

1. Introduction

1.1 The Renaissance of Institutional Analysis

Douglass North won a Nobel Prize in economics in 1993 for explaining how institutions affect the wealth and poverty of nations. According to North (1990), institutions are the formal and informal rules of the game that liberate and constrain individuals and groups in their attempts to achieve their goals. North's conception of institutions is broad enough to encompass all types of rules, including constitutional and procedural rules, laws and legislative rules, and norms and social conventions (Palagashvili, Piano, and Skarbek 2017). Analysis of these rules provides tremendous insights into economic development, the extent to which societies suffer the tragedy of the commons, and political order and violence (Alston et al. 2018). As Rodrik, Subramanian, and Trebbi (2004) remark, "Institutions rule." Liberal institutions – those that encourage productive specialization, exchange, and peaceful transfer of political power – are especially important in explaining human progress and prosperity (McCloskey 2019).

The growing consensus in economics and political economy that institutions matter is not so much a revolution as a renaissance of ideas that have been around for centuries.¹ Adam Smith's *The Wealth of Nations*, published in 1776, is best known for showing that mutually self-interested exchange can result in outcomes that are socially beneficial – perhaps the most important idea in all of modern economics. Yet Smith was keenly aware of the importance of institutions in allowing this to occur, as evidenced by one of his more famous quotes: "Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice."

Starting in the middle of the twentieth century, the economics discipline became increasingly formalized through the use of mathematics, often at the expense of Smithian humanomics, which understands economic outcomes as deeply influenced by social and moral institutions (McCloskey 2016; Smith and Wilson 2019).² Although formalization has the upside of making explicit and clarifying the assumptions that go into any model, insights that are difficult to put in the language of mathematics often must be excluded. This

¹ Millenia, even, if we consider the fourth-century BC philosopher Aristotle's *Politics*, which considered differences in outcomes associated with aristocracy, tyranny, oligarchy, and mob rule, as one of the first works of institutional analysis. There has been a renaissance of institutional analysis of ancient Athens in the spirit of Aristotle (Carugati 2019; Carugati, Ober, and Weingast 2019).

² The formalized approach to economic analysis has been called the "Max U" approach given its predilection for solving utility maximization problems using calculus.

approach to economics shifted the analysis from a general inquiry into the nature and causes of the wealth of nations to a mathematized clarification of the assumptions and conditions under which market exchange results in efficient outcomes.

Two of the more famous results from this approach are the first and second welfare theorems, which proved Smith's invisible-hand thesis correct – provided certain conditions are met – after more than a century and a half. But the welfare theorems downplay a key part of Smith's insight and explanation. Specifying the exact number of firms or amount of knowledge needed for the invisible hand to work is not the same as specifying the rules under which beneficial exchange may occur. Economic theory became an “institutionally antiseptic” theory of constrained maximization while largely ignoring a leading determinant of constraints – namely, institutions (Boettke, Coyne, and Leeson 2013).

Change would come – not through an abandonment of the economic approach but from an enrichment of the discipline's understanding of what constitutes constraints. Institutionalists provided real-world examples of how people learn ways to get what they want for themselves and their communities. What had been relegated to the background was once again brought to the foreground. Elinor Ostrom's Nobel Prize in economics in 2009 reflected a recognition that diverse institutions contribute to human prosperity and well-being. Yet long before the recognition of North's and Ostrom's contributions,³ several traditions revived the focus on rules, especially Austrian economics, public choice, institutional economics, and the Bloomington School of institutional analysis.

Austrian economics has since its inception been concerned with the study of institutions (Boettke 1989). As Foss (1997, emphasis in original) argues, Austrian economists, including Menger, Mises, and Hayek, “emphasized the need to have not only an economics *with* institutions, but also an economics *of* institutions.” Two central features of the Austrian approach to institutional analysis came out of the work of these three scholars: (1) Institutions often arise and change through a spontaneous and emergent process; and (2) different institutional arrangements have different effects on the creation of knowledge and dispersion of information. Consider, for example, Menger's (1892, 38) explanation of the origin of money as a “spontaneous outcome, the unpremeditated resultant, of particular, individual efforts of the members of a society” rather than a state-imposed institution mandated by law. Or consider Hayek's

³ Boettke, Coyne, and Newman (2016) include Friedrich Hayek, James Buchanan, Ronald Coase, and Vernon Smith as Nobel laureates who continue the themes of Adam Smith, along with Douglass North and Elinor Ostrom.

