

**TRADE-OFFS BETWEEN COMMUNAL AND PRIVATE
INSTITUTIONS IN NATURAL RESOURCE MANAGEMENT
ALONG THE SPACES OF TIME AND SPACE: REFLECTION FROM
FOUR CASE STUDIES IN TANZANIA**

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Abstract

Classic scholars Hardin and Ostrom emerged with counter-traditions to each other in favour of private and communal natural resource management institutions respectively. In these premises, Hardin argues that it is not possible for local people cooperatively to manage a common resource sustainably because individuals in the community will always be driven by the rationale of ensuring more of personal gains at the expense of others. And, according to him, because every individual is driven by the same rationality the common will ultimately collapse, the state he calls “tragedy of the common”. On the contrary, Ostrom opposes Hardin by arguing that the community has the power of devising rules systems that enable it to manage the common sustainably. Impliedly, the two scholars portray that either communal or private institutions will prevail at specific spaces of time and place but not both. In this article, I challenge this contention using four case studies which have substantiated the use of both communal and private institutions by the same social players at different time space, and/or co-existence of both communal and private institutions at the same spaces of time and/or place.

Keywords: communal institutions, private institutions, natural resource management, co-existence

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1. Introduction

Garrett Hardin was the founder of the argument that communal management of common pool resources will result into tragedy of the common (Hardin, 1968). He rationalized his argument by asserting that the people are by nature selfish and always driven by the rationality of self accumulation of benefits at the expense of others in the community. Using the model of pastoralists in a communal grazing land, Hardin argues that every pastoralist will increase the number of his livestock grazing in this common resource so that to gain more selfish advantages/benefits while causing a damage/loss which is a burden for all. According to Hardin, because each of the pastoralists has the same character and attitude towards the grazing land, at the end the carrying capacity of the grazing area is exceeded such that it becomes degraded, the scenario he calls “tragedy of the common”. From his point of view, the solution should be government-enforced private management and use of natural resources because the local people are not capable to manage the commons sustainably. In other words, Hardin advocates for top-down approach whereby the state dictates and dominates decision making and the community has to comply. It may be logically argued that Hardin’s philosophy reduces pastoralists to objects which have similar if not same identities and their behaviors could be predicted.

The arguments of Hardin did not end unchallenged. Opponents of his premise emerged and one of the classic scholars in this regard is Ostrom. After conducting pervasive empirical research, Ostrom was convinced that there existed communities which had succeeded communally to use natural resources around them in a sustainable way without degrading them. She maintained that such communities even devised mechanisms of sanctioning those who did not observe the rules of the game that promoted sustainable use of the resources. This led to Ostrom making design principles (Ostrom, 1990) which in other words connote incentives (or disincentives) the community has for ensuring that the use of common pool resources is sustainable. Those design principles are about:

- 1) Clearly defined resource boundaries;
- 2) Rules governing the use of collective goods well matched to local needs and conditions;

- 3) Most individuals affected by these rules can participate in modifying the rules;
- 4) The rights of community members having the rights to devise their own rules being respected by external authorities;
- 5) Existence of a system for monitoring member's behavior;
- 6) the community members themselves undertaking this monitoring;
- 7) Use of graduated system of sanctions;
- 8) Community members having access to low-cost conflict resolution mechanisms for common pool resources that are parts of larger systems, appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises.

Much has been said about Ostrom's design principles; for example: as being more applicable to local common pool resources but requiring modification for applicability under global common resources (Stern, 2011), as being more effective today for effective, sustainable trans-boundary water management (Rowland, 2005), as a helpful theory to better analyse the institutional framework supporting the governance of water resources (Da Silva et al., 2013), as illustrating useful patterns for adapting irrigation governance (Bruns, 2011) meaning that their use should not base on cut and paste norms but should be customized in accordance with the field realities.

The arguments of Hardin could be translated as contending that people cannot manage a common resource together in a mutually beneficial and sustainable way because of the selfish behavior and consequence thereof will bring about conflicts and degradation of the common. On other hand, Ostrom's argument can be implied as asserting that people have their own logics and ways of creating agreements, resolving conflicts of interests and getting along together profitably and in environmental friendly manner. In other words, these counter premises from the perspectives of the two scholars are likely establishing that either Hardin's or Ostrom's argument will prevail at specific temporal and spatial points but both cannot co-exist, and that the same community actors cannot portray the two traditions but may show either one of the tradition or the other. In this paper, I challenge these contentions by arguing that

both Hardin's and Ostrom's traditions may co-exist at the same space of time and/or place but at different levels, and the same community actors may portray both traditions but at different temporal scales. The basis for this argument rests on the four case studies that will be presented in the coming sections. In other words, this article partly mediates the traditions advocated by these two classic scholars.

