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THE ROLE OF PROPERTY RIGHTS TO GRAZING LANDS IN SMALL-SCALE FARMERS DEVELOPMENT IN HE KAT RIVER VALLEY

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ABSTRACT

Property rights are social institutions that define and delimit the range of privileges granted to individuals of specific resources, such as land and water. They are the authority to determine different forms of control over resources thus determining the use, benefits and costs resulting from resource use. That is, they clearly specify who can use the resources, who can capture the benefits from the resources, and who should incur costs of any socially harmful impact resulting from the use of a resource. In order to be efficient property rights must be clearly defined by the administering institution whether formal or informal and must be accepted, understood and respected by all the involved individuals and should be enforceable. These institutions influence the behaviour of individuals hence the impact on economic performance and development. The paper has attempted to determine how the situation of property rights to grazing lands affects the development of smallholders in the Kat River Valley. Data was collected from 96 households who were selected using random sampling. To capture data, a questionnaire was administered through face-to-face interviews. Institutional analysis and ANOVA were used for descriptive analysis to describe the property rights situation, security of property rights and the impact on smallholder development. The results show that some rights holders have secure rights to grazing land resources while other farmers have insecure rights to grazing land resources. The results from institutional analysis show that the situation of property rights negatively affects resource use and management in the Kat River Valley. There are various institutional factors that negatively affect development of smallholder farmers in the Kat River Valley. Based on the research findings, some policy recommendations are made. These include consideration of the local context and strengthening of the protection of property rights.

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INTRODUCTION

Institutions as the set of formal and informal rules of conduct that ensure social cohesion through governing the relationships within a society are essential for economic development due to their bearing on behaviour that affects various social outcomes (North, 1990). In rural areas of the developing world, agriculture is key to economic development as many rural people depend on farmland, rangeland, irrigation and fishing waters and forests for their livelihoods. This dependency makes access to these resources of great significance for economic development of these areas.

This access to natural resources will lead to poverty alleviation by allowing people to grow food and to invest in productive activities (Van Braun, 2004). However, this access to resources is not realised automatically but depends on the institutions that govern resource use in these areas, thus property rights (Meinzen-Dick and Di Gregorio, 2004). Anderson (2008) stated that property rights define incentives people face for undertaking sustainable and productive management strategies and they determine the extent and distribution of socioeconomic benefits from natural resources. These have important implications for technology adoption, food security, poverty reduction, economic growth and environmental sustainability, hence overall development. The realisation of these outcomes is dependent upon the institutions that administer property rights through ensuring that individuals and communities involved have clearly defined, understood and accepted the property rights.

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The institutions that administer property rights should ensure that property rights rules are respected and enforced and this has been facilitated by the institutions' social legitimacy, legal support and accessibility by and accountability to the property rights holders (O'Driscoll jr. and Hoskins, 2003). Nevertheless, multiple property rights present in the world have resulted in various outcomes in different settings and the outcomes being determined by various socioeconomic factors. The main determinants have been social capital, resource conditions, politics, markets and the needs and preferences of the local people (FAO, 2008). Property rights have been very important in the management and sustainability of natural resources such as land and water. Secure property rights provide incentives to the owners and users of the resources to conserve these valuable resources since owners and users are guaranteed of the benefits that come from the resources. Conservation could be achieved through various means including the adoption of better technologies, production and management systems. Sustainable utilisation of land and water resources requires only secure property rights irrespective of the administering institution (Meinzen-Dick *et al*, 2007).

Insecure property rights are detrimental to environmental quality as people do not have incentives to invest in the preservation and sustainability of the resources since they do not have a guarantee that they would reap the benefits from the resources. This has led to overexploitation of resources as people use them rapidly in order to get maximum benefits (Key *et al*, 1998). When property rights are secure people become confident to invest in the management and development of their land and water resources. In areas where people have secure property rights, the level of environmental quality has been relatively high as people have adopted soil and water quality improving elements such as fertilizers and manure. The farming practices such as crop rotation and appropriate use of and proper chemicals have improved water and land quality. The level of pollution particularly of water resources has been relatively low (McCulloch *et al*, 2001; Colby, 1995).