The Origins and Consequences of Property Rights

3

(1988) extension of the concept of spontaneous order to explain the emergence of other market institutions such as law, including property law. According to Hayek, it was the emergence of these institutions that made possible the Great Society, in which individuals routinely buy, sell, and exchange without knowing one another.

The other central feature of the Austrian emphasis on institutions relates directly to the institution of property and comes from Ludwig von Mises's analysis of the role of property in rational economic calculation. Mises's (1935) argument is simple: Without private property, there can be no exchange; without exchange, there can be no exchange ratios, or prices; and without prices, we cannot solve the economic question of how to make rational production decisions. From the Austrian perspective, property rights play an essential role in the creation of knowledge of the opportunity cost of resources. Hayek (1945) continued this theme and furthered the argument against centralized planning by highlighting the ability or inability of different institutional arrangements such as the price system to generate, collect, interpret, and use dispersed knowledge to rationally calculate economic activity.

Whereas Austrian economists are primarily concerned with the knowledge-generating properties of institutions, public choice economists highlight the issue of incentives.⁴ Public choice economics, spearheaded by James Buchanan and Gordon Tullock, clarifies how political institutions influence the behavior of self-interested political decision makers and has been described as “politics without romance” as it rejects the notion that political decision makers necessarily have incentives to do what is in the interest of society (Buchanan 1984). Public choice economists emphasize the structure and enforcement of political rules, drawing insights from classical economists such as Adam Smith, whose sophisticated constitutional theory recognized the role of political constraints as a foundation for economic development (Weingast 2017). This emphasis and intellectual history are exemplified by Robert Tollison's preface to Brennan and Buchanan's (1985) *The Reason of Rules: Constitutional Political Economy*:

The notion that rules may substitute for morals has been familiar to economists and philosophers at least since Adam Smith. And, of course, the great intellectual discovery of the eighteenth century was the spontaneous order of the market, the discovery that within an appropriate structure of rules (“laws and institutions” in Adam Smith's phraseology), individuals in following their own interests can further the interests of others. The result is the great network of social coordination – refined and extended to the boundaries of the division of labor – that even after centuries defies the imagination when

⁴ This claim is, of course, not mutually exclusive. After all, one of the standard assumptions from public finance theory that Buchanan (1949, 1986) famously relaxed is the one of omniscience.

evaluated as a cooperative enterprise. The cooperation of agents in a market, however, requires neither that such agents understand the structure nor that they transcend ordinary precepts of morality in their behavior. What it does require is an appropriate “constitutional context” – a proper structure of rules, along with some arrangements for their enforcement.

In addition to incorporating Smithian insights, Buchanan was also heavily influenced by English political economist Thomas Hobbes. As expressed in *Leviathan*, published in 1651, Hobbes believed that state building is a bargain between citizens and the sovereign in which the sovereign establishes the rule of law in exchange for collecting a tax. Buchanan, like Hobbes, was a contract theorist interested in the origins of the rule of law. However, unlike Hobbes, who believed that a monopoly on coercion results in the emergence of good order and working relations, Buchanan recognized that whether this bargain generates a good order depends on the rules in place. A state requires the right rules to ensure the protection of minority interests, avoid predation, and encourage wealth creation. Such rules are critical to address what Weingast (1995) calls the sovereign’s dilemma: Political power always corrupts, and a state strong enough to protect rights is also strong enough to violate them. Accordingly, the challenge public choice economics poses is how to design rules such that self-interested political decision makers have the incentives to do what is in society’s interest (Buchanan 1975).

Institutional economics includes a broad range of perspectives but can be separated into the old and new traditions. Compared to the new institutionalists, the old institutionalists put more priority on empirical evidence and historical contingency than theory. The new institutionalists are more committed to deductive theory and use empirics and history to test theoretical propositions (Hodgson 2002). This is not to say the old institutionalists do not have theory; they do, but their theory of change emphasizes the importance of governments’ establishment of a legal framework to regulate complex interactions in a modern economy (Deakin et al. 2017; Hodgson 2015a).

Despite these important differences, both perspectives appreciate that wealth creation depends on the institutional matrix of society. They also agree that the extent to which rules encourage and enable individuals to participate in markets is a key question in the analysis of institutions. Institutional economics presents an empirically rich view of property creation and enforcement by emphasizing both the costs and benefits of different institutional arrangements for governing the ownership of resources.

