distinction: Formal institutions are endorsed by the state, the rest are informal institutions. This distinction is helpful for the purposes of empirical analysis because it is often *relatively* easy to identify and observe institutions that have been endorsed by the state. Informal institutions can be much harder to observe. A secondary consideration is that formal institutions may influence behavior in different ways from informal institutions. For example, some people may feel a moral obligation to obey norms endorsed by a particular state whereas they may feel no such obligation to obey norms endorsed by a particular religious leader. Finally, the distinction between formal and informal institutions is helpful to the extent that the purpose of analysis is to guide state action.

When all is said and done then, what is the best way to define an institution? Personally I find North's idea of an institution as a "rule of the game" most helpful. But I add an important caveat – in the game of life, rules are made up as we go along, by both those officially charged with administering the rules and the people subject to them.

What do we mean by economic performance?

Many studies of the relationship between institutions and economic performance equate economic performance with growth in per capita income. This reflects a very limited definition of economic performance. For both ethical and political reasons policymakers ought to care about other aspects of a society's economic performance, including unemployment, poverty and inequality (of either outcomes or opportunities) (see generally Sen 1999). This in turn implies that scholars ought to go beyond analyzing

the relationship between institutions and aggregate levels of economic output and also consider how institutions affect the distribution of resources along various dimensions, including gender (see for example, Agarwal 1994) and ethnicity (see, for example, Chua 2000). It is also important to consider how resources are distributed over time and, in a probabilistic sense, across possible states of the world. In addition, people care about the volatility and riskiness of their incomes, and so it seems worthwhile for social scientists to pay attention to understanding how institutions affect economic performance along those dimensions too.

So what then are we to make of studies of the relationship between institutions and economic performance that do not even go so far as to examine the effects of institutions on economic growth? It is not uncommon for scholars to make claims about the relationship between institutions and economic performance by studying intermediate outcomes that they presume to be closely associated with economic growth. For example, LLS have expended a huge amount of effort to substantiate the following claim:

> Compared to French civil law, common law is associated with (a) better investor protection, which in turn is associated with improved financial development, better access to finance, and higher ownership dispersion, (b) lighter government ownership and regulation, which are in turn associated with less corruption, better functioning labor markets, and smaller unofficial economies, and (c) less formalized and more independent judicial systems, which are in turn associated with more secure property rights and better contract enforcement. (LLS, 2008: 298)

Notice the absence of any claim that the common law promotes aggregate economic growth. In fact, LLS acknowledge that the cross-country data do not provide robust support for any such claim. They also acknowledge that the economic successes of countries such as Belgium and France – the examplars of the French approach to the design of legal institutions – suggest that this is no accident.

Do institutions matter?

In the past decade or two economists have become increasingly interested in statistical horseraces between institutional and non-institutional theories of economic development. The most creative quantitative studies try to examine natural experiments that come as close as possible to randomly treating different social units – whether they be countries or regions or households – with different institutions and holding all other factors constant. The results so far have been inconclusive.

A leading example of this empirical strategy is Acemoglu, Johnson and Robinson ("AJR") (2002). AJR treat European colonialism as a natural experiment. They hypothesize that European colonizers imposed different types of institutions on their former colonies depending on whether those colonies were suitable for European settlement. *Extractive institutions* that were detrimental to long-term economic performance were established in densely populated areas with unfavorable disease environments. Meanwhile, *institutions of private property* were adopted in more sparsely populated areas with disease environments that were less deadly to European settlers. AJR do not purport to be able to observe the quality of colonial institutions directly, but

they do have observations of pre-colonial population densities and mortality rates for European settlers. In AJR (2001) they use settler mortality rates as an instrument for the quality of current institutions in a cross-country regression analysis and find that institutions have a large effect on economic performance (see also, Rodrik, Subramanian and Trebbi 2004). In AJR (2002) they present evidence that former European colonies that were densely populated in 1500 and which had high settler mortality rates displayed relatively poor economic performance, beginning in the late eighteenth and early nineteenth centuries. Prior to the colonial era the societies in those areas were relatively prosperous. This reversal of fortunes cannot be explained by geographic factors.

