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Marginal Cost Pricing and Eminent Domain

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Abstract

There are three separate strands of literature in economics that are related to the efficiency of takings under eminent domain: one addresses the question of optimal compensation for properties that are taken, the second inquires how governments might learn the values of properties that they consider taking, while the third analyzes solutions to the problem of land assembly. This essay reviews these strands of literature and argues that the principle of marginal cost pricing can be used as a unifying principle for integrating them.

Keywords: Eminent domain, just compensation, takings, self-assessment, land assembly.

JEL Codes: K11, R52

Contents

1

Introduction

The takings clause of the Fifth Amendment to the US Constitution specifies that private property shall not "be taken for public use, without just compensation." The takings clause thus acknowledges that governments may take private property and ensure that owners can expect to benefit from compensation if government action deprives them of the benefits they expected from the possession of property. However, there is substantial resistance to government takings among the American public; this resistance has intensified considerably since the 2005 US Supreme Court decision in *Kelo v. City of New London*, which affirmed the practice of local governments of taking private property to facilitate private redevelopment projects.

The purpose of this essay is to examine proposals for making government takings more efficient as well as more equitable to owners. We expect that publicizing these proposals will ultimately lead to one of the following two outcomes. One possible outcome is that one or more of the proposals will be considered practical enough to be used in actual taking cases. The use of mechanisms that lead to fairer and more efficient takings might help to reduce the public aversion to takings. The alternative outcome is that these proposals will be regarded as academic

curiosities with social costs too high to put them into practice. The cost of these proposals would then provide an upper bound on the cost of government takings: rejecting the proposals implies that people view existing institutions as leading to greater overall efficiency and/or being more equitable than the proposals that we discuss.

Whether and why people should be willing to tolerate any government takings of private property depends on their conception of property ownership. The notion of "taking under eminent domain" stems from feudal land tenure, which specified that the ownership of land was dependent on a relationship to a superior entity, the *dominum eminens*. The dominum eminens had the right to take the land of his tenants, under conditions and rules specified by the tenancy. The contrasting notion of *allodial* ownership refers to land rights that are not encumbered with requirements of service to or acknowledgement of any such a superior entity.[1] Thus the highest entity has allodial title to his land because he does not have any superior.[2]

Some advocates of allodial title argue that such a title confers absolute ownership. However, while definitions of allodial title generally stress the absence of any duty to a superior, they are silent on the question of whether a holder of allodial title is also free of any duty to his equals, that is, his community. For example, medieval Frisian dike law required that the owners of land behind the dike maintain the dike, and it specified that those who were unable or refused to maintain the dike lost their land rights. Thus even though Frisia was not feudal territory and the Frisian owners did not have any duties to a dominum eminens, the medieval Frisian version of allodial land title nevertheless specified that owners of land had duties to their communities. When owners failed their duties, their communities could exercise the taking right of a dominum eminens even though a dominum eminens did not exist.[3]

[1] The related notion of a *fee simple* title refers to property that is owned by a superior entity (for example, the English Crown) but for which the title holder has no service obligations to the owner.

[2] Under the medieval Christian notion that a king as the highest authority of his society is still responsible to God, humankind can have only stewardship of the earth.

[3] See, for example, Mauelshagen (2007, pp. 138–139). The *Spadelandsrecht*, or "law of the spade" required that land that had been gained with the spade be defended by dikes that

Thus arguing against endowing governments with the power to take private property under eminent domain requires not only that land rights not be encumbered with any duties to a superior landlord but also that they not be encumbered with any duties to the community. Those who wrote and adopted the Bill of Rights of the US constitution rejected such absolute private ownership. Their idea of private property was property that was subject to taxation, regulation, and eminent domain, although, as specified in the Fifth Amendment, the taking of property by eminent domain required "just compensation."

It might seem that the requirement to pay "just compensation" makes government takings unnecessary because the government can simply purchase the properties that it needs for a public project. However, if the properties have no close substitutes, then any owner has an opportunity and an incentive to demand a price that equals his estimate of the project's entire social net value — the social value minus the cost of implementing the project — and society might consider it improper for the owners of needed properties to receive the entire net benefits of public projects. US courts have generally interpreted "just compensation" as the market value before the property's alternative use became common knowledge, so the takings clause implies that the government can effectively compel any owner to sell at this price if he does not do so voluntarily. The main difficulty in implementing takings is the need to determine property values without having observed genuine market transactions. If the assessment of a property's value is too low, then the taking will cause an inefficient allocation of resources if the project's expected social net benefit is below the true value of the property but above the assessed value, so that the government implements a project that should not be pursued. Conversely, if the assessment is too high, then the government might forego a socially worthwhile project.