One sub-branch of new institutional economics that played a large role in the renaissance of institutional thought is the Bloomington School of institutional analysis and political economy, which originated with the work of Vincent and

Elinor Ostrom. The Bloomington School focuses on citizenship, public entrepreneurship, and self-governance and shows that a remarkable diversity of institutions contribute to economic development (Aligica 2018). Vincent Ostrom's work focused on the importance of polycentric governance, as did Elinor Ostrom's, with offering profound insight into how such governance institutions work in practice. Their work suggests that good governance is largely a question of the extent to which rules fit the local context, with a key insight of the Bloomington School more generally being that there is no one-size-fits-all institution to generate prosperity; we must think beyond panaceas (E. Ostrom 2007). And, like the Austrian, public choice, and institutional schools, the Bloomington School represents a return to classical political economy, in this case that of James Madison, in its recognition of the importance of institutional design (V. Ostrom 2008).

Although these schools of thought overlap significantly, each offers unique insights that are necessary for understanding the origins and consequences of property rights. Austrian economists present a special focus on the emergence of spontaneous rules with property rights being particularly relevant for generating and dispersing knowledge. The Austrian perspective generates a presumption against the top-down imposition of rules as the central planner lacks the knowledge required to engage in effective reform. Public choice economics highlights the influence that the political system has on the economic order while recognizing that politicians have interests that differ from those of society. Public choice economists point out the incentive issues of poorly aligned rules and investigate the ways in which different institutional arrangements can align or misalign incentives. Institutional economics, including the Bloomington School, recognizes the tremendous diversity of institutions that explain the success or failure of governance arrangements, and it highlights the need for institutions, whether evolved or designed, to reflect the existing constraints.

As noted, the study of institutions has always been a part of economics and political economy, but what was once relegated to the sidelines has reemerged as the central focus, largely because of the perspectives of Austrian economics, public choice, and institutional economics (including the Bloomington School of institutional analysis). In this Element, we synthesize these perspectives to provide a greater understanding of the issues surrounding property rights.

1.2 Why Property Rights Matter

Property rights specify which resources can be owned and by whom and how they can be used. The central distinction between property regimes is whether the rights are held by individuals or by the state. In a private property system, rights to valuable objects are assigned to individuals. Under state ownership, the

government is the owner of property. The primary difference between the different forms of property is how they specify who bears the costs and captures the benefits. Private property rights internalize externalities – they align private and social costs – by assigning residual claimancy to the owner such that the owner bears the full cost of resource extraction and captures the full benefits of property use (Alchian and Demsetz 1972; Demsetz 1967).

In this Element, we focus on private property rights because they are associated with wealth creation, effective resource governance, and political stability. The simple correlation between secure private property rights and economic growth that is presented in Figure 1.1 suggests we have good reason to be concerned with private property (the data are from 2018).

Private property rights are also central to resource governance. Hardin (1968) referred to the tendency to overuse resources as the tragedy of the commons. A commons refers to anything used by a group of people, at any scale – anything from a shared workspace to the entire planet (or outer space, for that matter). Though Hardin was writing primarily to argue against the “freedom to breed” and in favor of population control, his illustration of the tragedy that results from “a pasture open to all” refers more generally to the overuse of any resource owned in common. Hardin offered possible solutions to the problem including establishing private property rights to the resource or granting the state complete ownership and restricting public use. All

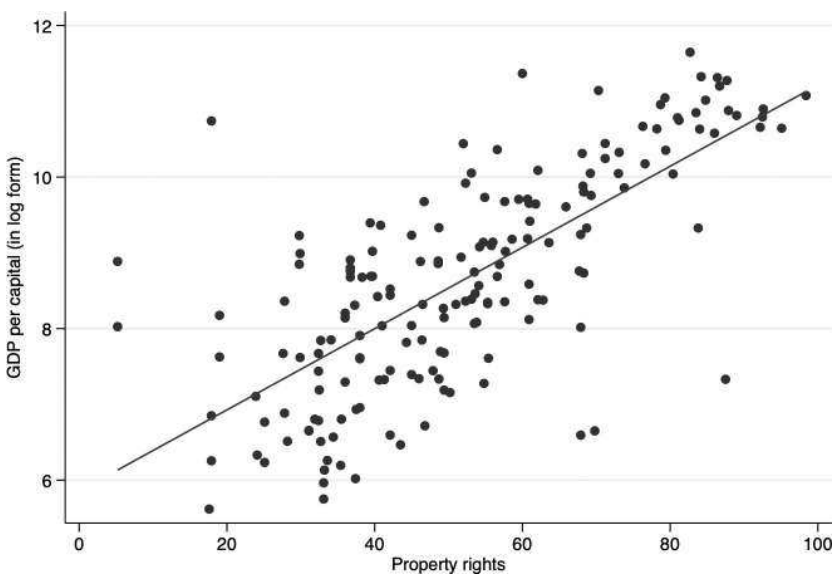


Figure 1.1 Private property rights and economic growth

The Origins and Consequences of Property Rights

7

possible solutions are objectionable, he notes, but “we must choose – or acquiesce in the destruction of the commons.”