It is debateable whether cross-country regressions that rely upon instrumental variables for institutions can provide conclusive tests of the hypothesis that institutions influence economic performance. One difficulty is that the institutions that have been used to date can plausibly be correlated with non-institutional factors that influence economic performance. In the case of Acemoglu, Johnson and Robinson's approach, the problem is that variations in colonial policy were not necessarily random and might well have been correlated with non-institutional factors that influenced subsequent economic performance. As Glaeser et al. (2004) point out, Europeans may have given their settler colonies better know-how and human capital as well as, or instead of, better institutions. They are also concerned that geographic factors such as the local disease environment not only influenced colonial policies but also had an ongoing influence on post-colonial economic performance.

A second difficulty with these cross-country studies is that they invariably use questionable measures of institutions. For instance, in their own empirical analysis

Glaeser et al also try to exploit institutional variations dating back to European colonization (and its immediate aftermath) as a sort of natural experiment. However, instead of focusing on differences associated with variations in European settlement practices, they focus on institutional variations correlated with the origins of some of the legal institutions – basically, common law or civil law – adopted in or shortly after the colonial period. For reasons explored in La Porta et al. (2008), the common law and (French) civil law traditionally adopted very different approaches to the design of a broad range of formal institutions, and those differences that have persisted into modern times. Using indicators of legal origins as instrumental variables, Glaeser et al. explore whether variations in certain political institutions – specifically, ones which impose constraints on the executive – have been significant determinants of economic performance in poor countries. They find that their measures of political institutions were not significant determinants of growth in income per capita from 1960 to 2000, whereas measures of human capital were significant. This study sheds little light, however, on whether other institutions were significant determinants of growth.

It is worth noting that analysing the effects of institutional variation, whether over time or across countries, is not the only way of corroborating the claim that institutions matter. In some situations observed behaviour may be sufficiently inconsistent with the predictions of economic theories that ignore the role of institutions that the only plausible explanations are institutional ones. A classic illustration is Townsend (1995), which argues that the stability of household consumption in several poor, high-risk Indian villages in spite of significant fluctuations of household income could only be explained

by the existence of institutions that enabled substantial amounts of risk-sharing among villagers.

The roles of specific institutions

Innumerable claims have been made about the roles that specific institutions play in influencing economic performance. For example, some economists insist that land tenure institutions that guarantee exclusive individual ownership and unrestricted alienation of land are critical determinants of economic performance because of their effects on incentives to invest in improving property and opportunities to benefit from mutually beneficial exchange (Alchian and Demsetz 1973, De Soto 1989, Besley 1995). Still other scholars have found that both historical and contemporary institutions governing the distribution of land have significantly influenced outcomes such as such as investments in and productivity of agricultural land (Besley and Burgess 2000, Banerjee and Iyer 2005). Other scholars focus on institutions that support exchange of land, goods and services, which in turn permit actors to re-allocate risk and capture gains from trade (see for example, Clague et al. 1999, Fafchamps 2004). Some scholars focus on formal legal institutions, but others either make no distinction or emphasize the interactions between formal and informal institutions (for a survey see Davis and Trebilcock 2008).

At a more general level, some scholars argue that institutions which limit the state's role in economic activity are crucially important, in part because such institutions discourage actors from investing wastefully in competition for the rents generated by restrictive state intervention (Krueger 1974). Baumol (1990) generalizes this point to

suggest that a crucial feature of institutions is the extent to which they induce entrepeneurs to allocate their talents to productive as opposed to unproductive activities. Other scholars, however, take issue with the claim that state intervention necessarily leads to unproductive activity. Instead they claim that it can be a useful way of stimulating economic transformations, pointing to the interventionist 'developmental states' which are thought to have played a critical role in the economic rise of several East Asian countries (Evans 1989). Dani Rodrik (2000) argues that it is also important to take account of institutions that serve to redistribute wealth and mitigate conflict, on the theory that these institutions help to ensure the kind of social cohesion and stability that are pre-requisites to a successful market economy.

All of the examples given so far involve institutions that directly govern the behaviour of private actors. In other words, drawing on Hart's above-mentioned distinction between primary and secondary legal rules, they concern "primary institutions." Another broad set of claims has been made about the roles that various sorts of secondary institutions play in economic development. For instance, North and Weingast (1989) emphasize the importance of political institutions that allow the state to make credible commitments not to revise private rights, including those of its creditors. Taking a somewhat different tack, Rodrik (2000) claims that 'participatory politics,' and more specifically, participatory democracy, is a crucially important "meta-institution", on the grounds that it best performs the function of collecting and aggregating the kind of location-specific information required to create institutions tailored to local conditions. Thus, where North and Weingast value stability, Rodrik values adaptability.