The economic justification of government takings depends on whether the taking involves multiple owners or a single owner. If the properties are owned by a single person, then bargaining between the

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were built with the spade. When an owner was unwilling or unable to fulfill his dike-duties, the *Deichgraf* stuck a spade into the part of the dike for which the owner was responsible to indicate that the owner had surrendered his property right. The Deichgraf was generally appointed by the often cooperatively-organized dike community.

government and the single owner is likely to lead to an efficient use of the properties — the government will implement the public project only if the project's social net benefit exceeds the owner's valuation of his property under alternative use. Thus in cases that involve a single owner, society can allow the practice of government takings if it values a more equitable distribution of the benefits of public projects more highly than it values individual property rights. However, if the government and the owner do not reach agreement and the government takes the owner's property, then the taking will be inequitable if the government provides inadequate compensation to the owner because it has underestimated the value of the property. The problem of discovering the value of property that is taken is one of the three central themes of the work that we review in this essay.

When properties are owned by multiple persons, government taking has the potential to resolve an economic inefficiency that results from the government having to bargain with multiple persons individually. Each of the multiple owners has an incentive to demand a price that equals his estimate of the entire social net value of the public project minus his guess of the prices that the government will need to pay to the other owners. Unless the owners coordinate their demands and bargain collectively, the sum of their individual demands is likely to exceed the value of the project. Because individual bargaining between the government and the owners may be unable to bring the total price that the owners demand below the value of the project, owners who hold out for higher prices can thwart the project even if implementing the project would be efficient. The potential failure of individual bargaining to yield efficient resource allocations in such cases is known as the problem of land assembly, and government takings are one way of addressing this inefficiency. Because there is no conceptual difference between the social benefits of public and private projects, government taking for private development can also improve social welfare if a private developer fails to assemble properties when multiple owners demand inflated prices.[4] The main difficulty, whether the situation concerns

[4] For public as well as private projects, the social net benefit is the consumers' willingness to pay over and above the price that they need to pay to benefit from the project — this

public or private projects, is to determine whether the owners refuse to sell because they are demanding inflated prices — in which case government taking could increase social welfare — or because every offer consistent with non-negative net benefits for the project would be below the joint value of the properties, in which case government taking would lower social welfare. In addition, regardless of whether or not a taking improves social efficiency, the taking will again be inequitable if the government provides inadequate compensation to some owners because it has underestimated the values of their properties. The problem of designing mechanisms that facilitate optimal land assembly is a second theme of the work that we review here.

The question of whether or not to take private property is rarely a one-time decision; often there is a period of several months or even years between the time when a government agency determines that it might want to take private property for public use at some point in the future, and the time when it decides whether or not to actually take the property. During the span of time in which a property has a noticeably positive probability of being taken, efficient property management requires that the owner consider this probability when he decides how much to invest in his property.[5] The higher the probability that a property may be taken, the lower, generally, is the efficient level

price is either the tax or user fee necessary to finance the public project or the market price of the privately provided good or service. The social net benefit of a private project also includes the producer's profit.

[5] Consider three of the most widely discussed taking cases in recent US history: *Hawaii Housing Authority v. Midkiff* (467 U.S. 229 (1984)), *Poletown Neighborhood Council v. City of Detroit* (304 N.W.2d 455 (1981)), and *Kelo v. City of New London* (545 U.S. 469 (2005)). In 1977, the Hawaii Housing Authority identified several parcels for compulsory acquisition. Frank Midkiff filed suit in US District Court in 1979, opposing the compulsory acquisition of his property. Five years later, in 1984, the US Supreme Court decided that the envisaged compulsory acquisition was constitutional. In October 1980, the City of Detroit passed the resolution to acquire properties in the Poletown neighborhood through eminent domain. Six months later, in March 1981, the Michigan Supreme Court decided that the taking was constitutional, and the City of Detroit began taking the identified properties. In 2000, the City of New London decided to exercise its power of eminent domain to acquire 15 lots as part of its development plan. Five years later, in 2005, the US Supreme Court decided that the City of New London was indeed permitted to exercise this power. In each case, the property owners had to decide whether and how much to invest in the upkeep and modernization of their properties during the months and years of uncertainty about whether or not their properties would be taken.

of investment. However, owners who expect to receive compensation for inefficient investments are likely to disregard the possibility of a taking and invest more than the socially optimal amount.

The economics literature on takings has examined in great detail the relationship between the compensation that owners receive for taken properties and the resulting incentives for owners to invest in their properties. The problem of designing optimal compensation in view of the consequent investment incentives is the third theme of the work that we review. A common assumption in this literature is that the market values of properties are known, which allows the authors to focus on the owners' investment decisions. In their seminal paper, Blume et al. (1984) pointed out that paying compensation equal to the value of property at the time of a taking gives owners no incentive to take account of the prospect of a taking, leading to wasteful investment. If, on the other hand, compensation is not provided and governments are insensitive to the losses of private asset value that result from takings, then governments will take property wastefully. Over the past 25 years, a sizeable literature on the economics of government takings has analyzed compensation rules that improve social welfare; the general consensus is that owners will invest efficiently only if they can expect to obtain at most partial compensation — that is, if owners are compensated for the values that their properties would have had after efficient investment given the probability of a taking, rather than the values that their properties would have had the government never announced the possibility of a taking.[6] However, common notions of fairness suggest that owners ought to be fully compensated for their losses.[7] Thus this literature suggests that there is a trade-off between efficiency and fairness.

