Environmental Science and Policy 85 (2018) 47–53

Contents lists available at ScienceDirect

Environmental Science and Policy

journal homepage: www.elsevier.com/locate/envsci

Managing natural resources: Coasean bargaining versus Ostromian rules of common governance

Aleksandar D. Slaev[a,*], Marcus Collier[b]

[a] Faculty of Architecture, Varna Free University, Varna 9007, Bulgaria
[b] School of Natural Sciences, Trinity College Dublin, The University of Dublin, Dublin 2, Ireland

ARTICLE INFO

Keywords:
Natural resource management
Privately owned resources
Common resource governance
Coasean bargaining
Theory of clubs

ABSTRACT

The purpose of this paper is to explore the forms of ownership over natural resources according to the theories of Coase and Ostrom. Coase's work is regarded as a theoretical basis for establishing private ownership over natural resources, whereas Ostrom's theory is considered the most influential one supporting common/collective ownership. The key research question of the paper is whether the two theories are indeed opposite and contradictory. The novelty of our approach is that we account for the nature of common property rights in light of Buchanan's theory of clubs, thereby showing that the opposition between the concepts of Coase and Ostrom is exaggerated. The point is that ownership is generally considered only in its most extreme forms – purely private and purely public. By referring to Buchanan, we show that in contexts of common/collective entitlements with varying degrees of publicness/privateness, Coasean bargaining and Ostromian rules of common/collective governance can coexist and work together effectively. On this basis, this research proposes a framework for defining policies for managing natural resources.

1. Introduction

The current high rates of economic development have accelerated the use of natural resources, and this highlights the importance of natural resource management. Property rights are crucial in this regard. Some researchers (e.g., Demsetz, 1967; Libecap, 2009) believe that common property rights are the main cause of the "tragedy of the commons" (Hardin, 1968), and private entitlements and free markets are essential for effective natural resource management. Coase's theory (1960) is arguably the soundest basis for this approach. But other researchers (e.g., Wade, 1987; Tucker, 1999; Agrawal, 2001) believe that private property is not the only or the right solution and that common ownership can provide effective management of natural resources by establishing proper systems of regulation. Of the theories supporting common/collective ownership of natural resources, that of Ostrom (1990) is probably the most influential.

The purpose of this paper is to explore the issue of the relevant forms of ownership over natural resources according to the theories of Coase and Ostrom. Our main research question is whether the two theories are indeed contradictory as commonly believed. The novelty of our approach is that we account for the role of common property rights in light of Buchanan's theory of clubs (1965). Drawing on Buchanan, we show that the opposition between the concepts of Coase and Ostrom is exaggerated. The point is that property is generally considered only in its most extreme forms – individual/private and common/public, whereas Buchanan's theory explores the wide range of property rights between purely private and purely public. The relationship of Coase's theory to common forms of ownership is insufficiently explored, but this is an important issue – particularly when it comes to natural resources, as these resources are often collective or public property. On the other hand, Ostrom's theory emphasizes the advantages of collective property rights in common-pool resources, but at the same time Ostrom is highly critical of the performance of public ownership. In fact, Ostrom's theory focuses on common forms of ownership, which are of a lower level of publicness than state or public. However, as this paper illustrates, when ownership is viewed not only in its extreme forms (purely private or purely public), it turns out that the concepts of Coase and Ostrom are far from contradictory and should even be considered complementary. Applying Buchanan's theory to those of Coase and Ostrom yields a deeper understanding of how they relate to each other. Finally, it suggests a framework for defining policies for managing natural resources.

We start by examining the theoretical framework of our study – that is, the types of property rights and their advantages and drawbacks concerning natural resource management – and we ask how the theories of Coase and Ostrom refer to the types of ownership. In the

* Corresponding author.
E-mail addresses: slaev@vfu.bg (A.D. Slaev), marcus.collier@tcd.ie (M. Collier).

https://doi.org/10.1016/j.envsci.2018.03.017
Received 4 December 2016; Received in revised form 8 January 2018; Accepted 17 March 2018
1462-9011/ © 2018 Elsevier Ltd. All rights reserved.

Discussion section, we first explore how Coase's theory works in contexts of common/collective ownership. Although this theory is traditionally associated with private ownership and privatization, common property rights should play an important role in Coase's research – yet he does not investigate the implications of such entitlements. When we account for common/collective entitlements, then we observe that Coase's and Ostrom's theories have much in common. This leads to further conclusions concerning the roles of relative privatization and the individualization of responsibilities in natural resource management.

2. Theoretical framework

2.1. The property rights context of resource management

Property rights can be defined as the social consent that an individual is entitled to a specific use of a resource ("socially recognized rights of action"; Alchian and Demsetz, 1973: 17). Thus, although property rights are natural rights of individuals, they must be recognized, enforced and guaranteed by communities and states (Moroni, 2018).