Secure property rights usually result in economic improvements that lead to sustainability of the environment (Anderson, 2008). People with secure property rights to land and water resources get financial gains from the productive activities involving these resources and these gains are used in the acquisition of technologies. Technologies such as irrigation systems provide efficient use of water and better waste disposal systems reduce the rate of water pollution and these ensure improved availability of clean water for irrigation and livestock as well as human consumption (Colby, 1995). However, Demsetz (1967) stated that the investment in some technologies requires the security of property rights to be of long duration as it takes time to realise the benefits from other technologies. Governments in developing countries have designed and implemented various policies aimed at achieving development but the success of these policies has been limited and absolute failure has been realised with other policies. Several factors have been mentioned as sources of failure and these include lack of finance, poor natural resources, and lack of human capital among others (O'Driscoll jr. and Hoskins, 2003). The South African government has implemented a land reform policy and the National Water Act aimed at achieving

development through providing access to, economic use of, non-gender based distribution of, sustainable use and management of land and water resources throughout the country (DLA, 1999; DWAF, 1997). These policies have been and continue to be given various forms of support including finance, human capital, technical support, natural resources of good quality and where this has not been the case improvement measures have been taken (DLA, 1999). Despite all these, the policies have achieved limited success with regard to the intended outcomes particularly in the rural area of Kat River Valley. Therefore, the effect of the property rights situation in the Kat River Valley on the achievement of the national development objectives are examined in this paper.

MATERIALS AND METHODS

Study Area

The Kat River Valley is a small basin in the Eastern Cape Province that is situated northeast of Grahamstown, in the foothills of the Winterberg and Amatole mountains. It is a sub-catchment of the Great Fish River that includes the areas of Fort Beaufort, Seymour, Balfour and other rural villages (Hill and Nel, 2000). It forms part of the Nkonkobe Municipality which falls under Amatole District Municipality. The area is divided into three main parts including Upper, Middle and Lower Kat River Valley. It is about 80 kilometers in length and covers an area of 1600 square kilometers, with boundaries defined by the Elandsberg Mountains in the north east, the Katberg Mountain and the Ndidima range in the North West, the Kroomieberg in the west, and the Menziesberg and Juannasberg in the east (Motteux, 2001).

Data Collection Method

In this area there were two different grazing lands used by different sections of the community. The eastern grazing land was only occupied by people with exclusion rights to this land while the western grazing land was occupied by people who invaded the land many years ago. The technique of simple random sampling was employed. The strata consist of those using the western rangeland and those who use the eastern rangeland. In each stratum, forty three households were randomly selected. The study used a semi-structured questionnaire.

Data Analysis

The methods and techniques employed in any investigation depend upon various factors including the nature/type of data to be collected (Leedy and Ormrod, 2005) as well as the purpose and objectives among others (Patton, 1990). The nature of data collected for the investigation of the role of property rights in resource use and management in Taung Maralleng is qualitative. As a result, the study employed a predominantly institutional framework of analysis and the informal and formal institutional factors that were argued to have had contributions to both development and underdevelopment were highlighted and the recurrent themes were isolated for analysis and discussion. In that regard, institutional economists, particularly Williamson's (2000)

hierarchy of society's institutions were employed for guidance. The analysis employed North's (1990) theoretical propositions in discussions of transaction costs. A qualitative evaluation of the contributions of the factors to underdevelopment was carried out in the study. Factors that were consistently argued to have hugely contributed towards underdevelopment and hence high social transaction costs were assigned a high ranking of '3 points', while those which were argued to have had no detrimental contributions were assigned no ranking, which implicitly signals a 'zero point' value assignment. The factors that had least contribution were assigned a ranking of '1 point' and those with higher contribution were assigned a ranking of '2 points'.

The rankings were as follows; '*minimum=1 point*'; '*medium=2 points*' and '*high=3 points*'. Based on the sum of ranking points assigned to each category of factors, deductive judgments were made on their contributions towards underdevelopment of the area. Analysis of variance (ANOVA) was used for the descriptive analysis whereby frequency and mean values were main descriptive indicators used. Security is defined as freedom from interference from outside sources, continuous use, and ability to reap the benefits of labour and capital invested in the resource. Embedded in this description are three dimensions of land rights; breadth, duration and assurance. Breadth refers to the types of rights held. Generally, the more rights held the more secure those rights.

Households with rights to alienate resources or to make long-term improvements on land would be considered more secure than those with only use rights to land. Duration refers to the length of time over which the individual/group may enjoy specific benefits while assurance refers to the ability of individuals to exercise their rights. In this study, breadth was measured by the number of rights held to land. In the case of land when use, exclusivity and transferability were held it was ranked strong and when only two were held it was ranked moderate while it was ranked weak when only one type of rights were held. Water and grazing lands are public goods and no community member should transfer and exclude others from this resource. Breadth of the grazing rights was measured by the possession of use rights. In this case, breadth was either ranked strong or weak. If use rights were held it was ranked strong and when such rights were absent it was ranked weak.