In the wake of the 2005 US Supreme Court decision in *Kelo v. City of New London*, a new literature has emerged that considers ways of dealing with the problem of land assembly besides resorting to takings under eminent domain. In contrast to the earlier literature on takings, this new literature assumes that property values are unobservable and

[6] See, for example, Kaplow (1986), Fischel and Shapiro (1989), Miceli (1991), Miceli and Segerson (1994), Innes (1997), and Nosal (2001).

[7] Bell and Parchomovsky (2007) offer a summary of fairness-based justifications for paying full compensation.

examines mechanisms that provide owners with the incentive to reveal the values at which they would have been be willing to sell their properties before they knew that their properties became part of a land assembly. An implicit assumption in this literature is that land assembly should occur only if the value of the new development exceeds the sum of the subjective valuations of all owners. There is substantial evidence that market valuations, which are commonly used to establish appropriate compensation for taken property, are often significantly below the amounts at which owners would have willingly sold their properties. This new literature therefore calls into question the fairness of compensating owners according to market valuations rather than according to the owners' own subjective valuations.

Epstein (1985) offers insights into the philosophical issues of government takings. Fischel (1995) and Fennel (2004) analyze the legal issues of eminent domain, while Somin (2009) and Mihaly and Smith (2010) discuss the considerable legislative activity on the state and federal level since the *Kelo* decision. Miceli and Segerson (2007b) provide an overview of the economics of eminent domain until right before the time when the new literature on valuation and land assembly started. Our essay integrates the economics of takings with the hitherto separate literature on land assembly and the associated literature on self-assessment that analyzes ways of providing owners with the incentive to reveal their valuations of their properties. Our organizing principle is the basic economic insight that socially efficient behavior generally results from marginal cost pricing — the requirement that every person or other economic entity bear the full marginal costs of his or its actions.[8] Social inefficiency is caused when actors do not bear the full marginal cost of their actions. Effective remedies for such inefficiencies assign the costs borne by others to the persons or entities whose actions cause these costs. The trick in designing such remedies is to identify

[8] The efficiency of marginal cost pricing holds for activities that form convex sets, for example, activities with either constant or decreasing returns to scale. Although marginal cost pricing does not always ensure efficiency — for example, marginal cost pricing is inefficient when activities have increasing returns to scale — existing economic analyses of takings and land assembly assume "standard" convex activities where marginal cost pricing provides incentives for efficient behavior.

the instances in which someone pays either more or less than his full marginal cost and then devise an appropriate and feasible mechanism that restores marginal cost pricing.

In Section 2, we describe our general framework. In Section 3, we examine the literature on efficient investment decisions when there is a possibility that the government might take the associated properties in the future. We argue that existing analyses have failed to develop mechanisms that lead to full compensation mainly because they do not consistently apply the principle of marginal cost pricing. Existing compensation rules follow the current state of the law and do not view a government's announcement of the possibility of a taking as itself a partial taking that requires compensation. However, if announcing the probability of a taking lowers a property's value and if governments are not required to take this reduction into account — that is, if governments do not have to bear the marginal costs of their actions — then they can be expected to make inefficient taking decisions that lead to at most partial compensation of owners.

To be able to illustrate the principle of marginal cost pricing in as simple a setting as possible, in Section 3 we follow the literature on optimal investment under the threat of future takings and assume that property values are public knowledge. In Sections 4 and 5, we consider the more realistic case when property values are not easily observable. In Section 2, we survey several mechanisms that provide owners with the incentive to reveal their subjective valuations of their properties. We show that owners have such incentives if they bear the marginal costs of overstating as well as understating these values. Like the taking mechanisms that we discuss in Section 3, these revelation mechanisms elicit truth-telling by assigning marginal costs in different ways. The main difference between these mechanisms lies in their assumptions about the information to which the government and owners have access. The mechanisms in Section 4 have in common that they can all be used to provide incentives for truth-telling if there is only a single owner, and we discuss them in the context of a government that seeks to take private property for public use.

In Section 5, we address the situation in which either the government or a private developer seeks to assemble properties owned by multiple

persons. We first illustrate how several recently proposed solutions fail to solve the problem of land assembly because they do not ensure that all parties involved bear the marginal costs of their actions. We then consider three more promising mechanisms. Two of these mechanisms are based on the principle of marginal cost pricing and thus ensure efficient land assembly. However, the side-payments that are necessary to provide owners with an incentive for truth-telling are likely to have unintended redistributive consequences and thus affect the fairness of these mechanisms. The third mechanism does not apply the principle of marginal cost pricing consistently and therefore does not ensure efficient land assembly. Nevertheless, it does ensure that no owner receives less than his subjective valuation of his property if land assembly occurs. Section 6 concludes.

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