Can Conservation Easements Market Evolve from Emerging to Efficient?

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Introduction

Private lands provide public benefits, such as open space and wildlife habitat, for which landowners are often not compensated (Bergstrom, Dillman, and Stoll, 1985). As a result, traditional land markets do not provide optimal levels of these socially desirable amenities. Economists promote conservation easements as a government facilitated "market based solution" (Anderson, 2004) to provide quasi-public goods. A conservation easement is a voluntary, but legally binding agreement, where the landowner commits to limit development and/or future changes in land use, thereby preserving socially desired amenities. Landowners may sell an easement, donate an easement and receive tax benefits, or engage in a hybrid combination of these two approaches. Landowners typically agree to prohibit future building on the property; limit future buildings to certain areas on the parcel; or restrict land use for which they may receive payment and/or tax benefits[2] subject to IRS regulations. Land under conservation easement remains privately owned and can be transferred, although the agreed upon development rights are extinguished[3].

Conservation easements address market failures, but implementation problems abound (Cheever, 1996). As they provide quasi-public goods, conservation easement programs are chronically underfunded. Most private landowners do not have the income or wealth to utilize all of the potential tax benefits. There is not enough compensation to fully eliminate deadweight losses resulting from the positive externality incurred by private landowners whose lands provide social benefits. Furthermore, appraisal practices have contributed to high profile, contentious IRS audits (Stephens and Ottaway, 2003; Ozarski, 2008). The issue is whether the conservation easement market flourish (become complete), vanish or remain perpetually incomplete.

The purpose here is to examine and discuss whether the emerging conservation easement market will ever operate efficiently. Answers are sought in the substantial literature characterizing emerging markets, though not traditionally applied to conservation goods, or partial interests in property rights, like conservation easements. Criteria is compiled to define an

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[2] For a summary of these benefits, see Hoag et al., 2005.

[3] For readability, we use the terms "market for private land protection" and "market for conservation easements" interchangeably to refer to private lands encumbered with conservation easements

efficient market in order to characterize the conservation easement market as "emerging" and to describe where it is still lacking. Lessons are learned about market formation to suggest policies that can be implemented to improve efficiency in the conservation easement market and markets for other privately traded quasi-public goods.

Characterizing Conservation Easements as an Emerging Market

Based on the literature, three criteria are presented that must exist if conservation easement markets are to evolve to efficiency. These criteria include a *well-defined scope, consistent price signals, and absence of market failures*.

1) Well-defined scope

According to Buzzell (1999), the first step of defining a market is to finely specify the scope of the good around which the market is forming. In the case of conservation easements, the associated amenities being preserved can make the scope of the good difficult to succinctly define. The United States Internal Revenue Service, which effectively regulates tax payer financial benefits that result from donated conservation easements, is clear that the conservation easement MUST exhibit at least one of the following conservation values, as outlined in Section 170 (A)(2)(d) of the U.S. IRS Tax Code:

1) Public outdoor recreation and education

2) Significant wildlife habitat

3) Qualifying open space (including protection of agricultural land where there is a strong state or local government policy for protecting such land) or scenic views

4) Historic property

In the specific example for the market for private land protection where a conservation easement is involved, the tax code works toward defining the goods in a way that promotes efficiency. Interestingly, the government was recently forced to become more involved because the IRS needed to assure that the tax write-offs were legitimate. Due to the large role tax incentives play, IRS rules became an important contributor toward evolving the market.

2) Consistent price signals

Economic theory indicates that price effectively serves as a signal for both sides of the market (Smith, 1776; Friedman and Friedman, 1962, 1990). A well-documented stream of literature indicates that a fully developed market will present consistent price signals and provide information to market participants (Innes, 1990; Forsyth and Lundholm, 1990; Grossman, 1995; Marin and Rahi, 2000). So long as there is no interference with price communication, markets will operate seamlessly.

Suppose that the price information is inconsistent or counterintuitive to economic theory. This would probably be a sign that a market is incomplete, or new and not fully formed (Innes and Rausser, 1989; Lundholm, 1991; Marin and Rahi, 2000). Inconsistent price signals indicate that there is a need for market characterization as described in Coase (1988). Coase states that market characterization is an important, but often overlooked, step towards improving efficiency. Coase advocates for government regulations that minimize transactions costs in order to bolster greater trade volume —actions that will yield consistent price information.