RESULTS

Property rights to grazing land

There is homogeneity with regard to the tenure system and type of rights exercised on grazing lands in the area. In this area there were two different grazing lands used by different sections of the community. The eastern section was only occupied by people with individual rights to arable and residential lands and had approximately 10 hectares (ha) of grazing land, while the western section occupied by people who invaded the land had access to about 17 ha of grazing land.

Property rights to eastern grazing land

Livestock farmers from the eastern section indicated that they obtained rights to this land from their fore-fathers and chiefs. The authorities (grazing committee) had to be notified before exercising any rights on the grazing land. All farmers exercised use and exclusion of only people from the western side and other villages, while other rights such as transfer were not exercised. The majority (92%) of these farmers indicated they were clear about the boundaries of their grazing land. The property rights to this land were seen as strongly protected, enforced and recognised by the law and all residents were certain and positive about the future of their rights to this land. Generally, the level of security of rights to grazing land was viewed as good since this was indicated by all. However, the users did not prefer communal use of resources, including the grazing lands, and they demonstrated strongly negative attitudes towards the communal rights system. The whole group of users had knowledge of the grazing rules and regulations but when it came to observation of such rules different responses were provided with the majority indicating that other users did not observe the rules. A member of the grazing committee indicated that the grazing rules were not observed on this grazing land and the structures were intentionally destroyed by the users.

Property rights to western grazing land

This was the larger of the two grazing lands in the community and it was used by more people than was the eastern grazing land.

Table 1. Variables used for the determination of security of property rights

Variable	Definition	Indicators	Measure
Security	Freedom from interference from the outside sources, continuous use, and ability to reap the benefits of labour and capital invested in the resource	Breadth Assurance Duration	Number and type of rights Knowledge of boundaries. Enforcement and protection of rights Certainty/uncertainty on the length of time for exercising the rights

Table 2. Responses on boundaries, security, future and legal status of rights on grazing lands

Location of grazing land	Knowledge of boundaries	Views on security of rights	Views on future of rights	Views on legal status of rights
Eastern section	Known=92% Unknown=8%	Very good=100%	Certain=100%	Strongly enforced, protected and recognised=100%
Western section	Known=70% Unknown=30%	Very poor=100%	Uncertain=100%	Unenforced, protected and unenforced=100%

Table 3. Summary of security of property rights to communal grazing lands

Location of the grazing land	Breadth	Assurance	Duration
Eastern section	Strong	Strong	Strong
Western section	Strong	Weak	Weak

Some users indicated that they gained access through land invasions, while others obtained it from the local committee. Users only exercised use rights to this land and other rights including transfer and exclusion were prohibited. The rights were exercised by all livestock farmers in the area. This section of the community indicated that even the members from the eastern section were not excluded although the latter excluded the former on their eastern grazing land. There has been some conflicts reported on this grazing land and they were mainly between users from the eastern and western sections. The boundaries of the land were known by 70% of the users (Table 2) while the remainder had no knowledge of the boundaries. The whole group of users indicated that their property rights to this land were not recognised, enforced and protected by law. There was uncertainty regarding the future of property rights to this land among all the respondents. All users of this grazing land indicated that the level of security of their rights to this land was very poor. There were regulations that governed the use of this western grazing land and all people were aware of the rules and forms of punishment for breaking the rules. The rules were enforced by the local committee. However, a member of the local committee indicated that some rules were not observed in their entirety while others were no longer operational. The member also mentioned that the small size of the pasture in relation to livestock population made it difficult to implement rotational grazing. The disrespect of the grazing rules and regulations was confirmed by the respondents as majority of them indicated it to be one of the major problems on this grazing land.

DISCUSSION

Analysis and Discussion of the Security and Impact of Property Rights in the Kat River Valley

Security of property rights to grazing lands

According to the previous section, for the western grazing land users, the breadth is strong while the assurance and duration are weak. For livestock farmers who utilise the eastern grazing land all security aspects including breadth, assurance and duration are strong (Table 3).