Rodrik (2000) also recites several powerful arguments against the view that a successful market economy requires any specific set of institutions (see also, Lin and Nugent 1995: 2310-2313, Hall and Soskice 2001). In the first place, as many scholars have argued, there are almost always alternative institutional mechanisms for achieving any given objective. For example, post-war Japan's lifetime employment and extensive regulation of entry into retail markets may have served as forms of social insurance, substitutes for a system of transfer payments administered by a welfare state. Second, Rodrik points out that institutions which do not directly serve any useful economic purpose may serve as valuable complements for other economically significant institutions. For example, because of its impact on social coherence and stability, a system of social insurance, of some sort, may be an inefficent but necessary complement to institutions that provide for freedom of contract and protection of private property. Rodrik does not explain why his argument against one-size-fits-all institutions does not also apply to his argument in support favour of participatory democracy.[1]

One-size-fits-all theories are also vulnerable to the objection that optimal economic institutions may vary depending on what some might call non-institutional features of the environment in which they operate (assuming that institutions are defined narrowly as decision-making protocols, to the exclusion of their social embodiments and the surrounding environment) (Trubek and Galanter 1974; Evans 2004). For example, Posner (1980) argues that the optimal institutions for primitive societies ought to reflect

[1] He simply says, "While I am a great believer in institutional diversity, I see no argument that would make it appropriate for some governments to deny their citizens basic political rights such as freedom of speech, the right to vote and stand for political office, or freedom of association." (id: 28) Evans (2004) offers a slightly more robust defense of participatory institutions.

the fact that in those societies it is typically costly for individuals to acquire information about their environment. As a result it may be optimal for those societies to adopt institutions, such as extensive reliance on exclusive kinship groups and gift-giving, that would be dysfunctional in more modern societies. Greif (1994) shows how the optimal institutions for a society can depend on prevailing beliefs about how other members of society will behave. On a somewhat different tack, Berkowitz, Pistor and Richards (2003) argue that the link between legal institutions and social outcomes depends in part upon the relevant population's level of familiarity with the concepts and value judgments underlying the law. They argue that formal legal institutions which have been transplanted from one jurisdiction to another will operate in a less consistent and, from the perspective of the subjects of the law, less satisfactory fashion than the same legal institutions would perform in the jurisdictions in which they originated. This can in turn undermine the overal effectiveness of legal institutions.

A final point worth noting is that most of the scholarship discussed so far focuses on a single class of mechanisms through which institutions influence economic behaviour, namely, mechanisms that involve the shaping of incentives. A relatively small number of scholars have examined other mechanisms, most notably those through which institutions influence preferences Bowles (1998).

Explaining institutional variation

If institutions are important determinants of economic performance and we want to understand why economic performance varies across space and time, then it is

important to understand how and why institutions vary. This is a major project because a whole host of factors may influence institutional variation. To begin with, as Rodrik (2000) argues, political institutions such as participatory democracy might themselves influence the evolution of other institutions. In addition, La Porta, Lopez de-Silanes, Shleifer and their collaborators, have made intriguing claims about the extent to which historical decisions to base a legal system on French civil law rather than English common law (La Porta et al 2008) have influenced contemporary institutions. Other important influences include economic factors, meaning the distribution of resources in society and the prevailing modes of production. So, for example, Engerman and Sokoloff (2002) argue that in the New World, countries with modes of production that generated high levels of economic inequality developed institutions that were designed to consolidate and maintain the power of the elite. Still other influences can be classified as political – meaning the attitudes and desires of powerful actors (including foreigners). There are also 'cultural' influences, an admittedly nebulous category which, depending on the author, has been defined to include ideas about how other members of society ought to (values) or are likely to (beliefs) behave (Greif 1994). Finally, it is important not to discount the potential for genuine institutional innovations, which may even be prompted by social scientific research (Ruttan and Hayami 1984). Of course, it is open to debate whether phenomena such as the distributions of wealth and power, modes of production, culture, or innovation, are truly independent of institutions.