2.1.1. Types of property rights and Buchanan's theory of clubs

The type of the established property rights over a resource is a key factor for its management. Most researchers consider four main types of entitlements: 1) private, 2) common (shared, collective, communal), and 3) public (state) property rights, and 4) open access, which is actually a lack of property rights (Heller and Dagan, 2001; Cole, 2000). Two of the three types of property rights – private and public – are regarded as basic, "pure" and opposite to each other, and the third type – common/collective – is seen as intermediate between private and public. Whereas public ownership refers to resources owned by national societies and states, collective ownership refers to resources owned by groups and communities smaller than nations. This type of ownership is the subject of Buchanan's research. According to Buchanan (1965: 2), "[w]hile it is clear that some goods and services may be reasonably classified as purely private, even in the extreme sense, it is clear that few, if any, goods meet the conditions of extreme collectiveness". He observes that there is a "whole spectrum of ownership-consumption possibilities, ranging from purely private … to purely public". Arguably, the bulk of resources are thus owned in common/shared ownership with different degrees of publicness – e.g., property of collective companies, partnerships, cooperatives, stock companies, corporations, clubs, NGOs, municipalities, condominiums and even families, insofar as a family can be considered a form of partnership. Nevertheless, despite the pervasiveness of common entitlements, to examine the performance of property rights, one should refer to their extreme (pure) forms.

2.1.2. Managing private resources

If an individual or entity owns a resource privately, she or it is entitled to all rights (of access, withdrawal, management, exclusion and control; Ostrom and Schlager, 1996), as well as all responsibilities for this resource. The unity of interests, all types of rights and responsibilities, i.e., the indispensable connection between positive and negative entitlements, is the basis of the efficiency of individual/private property rights.

Individual property rights are exercised either by private planning or by participating in market transactions. When a person owns all resources needed for an activity, she manages these resources through private planning (Moroni, 2010; Slaev, 2016a). A private owner is able to plan the use of the resource(s) strictly and in detail. Moroni (2007, 2010) calls this planning method *teleocratic*, because it is characterized by strict provisions and detailed definition of all goals and steps towards their achievement. Alternatively, when an individual privately owns only part of the resources needed for an activity, to carry out this activity, she must combine her resources with those owned by the others in market transactions. But in the market, inefficient producers will be replaced by efficient ones; thus the market mechanism is the ultimate guarantor of efficient private management (Caves and Associates, 1992; Leibenstein, 1966; Markovits, 2008). Therefore, regarding resource management, we emphasize the responsibility of private entitlements. Because of the indispensable connection between positive and negative entitlements, between assets and liabilities, and between rights and responsibilities, private ownership is expected to provide for efficient long-term (i.e., sustainable) use of resources (Demsetz, 1967).

2.1.3. Managing shared/collective/common resources

Shared or commonly owned resources are managed collectively. Because one can manage common resources on his or her own, all co-owners first of all need to agree on who can do what within what limits and who is in charge of what – that is, co-owners need to allocate property rights among themselves. This allocation is realized through the adoption of rules, and this is the main "technological" feature of collective management. The proper method of management employed by partners, groups and communities is the *nomocratic* method (Moroni, 2007, 2010; Slaev, 2016b). In contrast to the strict approach of *teleocratic* management, *nomocratic* management uses more general rules that allow the individual members a range of freedom. As the roles of individuals are allocated by rules/regulations established by the community, there are no automatic or innate connections between positive and negative entitlements and between rights and responsibilities, and this is the first major drawback of common entitlements. The allocation of entitlements is never perfectly defined by rules and is even less perfectly enforceable. It is possible and often happens that one co-owner may provide the resources for an activity but receive no share of the benefits, or vice versa. The imperfect allocation of entitlements is the main reason for behaviours such as shirking (Alchian and Demsetz, 1972) and free riding (Ostrom, 1990). Furthermore, the performance of collective management greatly depends on the number of co-owners. Only in small groups is it possible for individuals to exercise their property rights directly (Ostrom and Hess, 2007); in bigger groups, individual co-owners have to transfer their management rights to a central body. Transferred entitlements are more or less distorted, because, as Demsetz (1967: 355) explains, "a small management group becomes de facto owners". As managers often tend to substitute their own interests for the transferred interests of regular co-owners, other major problems of efficacy emerge: agency issues (Jensen and Meckling, 1976) and issues of collective/public choice (Buchanan and Tullock, 1962). Further inherent problems of collective governance refer to corruption and misuse of administrative and coercive powers.

2.1.4. Advantages of private and common entitlements

Arguably, all authors agree that open access is devastating for natural resource management (e.g., Agrawal, 2001; Heller and Dagan, 2001; Cole, 2000). As Dagan and Heller explain, although Hardin's (1968) goal was to describe the "tragedy of the commons", he actually described "the tragedy of the open access". Still, while it is evident that the lack of any entitlements means total lack of responsibilities, the foregoing analysis outlines the considerable drawbacks of collective management. However, common property rights also have a great advantage – by sharing, individuals economize individual costs. Hence, individual/private entitlements are generally associated with high benefits of exercising property rights, and shared/common entitlements are associated with low costs. Infrastructure is an obvious example. A private irrigation system, its development and use would be managed many times more efficiently than a common system, but the costs of construction and maintenance are so high that private developments very rarely occur. That is, individual entitlements contribute to the efficiency of property rights by enhancing their performance, whereas common property rights contribute to this efficiency by reducing costs.

Download English Version:

https://daneshyari.com/en/article/7465916

Download Persian Version:

https://daneshyari.com/article/7465916

Daneshyari.com