On the western grazing land, the security of property rights is weak which had negative impact on the livestock farming. This situation has not motivated these farmers to employ better practices in terms of use and management of the rangeland. They only grazed their livestock without applying any effort to improve fertility and preventing degradation of the rangeland. The situation has resulted in land degradation observed in the area which, in turn, has negatively affected productivity among farmers utilising the rangeland. On the eastern grazing land, the situation regarding attitudes, use and management of the grazing land is the same as the western grazing land which is contrary to economic theory when considering that these farmers had secure property rights to this land. The institutional factors that led to this contradiction will be discussed in the subsequent section.

Institutional analysis and discussion of the impact of property rights

Institutional factors affecting grazing lands in the Kat River Valley

The eastern grazing land users had negative attitudes towards communal use and management of grazing resources. These attitudes led to misuse and mismanagement of this grazing land and destruction of structures such as watering points on the grazing land. The grazing rules and regulations were not observed. These factors led to degradation of the rangeland, hence poor livestock farming development in the area. It was observed by the researcher and reported by people from the western rangeland that this land was used by the whole community even though people from the eastern section of the community never mentioned it during interviews. The size of the western grazing land was too small given the high population of animals kept on the pasture about 17 ha in size. This led to inconsistency in practising and enforcing basics such as rotational grazing. Some rules and regulations were no longer observed and operational as a result and the situation had led to deterioration in the condition of the rangeland. In the case of eastern grazing lands, the detrimental factors were bad as they scored 4 out of 6 points. The results revealed that disrespect of grazing rules and regulations is the most detrimental factor to grazing resources management and development of the small-scale livestock farming on the

Table 4. A quantitative evaluation of the contributions to underdevelopment: case of the eastern grazing land

Individual rights holders	Institutional Factors	Quantitative evaluation of contributions to inefficiencies/underdevelopment			Total points
		Min=1	Med=2	High=3	
	1. Disrespect of grazing rules and regulations			X	
	2. Dislike of communal rights system	X			
Index points		1	0	3	4/6

Table 5. A quantitative evaluation of the contributions to underdevelopment: case of the western grazing land

Western grazing lands	Factors	Quantitative evaluation of contributions to inefficiencies/underdevelopment			Total points
		Min=1	Med=2	High=3	
	1. Small size of pasture		X		
	2. Disrespect of rules and regulations		X		
	3. Lack of property rights			X	
Index points		0	4	3	7/9

pasture as it scored 3 out of 4 points attributed to all detrimental factors. The dislike of the communal rights system scored a point (Table 4). In the western grazing land, the detrimental factors were quite strong as they achieved 7 out of 9 points. The results show that lack of property rights is the most detrimental factor to the management of grazing resources and development of the small-scale livestock farming in the area as it scored 3 points out of 7 that is scored by all detrimental factors. Small size of pasture and disrespect of grazing rules and regulations scored 2 points each (Table 5). The security of property rights was analysed and discussed and the institutional analysis was carried out to investigate the impact of property rights to grazing land resources on resource use/management, hence smallholder development in the area. Quantitative evaluation of institutional factors' contribution to underdevelopment was employed in the exercise. The next chapter presents conclusion and recommendations from the research.

Conclusion

It is argued that smallholder farmers have to engage in meaningful agriculture, if they are to contribute to economic growth and development in the rural areas. Nevertheless, this can only be achieved in the presence of property rights that is, institutions that govern resource use. The property rights should be clearly defined, accepted, understood, protected and enforced in order for them to be efficient and effective. The main question of the study was how the situation of property rights to grazing land resources in the Kat River Valley area affects smallholder development. The results of the study agree with the economic theory that property rights affect economic performance and there are other factors that affect efficiency and effectiveness of the property rights. In the eastern grazing land, the property rights were secure. However, they did not have a positive impact on the use of the grazing as the users disliked the land management system and disrespected the rules and regulations which resulted in misuse, mismanagement and deterioration of the rangeland. The property rights are insecure on the western grazing land and this insecurity coupled with small size of pasture and disrespect of the rules has resulted in misuse and degradation of the veld.

One of the requirements for efficient and effective property rights is the acceptability by the communities. In the Kat River Valley, farmers on western grazing land prefer communal rights for grazing lands while those with private rights to arable and grazing lands prefer private rights for such lands. Therefore, policy makers should consider these when dealing with land issues in the area. That is, land policy should focus on granting only the land rights that are preferred by people as it is believed that such rights could positively influence their behaviour and economic performance. Most economic development is the result of private ownership of resources including land and water. It was discovered that private rights to land resources are disrespected, hence inefficient and ineffective in the Kat River Valley. As a result, the government through its relevant ministries should ensure that the property rights to resources are protected and enforced in the area.

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