Insights from the property rights perspective suggest the tragedy of the commons is more specifically a consequence of incomplete property rights (Cole, Epstein, and McGinnis 2014; Frischmann, Marciano, and Ramello 2019). Without clearly defined and enforced property rights, individuals account only for their private costs of resource extraction, not the social costs arising from their use of the resource. The property rights perspective recognizes, as Hardin (1968) did, that some solutions to the problem of open access are better than others as some resources “cannot readily be fenced, and so the tragedy of the commons . . . must be prevented by different means” (p. 1245). What determines which property arrangement is better? In large part, it depends on the extent to which a resource is excludable and rivalrous.

Any good can be categorized according to its excludability and rivalry.⁵ Excludability refers to the ability to exclude nonpayers from accessing or consuming the resource. Rivalry refers to the extent to which one’s use of a good or service precludes others’ use of it. Rivalry is generally considered an inherent characteristic of the good, while excludability comes in degrees and is largely determined by the existing technology and capacity to leverage violence for enforcement of property rights.

Private goods are excludable and rival; they are goods and services commonly supplied in markets. Public goods are non-excludable and nonrival so that once they are provided, all can enjoy the good as much as they like without affecting others’ ability to do so.⁶ Like public goods, club or toll goods are nonrival, but it is less challenging to limit access to them. Examples include toll roads, radio spectrum, and community pools.⁷ A common pool resource is non-excludable and rival, with standard examples including fisheries and pastures. Table 1.1 summarizes these four types of goods based on the characteristics of excludability and rivalry.

The resources in question in Hardin’s analysis are common pool resources characterized by open access – “a pasture open to all.” Because nonpayers

⁵ The terms “rival,” “subtractable,” “divisible,” and “depletable” are used interchangeably to reflect goods for which there is competition over their use.

⁶ Because excludability depends on technology and costs of exclusion, many public goods, such as highways, police, and lighthouses, are provided privately (Candela and Geloso 2018; Clark and Powell 2019).

⁷ Buchanan (1965) designates these types of goods as club goods while others refer to them as toll goods. Some club goods are only nonrival to a limit, which suggests an optimal number of members in the club. Past the optimal number of resource users, the good becomes rival. Compare a toll road that could still suffer from problems of congestion if the toll is priced too low to a good like radio spectrum, which (largely) remains nonrival regardless of the number of users, though the spectrum itself is subject to congestion.

Table 1.1 Four types of goods

	Extent of rivalry		
		High	Low
Difficulty of establishing property rights	High	Common pool resource	Public good
	Low	Private good	Club or toll good

Source: Adapted from Ostrom (2010a)

cannot be excluded, individuals have the incentive to only think about their own use, and in their use, they generate externalities. How should this be resolved to encourage conservation of the resource rather than giving in to the tragedy of its overuse? Whether individual ownership, closed-access communal ownership, state ownership with restrictive access, or some other system, the optimal solution depends in part on conditions such as the general cost of creating, defining, and enforcing rights, a cost that depends in part on the existing technological limitations of excluding outsiders from use of the resource and the capacity of the state to act as a neutral third party. In many settings, private ownership is the best means to encourage conservation (Demsetz 1967); in others, co-ownership is more effective than private or state ownership (Anderson and Hill 1983; Ostrom 1990); and in still other instances, state management is appropriate (Bromley 1991). It may even be the case that one property regime is optimal until the technological constraints affecting enforcement costs change (Anderson and Hill 2001). For instance, Anderson and Hill (1975) document how the invention of barbed wire altered the calculus of choice of landownership arrangements governing herding on the Great Plains so that co-ownership became private ownership with the introduction of the new technology.