Inconsistent price signals are a hallmark of the conservation easement market. Brown (1976) found that inconsistent prices affect wetland conservation easement programs in North and South Dakota and Minnesota. An econometric study by Plantinga and Miller (2001) found that land encumbered with conservation easements is difficult to value with traditional appraisal practices, although the authors suggested that the value of development rights is a monotonic relationship between distance from a city and a property in most cases. Anderson and Weinhold (2005) asserted that properties encumbered with conservation easements do not necessarily show a decrease in resale price when compared to properties that are identical in all respects except for the conservation easement. Nickerson and Lynch (2001) also found a statistically insignificant relationship between property price and a conservation easement.

Inconsistent price information is clearly linked to the presence of market failures, which will be discussed momentarily. However, another consideration is that CEs are often placed on unique, signature parcels of land described as protecting a community's "sense of place", which may be considered "priceless" to protecting community identity (Keske, 2008). The heterogeneity of such parcels may impede any kind of broad-scale price discovery – because "priceless" is in the eyes of the beholders, in this case, the parties involved in individual transactions.

3) Absence of Market Failures

An efficient market should be absent of market failures. There are at least three market failures that contribute to an incomplete market: thin markets, uncertainty, and information failures. Thin markets are defined as markets in which there are few buyers or sellers, and the sparse amount of transactions leads to market failure because there are not enough transactions to generate consistent price information, and transactions costs may be high (Carey and Sunding, 2001; Rosenzweig et al, 2002; Coase, 1988). It is well established that comparable sales for properties encumbered with conservation easements are limited for conservation easement appraisers and will take some time to develop (Plantinga and Miller, 2001; Keske and Hoag, 2006), but comparative sales data are increasingly becoming available for encumbered properties (McLaughlin, 2004).

Uncertainty is characteristic of an incomplete market, particularly in the study of financial and securities markets. The market for private land preservation presents uncertainty due to speculation on the conservation values that exist on the property. From a land trust's perspective, there is some uncertainty associated with verifying and protecting conservation values of the land for perpetuity, especially in the event of an IRS audit, which have become increasingly more common (Land Trust Alliance, 2009). From the landowner's perspective, conservation in perpetuity extinguishes option values (Boyd, Caballero, and Simpson, 2000), which may preclude future farm-saving measures or wealth transfers to heirs.

Information failures encompass incomplete or asymmetric information, where at least one side of the market lacks knowledge about market issues associated with risks or price information, yielding market inefficiency (Wang, 1994; Roth, Sönmez, and Ümar 2005). In the case of water markets, Carey and Sunding (2001) and Carey, Sunding, and Zilberman (2002) found that information asymmetry and lack of price information prevented emerging water markets from fully succeeding. Information asymmetry abounds in the conservation easement market. Landowners have better information about the amenities that exist on their land. Land trusts may have more experience and therefore more information about the values they place on similar conservation easements. Given that these transactions are privately negotiated one trade at a time, the market yields little information to help participants negotiating a trade.

Discussion: Policy Implications

By facilitating conservation easement markets and providing regulations to enforce tax policies, the government has, on one hand, created a market solution for private lands that provide public conservation values. On the other hand, despite the fact that financial benefits prompted by changes to the 1976 Tax Code invigorated the conservation easement movement, the market remains inefficient 30 years later. Without further government intervention, it is possible that the market may remain perpetually incomplete, as is the case with water markets. In this section policy recommendations are offered to transition the market for private land preservation from an emerging market into a more efficient one. Policies are proposed that reduce market failures (information failures, thin markets, and uncertainty, respectively), and facilitate progressive tax policies.

1) Invest in government communications and research programs that reduce information failures

Investment in research and government programs can reduce information failures on two fronts. First, more information regarding the resale of properties encumbered by conservation easements, perhaps in the form of a national or state-wide database, may yield more accurate, consistent appraisals. Availability of this database may be possible through The Land Trust Alliance, an NGO considered to be the "governing organization" for land trusts that "hold" conservation easements and enforce the land stewardship practices. The Land Trust Alliance has already reduced some information failures by committing resources towards availability of information and branding. For example, the Land Trust Alliance (2009) has developed many educational programs and informational guidelines, which are easily accessible on their website and their large land conservation electronic library. The Land Trust Alliance also recently awarded 12 land trusts with accreditation as part of its inaugural accreditation program to promote branding. With an accepted policy organization in place, appraisal information (and conservation attribute information) can be made available with cooperation from a government partner.

Second, more research is needed to understand and communicate landowners' conservation values and preferences for preserving environmental amenities. The bulk of academic research available focuses on the demand side for conservation easements. However, it is also important to recognize that landowners may be motivated to engage in land protection for non-financial reasons. Several agricultural studies have suggested that landowners receive non-consumptive use rent, referred to by Marshall (2002) and Hoag et al. (2005) as private amenity rent (PAR), which may impact their reservation price for a conservation easement. This may prompt a landowner to accept an easement that does not cover the full appraisal value. McLaughlin (2004) cites a joint effort by the State University of New York and the University of Vermont, noting that landowners enacting a conservation easement were motivated to do so primarily as a result of their "personal attachment to their land, a sense of altruism, and a commitment to the stewardship of their land." Despite the fact that PAR may nudge some landowners into conservation easements, the availability of financial benefits also has a clear influence on landowner willingness to consider conservation easements (Miller et al., 2009).