The range and complexity of the influences on institutional development raises the question of whether it is even feasible to develop a positive theory of institutional change. Avner Greif, for one, argues that it is not. Relying on results from classical and

evolutionary game theory, which recognize that some settings are compatible with multiple equilibria, he argues that there is often no reason to expect a one-to-one mapping from the exogenous features of a society to institutions (Greif 2006: 19). As a result, Greif is pessimistic about the prospects of developing a theory to predict the emergence of institutions based on the exogenous and observable features of a society. He is also pessimistic about the possibility of developing such a theory inductively because of the difficulty of observing many important features of institutions and the cultures in which they operate.

Greif's pessimism about our ability to predict institutional variation draws upon and is consistent with the the work of scholars who emphasize the role of path dependency in the evolution of institutions (e.g. Aoki 2001; North 2005). According to this school of thought, complementarities between institutions on the one hand, and either the institutional or non-institutional features of a society on the other hand, can lead to significant differences between the institutions that are optimal for various societies. Moreover, these divergences can be self-reinforcing over time, as institutional divergence in one period in turn justifies further divergence in the next period. Consequently, even if we assume that at any given point in time all societies adopt institutions that are optimally suited to their particular circumstances, minor variations in either the institutional or non-institutional features of societies in early periods can lead to significant variations in their institutions in later periods. If those variations are unpredictable then their consequences for institutional development will be unpredictable as well.

The focus of this collection is upon the relationship between institutions and economic performance and so strictly speaking studies of the determinants of institutional variation are beyond its scope. However, the collection does include a few works that focus on determinants of institutional variation which are, at least arguably, themselves institutional in nature.

Empirical challenges

Empirical studies of the impact of particular kinds of institutions on economic performance have to overcome daunting challenges (see generally, Udry and Pande 2006). Those challenges stem from both the potential complexity of the relationships between institutions and economic performance, and the difficulty of reliably measuring the characteristics of many institutions. The complexity surrounding this issue has several dimensions. To begin with, many forms of behavior are influenced by multiple institutions, including, for instance, formal as well as informal institutions and domestic as well as international ones. In addition, behaviour can be influenced by non-institutional features of a society, including physical characteristics of the population and their environment. Moreover, sometimes these factors can serve as substitutes for one another in inducing particular kinds of behaviour, and at other times they serve as complements. Imagine, for instance, purporting to analyze the impact of institutions on the development of a small tropical nation without taking into account the influence of customary law, international trade law, the disease environment, and whether its location

makes it a good trans-shipment point for contraband, as well as the potential interactions among these factors.

The task of analysing complex relationships between institutions and economic performance is enhanced by the fact that many of the relevant variables are difficult to measure. For instance, as we have seen, some scholars claim that in measuring the impact of the French Civil Code one ought to take into account the influence of factors such as the extent to which both judges and members of the population understand and accept the values underlying the Code. Whether these variables are considered institutional or non-institutional will depend on how narrowly one defines the concept of an institution. Either way, the fact remains that they are difficult to measure.

Many of these problems can be sidestepped by examining the relationship between behaviour that is believed to reflect the influence of particular institutions and economic performance. Studies of the impact of 'the rule of law' on economic performance seem to take this approach, since the rule of law is typically defined as 'respect for the rule of law' which is essentially a measure of whether individual behaviour is in compliance with fundamental legal norms (Davis 2004). This work-around makes some sense because behaviour is often observable and fundamental legal norms are well-known, while motivations typically are not. The obvious weakness of these studies though is that they assume rather than analyse the relationship between specific institutions and respect for the rule of law.

Future empirical studies of institutions and economic performance are likely to rely less on studies of cross-country variations in institutions and more on evidence from within-country studies (Udry and Pande 2006), particularly those in which a particular

institution or set of institutions has been applied to a randomly selected group of economic actors (Duflo, Glennerster and Kremer 2007). The performance of the selected actors (the "treatment group") can then be compared to the performance of the actors who were not selected (the "control group"). If the two groups are sufficiently large, it will be reasonable to assume that they are similar along all relevant dimensions. Assuming that the composition of the two groups remains fairly constant over the course of the experiment and that conducting the experiment does not somehow affect the control group, it will be appropriate to infer that any differences in the economic performance of the two groups have been caused by the institutional treatment. For this reason reliance on randomized trials can go a long way to eliminating the concerns about causal inferences that haunt other empirical strategies.