1.3 Dimensions of Property Rights

Property rights regimes vary along four main dimensions: clarity of allocation, security from trespass, alienability, and credibility of persistence (Eggertsson 1990; Riker and Weimer 1993). Clarity of allocation refers to the extent to which property rights are delineated. Oftentimes, the state helps delineate rights, but in other cases, informal institutions serve such functions. For example, before the Europeans arrived in eastern North America, property rights to land were delineated by stones engraved with the signs of the clan

that claimed ownership. According to Anderson and Leonard (2016), this institution served to clearly allocate property rights until the Europeans, who were unfamiliar with (and uncaring about) what the markings meant, arrived. Compare this method of delineation to a modern land registry that is easily searchable online. Of course, such technology wasn't available back then, and Native Americana used what technology they had available, but there is a clear difference between the two property regimes along the dimension of clarity of allocation.

Security from trespass refers to the ability to exclude unauthorized users from the property. As mentioned earlier when discussing excludability, this dimension of property is determined in large part by existing technology and the state's capacity to enforce property rights. Fences, alarm systems, guns, and legal recognition (with the ability to call upon a third-party enforcement agency, such as the police) all affect the ability to prevent trespass.

Alienability refers to the ability to dispose of property as one sees fit, including the ability to sell the property or transfer ownership to someone else. Variation in alienability is mostly determined by legislation rather than physical characteristics. For example, if you own your house, you can rent it out but you cannot legally set it on fire.

Credibility of persistence refers to the expectation that the government will continue to respect rights in the future. Because the state is often relied on to enforce property rights, the sovereign's dilemma of Weingast (1995) obtains: A state strong enough to enforce rights is strong enough to violate them. Political authority can always be used to benefit rulers at the expense of the rest of society (North 1981).

All property regimes vary along these dimensions, not just private property. For example, in some contexts, state property rights are clear and credible, but in others, they are poorly defined, insecure, and inalienable and the commitment of the government to enforcing them is questionable. In the latter cases – weak or failed states – state ownership might not be enforced, in which case informal institutions determine ownership. The inability of governments to enforce state ownership often contributes to the tragedy of the commons, while informal private and community property rights can help to alleviate it.

1.4 Function and Form of Property Rights

The distinction between function and form is critical to understanding the diversity and performance of property institutions. All property regimes serve the same general function of internalizing externalities and governing behavior so that it allows for coordination and encourages investment, economic growth,

and stability of expectations. However, property regimes differ in the form they take and consequently in how well they serve their function. Additionally, even property regimes of the same form can differ significantly.

Property regimes are not mutually exclusive and may overlap. Some resources may be privately owned while others are state owned. For example, the government may maintain ownership yet lease out resources for private use. This may include leasing rights to resources such as pasture or minerals (Libecap 2018) or leasing land for other private uses (Ho 2005).

There is also a diversity of manifestations of any of the types of property regime, as illustrated in reform-era China (that is, after 1978). Private property rights were abolished and replaced by state ownership in urban areas and by collective ownership in rural areas under Chairman Mao. One of the economic reforms, the Household Responsibility System (HRS), gave rural households residual claimancy over their output and established land-use rights. However, land remains publicly owned, and the state has authority to expropriate rural land for sale in open markets to fuel economic development and urbanization. This property system has a different form from the private property system that developed in Western Europe and North America, but it still served to encourage investment, as evidenced by China's explosive economic growth (Ho 2017). Households have clearly delineated land rights that are secure from trespass, and they gained limited alienability rights (farmland can be rented out, provided it remains agricultural), yet their rights lack credibility of persistence given the risk of state expropriation. Should the Chinese system be classified as private or state ownership? It's not clear. We prefer to call it selective enforcement because its defining feature is the important differences in definition and enforcement of rights for rural households compared to urban leaseholders.

China's heterodox approach to property may be surprising, but the idea goes back a long way. Léon Walras, in his *Elements of Pure Economics, or a Theory of Social Wealth* (originally published in French in the 1870s), proposed nationalizing land. Walras thought that land could be nationalized and then rented out perpetually, thereby providing people with economic opportunities and providing the state with a reliable source of revenue. He hoped that such a plan would eliminate the need for taxes, under a belief that land's productivity and hence value would continually increase. A key difference from China's regime is that Walras believed that the state would purchase the land at the market price rather than nationalize it. Similar ideas can be found in Henry George's *Progress and Poverty*, published in 1879.

Legal recognition of property and state enforcement of property rights are part of the foundation of all rich capitalist economies, yet an appreciation of the diversity of institutions requires recognizing that state involvement in defining