In keeping with the core premise of this article, Gauset et al (2007) argue that communal and private institutions have complementarities and synergistic effects. Yet they have independent and common challenges and constraints. Using the model of management of the woodland forests and private tree planting among the local people in Gairo district in Tanzania, the authors observed that under the communal management regimes group dynamics and tragedy of commons were the main constraints that prevailed. On the other hand, under the private management regime, the scholars witnessed the main barriers were linked to land tenure, economic cost and climate shifts.

This article is organized as follows. After this introduction, approach used in the study is highlighted, followed by narration of the four case studies which reveal the occurrence of communal and private resource management institutions at spaces of time and place and determinants/dimensions for their occurrence/existence. Then, the four case studies will be summarized as a conclusion at the closure of the article.

2. Approach used to collect data

Multiple case studies approach was used to collect data for this study. This was based on the collection of cases from different research activities the researcher undertook with the local communities at different periods. Documentation of those cases was done at different times then the cases were brought together to make this article. These cases represent three different regions in Tanzania: Shinyanga, Kilimanjaro, and Morogoro (highland and lowland ecological zones), but also have covered different sectors including agro-business, pastoralism and beekeeping.

3. The four case studies

3.1 Case one: Livestock keeping and crops farming in Kahama district Mwanza Tanzania

At Kahama district situated in Shinyanga region, *Sukuma* agro-pastoralists have tendencies of utilizing grazing area interchangeably for grazing and crops farming. This area was under customary property rights system which is also ambiguous because the government in the same area regards the grazing land as an open land. Pastoralists have informally demarcated the area using live sisal plants by splitting it into several plots. This division is intended to identify owners of various spatial areas as a legacy from pastoralists' forefathers. The use regimes of the area varied based on the sector, climate and time dimensions. During crops farming (rain) season, the area was put under the private property rights system wherein individual agro-pastoralists strictly observed compliance with the boundaries of the individual plots identified as a live fence of sisal plants. Every agro-pastoralist, therefore, planted his personal food crops, at this season. Inversely, during grazing (dry) season the property rights system changed to communal whereby though live sisal fences existed physically, agro-pastoralists dissolved them mentally by allowing the livestock of each of them to graze throughout all plots. In other words, the livestock of individual pastoralists grazed together throughout the area as if the animals belonged to one person.

This case indicates the way the property rights institutional dimension is dynamic by clothing different characteristics at different temporal spaces but at the same spatial space and involving the same institutional actors. At some specific time, based on the climate dimension prevailing therein, it allows the existence of the tradition by Ostrom on successful cooperative resource use practices whereas at other climate dimension the tradition advocated by Hardin of private management regime prevails. But players and the play pitch are the same. The determinants for the kind of institutional dimension existing at different spatial and temporal points in this respect are *sectoral* and *climate* shifts.

3.2 Case two: Use of grazing land for livestock keeping at Mwanga district

Agro-pastoralists in Mwanga district, Kiruru Ibwejewa village in particular, portray two property rights systems (private and communal) that occur at formally one spatial scale in which some social actors have informally demarcated small spatial scales (a communal grazing land in which some elite pastoralists have established their private grazing areas) but at two temporal scales (rain and dry seasons). However, at one temporal scale, pastoralists' use practices are active under one property rights system but dormant under another property rights system whereas at another temporal scale the practices are active under both property rights systems although some social players confine themselves under private property rights system while excluding others. These behaviours of the social actors are driven by the resource status (i.e. pasture) in the play ground (i.e. a grazing land). During the period of relative pasture abundance (rainy season) all pastoralists use communal grazing areas except the demarcated plots by local elites which are protected using live thorny fences; the local elites conserve these for private use during dry season when there is a scarcity of pasture. Other pastoralists (in-fact the majority), who do not have private grazing lands, continue to use the communal grazing area even during the dry season, the period of pasture scarcity; they lack options. This case indicates the existence of two property rights arrangements (regimes) marked by inclusivity and exclusivity tendencies as shaped by the trend of pasture and the forecast of that trend by social actors.