However, it is not always possible to find natural experiments that incorporate the appropriate form of randomization. Some researchers have run controlled experiments in which institutions are deliberately applied in a random fashion. However, randomized trials on human subjects raise difficult ethical questions. If subjects are given the option of declining to participate in the trial then the composition of the study group may be biased. On the other hand, it may be difficult to justify compelling participation if anyone – among either the investigators or the subjects – believes that the study will disadvantage any of the participants, either in absolute terms or relative to other participants.

Conclusion

The study of the relationships between institutions and economic performance is still in its early stages. The works in this collection provide many important insights. Given the nature of institutions and the likely complexity of their relationships to economic performance, it is an open question whether this field of study will continue to be a fruitful one. The hope though is that further research will not only help us to understand the relationship between existing institutions and economic outcomes, but also help to design new institutions.

References

Acemoglu, Daron, Simon Johnson and James A. Robinson (2001), 'The Colonial Origins of Comparative Development: An Empirical Investigation', *American Economic Review*, **91**, 1369-1401

Acemoglu, Daron, Simon Johnson and James A. Robinson (2002), 'Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution', *Quarterly Journal of Economics*, **117**, 1231-94

Acemoglu, Daron and James A. Robinson (2005), *Economic Origins of Dictatorship and Democracy,* New York: Cambridge University Press

Agarwal, Bina (1994), 'Gender and Command over Property: A Critical Gap in Economic Analysis and Policy in South Asia', *World Development*, **22**, 1455-78

Alchian, Armen A. and Harold Demsetz (1973) 'The Property Rights Paradigm', *Journal of Economic History*, **33**,16-27

Aoki, Masahiko. (2001), *Toward A Comparative Institutional Analysis*, Cambridge: The MIT Press.

Banerjee, Abhijit and Lakshmi Iyer (2005), 'History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India', *American Economic Review*, **95**, 1190-1213

Baumol, William (1990), 'Entrepreneurship: Productive, Unproductive, and Destructive', *Journal of Political Economy*, **98**, 893-921

Berkowitz, Daniel, Katharina Pistor and Jean-Francois Richard (2003), 'Economic Development, Legality, and the Transplant Effect', *European Economic Review*, **47**, 165-95

Besley, Timothy (1995), 'Property Rights and Investment Incentives: Theory and Evidence from Ghana', *Journal of Political Economy*, **103**, 903-37

Besley, Timothy and Robin Burgess (2000), 'Land Reform, Poverty Reduction, and Growth: Evidence from India', *Quarterly Journal of Economics*, **115**, 389-430

Bowles, Samuel (1998), 'Endogenous Preferences: The Cultural Consequences of Markets and Other Economic Institutions', *Journal of Economic Literature*, **36**, 75-111

Calvert, Randall (1995), 'Rational Actors, Equilibrium, and Social Institutions', in Jack Knight and Itai Sened (eds), *Explaining Social Institutions*, Ann Arbor: University of Michigan Press

Chua, Amy (2000), 'The Paradox of Free Market Democracy: Rethinking Development Policy' *Harvard International Law Journal*, **41**, 287-389

Clague, Christopher et al. (1999), 'Contract-Intensive Money: Contract Enforcement, Property Rights, and Economic Performance,' *Journal of Economic Growth*, **4**, 185-209

Commons, John R. (1931), 'Institutional Economics', *American Economic Review*, **21**, 648-57

Davis, Kevin E. (2004), 'What Can the Rule of Law Variable Tell us About Rule of Law Reforms?' *Michigan Journal of International Law*, 26,141-161

Davis, Kevin E. and Michael J. Trebilcock (2008), 'The Relationship Between Law and Development: Optimists versus Skeptics', 56 *American Journal of Comparative Law*, 56, 895-946

De Soto, Hernando (1989), *The Other Path: The Invisible Revolution in the Third World*, New York: Harper & Row.

Duflo, Esther, Rachel Glennerster, and Michael Kremer (2007), "Using Randomization in Development Economics Research: A Toolkit" (with) in T. Paul Schults, and John Strauss (eds.) *Handbook of Development Economics*, New York: Elsevier Science Ltd., North Holland, Vol. 4, pp. 3895-62.