2) Decrease thin market properties by educating conservation organizations and landowners regarding one another's preferences

Land trusts may be able to reduce some of the information failures by signaling to landowners the weights that the trusts have for specific conservation attributes, such as open space. For

example, by including the specific attribute in the organization's name (e.g. Colorado Open Lands), the land trust may make itself more identifiable to the landowner as a better potential match. This "niche branding", commonly used in the marketing field, represents one step of the market evolving from incomplete to emerging, and it indicates to landowners the specific weights that they may place upon these conservation attributes.

Thin markets and the resulting matching risk also present challenges. A trust may be interested in either the wildlife habitat or the open space conservation values of the property, but if the landowner possesses zero PAR for wildlife habitat, the landowner may not even consider approaching a land trust whose mission is to protect wildlife habitat. A landowner may have difficulty finding a land trust that may represent his specific conservation needs, particularly in the case of working or family heritage lands. Thus, due to the information failure, the landowner may end up converting his land to development because he is unable to find a land trust appropriate for his conservation needs. Public information regarding landowners' and land trusts' preferences, perhaps made available through the Land Trust Alliance, could reduce this matching risk problem significantly.

3) Make tax benefits progressive rather than regressive

Paradoxically, tax incentives are regressive in the sense that they are more beneficial to the rich than to the poor. Too little land is preserved because the tax is available but not attainable. According to Marshall, Hoag, and Seidl (2002), the top reason listed by landowners for NOT placing a conservation easement on a family ranch was financial—including insufficient funds available to facilitate transactions costs, and limited benefits from income and estate tax breaks. Thus, a more progressive tax benefit may allow for increased realization of private benefits.

Policies such as a transferable state income tax credit, like that used in Colorado, effectively reduce the amount of uncertainty about whether a tax benefit can be utilized because the landowner is able to receive more (if not all) of compensation for the loss of development rights when he enacts a conservation easement on his property. These tax benefits are progressive, rather than regressive. This occurs because what the landowner does not use against his or her income taxes can be transferred, or sold, to a third party, who pays the landowner $0.80 on the dollar for the tax credit. The third party may then utilize $1 of tax credit against his or her state income taxes. This tax program reduces the uncertainty that is associated with fluctuations in income and wealth that is experienced by many working farmers and ranchers. For example, the transferability of the Colorado tax credit may also provide the necessary infusion of cash that may be needed to expand an operation. However, as has been shown in Colorado, progressive tax policies also present potential for abuse (Simpson, 2004; Ozarski, 2008), and adequate enforcement will be required to mitigate these potential abuses.

4) Reduce uncertainty with respect to future earning power

There is considerable uncertainty with respect to a landowner's future income when he enacts a conservation easement on his land. First and foremost, in order to receive full financial benefits, conservation easements are required to be perpetual, which limits potential future income. This leaves the landowner with significant uncertainty about how they are affecting future land management and their heirs' inheritances. There will likely be opportunities in the future to make income from natural resources, but a binding conservation easement restricts the landowner from engaging in many of these opportunities. Expanding the availability of conservation lease programs that require landowner commitment for a finite, rather than perpetual, length of time can reduce income uncertainty for landowners, although these conveniences will need to be balanced with the priority of providing sustainable public benefits.

Summary and Conclusions

Questions remain as to whether the emerging conservation easement market will rise to the level of a complete market. The conclusion here is that some government intervention will make it more likely. Overall, government intervention facilitates more transactions and reduces transactions costs. Policy intervention following the suggestions from the previous section may transition the market for private land preservation from emerging toward a complete and efficient one because price signals may be more consistent.

It is important to note that it can be difficult to recognize when the market has reached efficiency, and without a crystal ball, no one knows for certain what the outcome from government intervention really will be. However, when comparing the market for private land preservation to other incomplete markets, the market for private land preservation shows signs that it is advancing through several development stages and that it could blossom into a mature market on its own with minimal government intervention. Although the market may "self-correct", this self correction will require a substantial increase in the number of private land conservation transactions. However, the opportunity cost related to non-intervention may be considerable while the market undergoes self-correction. Therefore, government intervention is necessary in order for the market for land preservation to evolve into an efficient and complete market in a timely manner. At a minimum such intervention will likely be a Pareto improvement.

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