Recalling on the traditions of Ostrom and Hardin, this case shows that both traditions exist along both temporal scales but the practices of actors governed by these traditions are active under one tradition during the period of pasture abundance but active under both traditions during the period of scarcity although at this latter period the practices of some actors confine into one property rights system. Whereas this phenomenon is driven by the dimensions of *abundance* and *scarcity* of the resource, the dimension *climate* determines and shapes the attitudes of social actors especially those who play the game under both property rights domains.

3.3 Case three: Beekeeping in Kibungo Juu village in Morogoro rural district

Beekeeping in Kibungo Juu village creates the boundaries of communalism and privatism. When beekeepers in this village were provided with beehives in May 2013 by Sokoine University of Agriculture, which implemented a project on adapting mountainous communities to climate change, they were mobilized to form groups for participatory beekeeping, sharing training and monitoring of the progress. This is in keeping with the Tanzanian government's emphasis that development should be channeled through organized groups rather than individuals (TDV, 2005; NSGRP, 2005; URT, 2009). While the attitude of the researchers was towards having beehives managed commonly in a group, the attitude of the beekeepers was different, that which demanded that beehives to be distributed among the group members and each of them manage his/her own beehive independently. However, beekeepers wished that training on beekeeping as well as monitoring and sharing views about the progress of the beehives among the group members should be done in a participatory way (as a group), and to operationalize these, beekeepers appointed their leaders.

Experiential learning acquired from the past was among the reasons that led to the trade-off in terms of boundaries of cooperation and individuality in the implementation of development activities. Members of the group claimed that based on their experience in the past cooperative activities when a member died, his/her efforts and benefits he/she invested in the cooperative/group died with him/her because the deceased's siblings could not access those rights. As such, in order to ensure access to such benefits when a relative dies, the members have made decisions on the level and scope of cooperation vis-à-vis operating independently in community-based projects. The dimension of *transference* of someone's rights has driven the existence of two resource management institutions: communal and private, at the same spatial and temporal space but at different levels/extent.

Referring to Hardin's and Ostrom's traditions, this case indicates that the two traditions co-exist on the same spatial and temporal spaces but at different levels i.e. training (Ostrom) and practice (Hardin).

3.4 Case four: Paddy business in Kasiki ward of Kilosa district

In Kilosa district of Morogoro region, based on the field survey conducted in April 2013, it was observed that the women group participated in paddy production and selling. However, each member worked independently and even the benefits accrued from her efforts were used privately. Nonetheless, the group was used as an identity for accessing loans. This is because among the main conditions for access to loans by private donors and even government agencies include issuance of loans to groups not individuals (TDV, 2005; NSGRP, 2005; Davis, 2007; URT, 2009). As such, people have been mobilized to form groups so that to be provided with loan and training services as well as technological support. Women in Kilosa district, therefore, have been sustaining their groups (communal arrangement in keeping with Ostrom) for the interests of access to loans but undertake their activities individually (private arrangement in agreement with Hardin) for the aim of enhancing independent gains in terms of income and food security. Thus, the existence of private vis-à-vis communal institutions is driven by the dimension of *resource accessibility*.

4. A summarized integration of the four case studies

From the four case studies above, one notices the influence of the dimensions *sectoral shift* (purpose), *climate alteration*, *relative natural resource abundance*, *transference of rights*, and *resource accessibility* on the prevailing natural resource management institutions (communal or private). These determine the nature of management institutions that will exist at various and specific spaces of time and place, whether communal or private or both. Based on this study therefore communal and private management institutions are determined by the purpose, resource status, climate influences, sharing of rights and access to some anticipated rights. However, determinants of co-existence of resource management institutions are complex and dynamic across spaces of time and place. Whereas two or more of the above-mentioned dimensions may co-exist at same spatial and temporal scales, contextual realities dictate which can exist where and when.

Based on these case studies, I argue, premises of Hardin and Ostrom of existence of either communal or private management institutions (but not both) at a specific space of time and/or place as a precondition for sustainable management of natural resources are challenged. As observed in this study, while such situations certainly exist, they are not always the case, but, I argue, contextual realities, which are shaped and liable to be transformed by multiple and diverse dimensions/determinants, can dictate their exclusive existence or co-existence at different or same spaces of time and place.

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