Engerman, Stanley L. and Kenneth L. Sokoloff (2002), 'Factor Endowments, Inequality, and Paths of Development among New World Economies', *Economia*, **3**, 41-109

Evans, Peter B. (1992), ‘The State as Problem and Solution: Predation, Embedded Autonomy and Structural Change,’ in Stephan Haggard and Robert Kaufman (eds.) The Politics of Economic Adjustment: International Constraints, Distributive Politics, and the State, Princeton, NJ: Princeton University Press, pp. 139-181.

Evans, Peter (2004), ‘Development as institutional change: The pitfalls of monocropping and the potentials of deliberation,’ *Studies in Comparative International Development* **38**, 30-52

Fafchamps, Marcel (2004), *Market Institutions in Sub-Saharan Africa: Theory and Evidence*, Cambridge: The MIT Press.

Glaeser, Edward L., Rafael La Porta, Florencio Lopez de-Silanes and Andrei Shleifer (2004), ‘Do Institutions Cause Growth?’, *Journal of Economic Growth*, **9**, 271-303

Greif, Avner (1994), ‘Cultural Beliefs and the Organization of Society: An Historical and Theoretical Reflection on Collectivist and Individualist Societies’, *Journal of Political Economy*, **102**, 912–50

Greif, Avner (2006), *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*, New York: Cambridge

Hall, Peter A. and David W. Soskice (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, New York: Oxford University Press

Hart, H.L.A. (1994), *The Concept of Law*, 2nd ed., New York: Oxford University Press.

Kaplow, Lewis (1992), ‘Rules versus Standards: An Economic Analysis’, *Duke Law Journal,* **42**, 557-629

Kornhauser, Lewis A. (2004), ‘Governance Structures, Legal Systems, and the Concept of Law,’ *Chicago-Kent Law Review*, **79**, 355-381

Krueger, Anne O. (1974), ‘The Political Economy of the Rent-Seeking Society’, *American Economic Review*, **64**, 291-303

La Porta, Rafael, Florencio Lopez-de-Silanes and Andrei Shleifer (2008), ‘The Economic Consequences of Legal Origins’, *Journal of Economic Literature*, **46**, 285-332

Lin, Justin Yifu and Jeffrey B. Nugent (1995), ‘Institutions and Economic Development’ in *Handbook of Development Economics*, Jere Behrman and T.N. Srinivasan (eds), Vol. 3A, New York: Elsevier Science, North Holland, 2301-2370

North, Douglass C. (2005), *Understanding the Process of Economic Change*, Princeton: Princeton University Press

North, Douglass C. (1994), 'Economic Performance Through Time', *American Economic Review*, **84**, 359-68

North, Douglass C. (1990), *Institutions, Institutional change and Economic Performance*, New York: Cambridge University Press

North, Douglass C. and Barry Weingast (1989), 'Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth Century England', *Journal of Economic History*, **49**, 803-32

Olson, Mancur (1993), 'Dictatorship, Democracy, and Development', *The American Political Science Review*, **87**, 567-76

Posner, Richard A. (1980), 'A Theory of Primitive Society, with Special Reference to Law', *Journal of Law & Economics*, **23**, 1-53

Rodrik, Dani (2000), 'Institutions for High-quality Growth: What They Are and How to Acquire Them', *Studies in Comparative International Development*, **35**, 3-31

Rodrik, Dani, Arvind Subramanian and Francesco Trebbi (2004), 'Institutions Rule', *Journal of Economic Growth*, **9**, 131-65

Ruttan, Vernon W. and Yujiro Hayami (1984), 'Toward a Theory of Induced Institutional Innovation', *Journal of Development Studies*, **20**, 203 -23

Sen, Amartya (1999), *Development as Freedom*. New York: Alfred A. Knopf

Townsend, Robert M. (1994), 'Risk and Insurance in Village India', *Econometrica*, **62**, 539-91

Trubek, David M. and Marc Galanter (1974), 'Scholars in Self-Estrangement: Some Reflections on the Crisis in Law and Development Studies in the United States', *Wisconsin Law Review*, **1974**, 1062-102

Udry, Christopher and Rohini Pande (2006) in Richard Blundell, Whitney K. Newey and Torsten Persson (eds), *Advances in Economics and Econometrics: Theory and Applications, Ninth World Conference, Volume II*, at 349-412, New York: Cambridge University Press