

EFFECT OF CONFLICT ON RESOURCE USE AND INCOME OF NON- FADAMA AND FADAMA- BASED MICRO ENTERPRISES IN RURAL AREAS OF EBONYI STATE, NIGERIA

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ABSTRACT

Conflicts over resource use are becoming regular issue affecting productivity of Fadama and non-Fadama enterprises in recent times. This study assessed the effects of conflicts arising from resource use, and its implications on the income of micro-entrepreneurs in rural areas. Purposive sampling was used to select the study area. Data were collected using questionnaire from 160 respondents and through a focus group discussion with respondents. Data analysis included descriptive statistics such as five point likert scale. Effects on both Fadama and non Fadama sectors were compared using a parametric inferential statistics (Mann Whitney U. test). The major groups involved in conflict over resource use in the two sectors are identified as farmers, hunters, and grazers. Losses of crops, animals, physical body injuries on parties involved, reduction in income of farmers and unquantifiable resources expended on medication or for seeking legal redress were deliberate and incidental effects of conflicts on resource use. Participatory planning process involving all stake holders and firm support for the development of resolution mechanism will foster cooperation, rather than conflict.

INTRODUCTION

In Nigeria, agriculture is a rural based activity. Community conflicts over the use of resources are becoming a regular feature of rural agriculture since the 1960(s). There are different levels of competition and clashes over the control of available resources. The contending groups are farmers, fruit gatherers, hunters and grazer. Blench and Ingawa (2004) identified three major classes of conflicts. These are conflicts within a community over access right between communities and between citizens and authorities over resources.

The question of resource use in traditional agriculture is not trivial. It is widely held that efficiency is at the heart of agricultural production. This is because the scope of fadama and non-fadama micro-enterprise can be expanded and sustained through efficient use of resources, in a conflict free environment (Saiad, 1999). For these reasons, conflict over resource use has remained an important subject of empirical investigation particularly on fadama based micro-enterprises in rural areas.

Previous studies relating to conflict management in the use of resources classified it into two. These are inter-group conflict characterized by violence ensuing between farmers and pastoralists when either of the two groups encroaches on land claimed by any of the parties or

drainage of available water sources. Intra group conflict,, where members of the same group contest for the control of the same resources (Okoli, 1996). Conflict on resource use can affect productivity of agricultural enterprises. It can lead to losses of crops and animals, physical injury, drastic reduction in income. Panwal (2003), observed that unpredictable human and institutional policies which may result into conflict affect resource use negatively. Recent literatures reveal that, in spite of the increase in violence over the use of resources, empirical studies of Nigerian agriculture have concentrated on resource use efficiency. Analytical approach to identifying the impact of conflict on resource use and income of micro-enterprises in Nigeria has not been adequate. Few of such studies (e.g. Afoke, 1997; Meludu, 2006; Saiad, 1999) paid particular attention to conflict management and resolution strategies. The question therefore is: do the high frequency of disputes not affecting the farmer's resource use and income? This paper is an attempt to answer this question with specific emphasis on the level of productivity.

METHODOLOGY

The study area is Ebonyi State. It lies approximately between latitudes 7°28' and 8°30' North of the Equator and between longitudes 5°40' and 7°00' East of the Greenwich Meridian (Ebonyi State Planning Commission 2005). The state shares common boundaries with Benue in the North, Abia State in the South, Cross River in the East and Enugu State in the West. Its total land area is about 5935Km² and a population of about 2.146 million. (EBS Planning Commission). About 80 percent of the people are engaged in subsistence agriculture. Both purposive and random sampling techniques were employed. Purposive sampling was used to select two agricultural zones. Two local government areas (LGAs) were also purposively selected from each zone. Two towns were purposively selected, totaling eight towns in all. The purposive selection was based on areas characterized by high frequency of conflict. Twenty farmers (10 fadama and 10 non-fadama) were randomly drawn from each of the selected towns making a total of 160 respondents for the study.

Data on the effects of conflict on resource use and income of both enterprises was collected using a set of questionnaire and from focus group discussion. Data analysis included descriptive statistics such as: frequencies, means, cross tabulation and five point likert scales.

The level at which conflict affect resource use and income of fadama and non fadama enterprises were determined from the perceptions of the respondents. This was achieved using a five point likert-type rating scale weighted as follows: very high (5), high (4), moderate (3), low (2), very low (1). The cut-off point was 3.0 (obtained by dividing the sum of 5, 4, 3, 2, 1 by 5). Decision rule shows that responses with mean scores ≥ 3.0 were regarded as "agreed" while mean scores ≤ 3.0 were regarded as "disagreed". To accomplish the goal of comparison on both enterprises, a non parametric inferential statistics (Mann Whitney U test) was adopted. This is specified as:

Equation 1.1

$$U_1 = N_1 N_2 + \frac{N_1 (N_1 + 1) - R_1}{2}$$

Equation 1.2

$$U_1 = N_1 N_2 + \frac{N_2 (N_2 + 1) - R_2}{2}$$

Where

U = The smaller of U_1 and U_2

N_1 = Sample size of fadama respondents

N_2 = Sample size of non fadama respondents

R_1 = Sum of ranked scores from likerts scale for responses of fadama respondents.

R_2 = Sum of ranked scores from likerts scale for responses of non-fadama respondents.

Level of significance: 5 percent

Decision Rule: Accept H_0 if $P(U \text{ statistics}) > 0.05$

Reject H_0 if $P(U \text{ statistics}) < 0.05$

RESULTS AND DISCUSSIONS

Socio-Economic Characteristics of Respondents.

The characteristics considered were age, educational status, gender, and income level. The result is presented in table 1. On age classification, more than half of the farmers (81.3%) were found to be within the age bracket of 31 to 50 years. The least number of respondents were found in the 30 years and less than 30 years age bracket. Only 11.8% the respondents is older than 50 years. The study shows a productive farming population. Since the age of farmer is important in determining productivity, it implies that in a conflict free environment there can be an efficient resource use and substantial increase in output.

The educational level of farmers is known to affect their production efficiency. Agricultural extension experts pointed out that, farmers with higher educational qualification adopt conflict management and survival strategies more than those without or with lower educational qualification. Evidence from this study reveals that 58.1% of the respondents had no formal education, while about 24.4% are farmers with primary education. Thus, not less than 82.5% of the respondents had no or low level of education. This is in conformity with the often reported illiterate status of rural farmers from many previous studies as a result of rural urban migration of educated men. This is expected to impact negatively in the study area.

From gender perspective, the females were found to make up the bulk of farming population in the study area. About 83% of the sampled farmers are women. Several studies have indicated that women constitute up to 70% of African agricultural workforce. Sigot (1995), shows that women in Africa are responsible for an estimated 80% of total food production throughout the continent. Since females represent the bulk of the farming population, they receive greater effect of conflict on resource - use.

On the income level, majority of the farmers (55.6%) fall within the low income bracket, based on the mean income of twenty thousand naira (₦20,000) in the study area. This is because most farmers carry out their activities on subsistence level. Those who can earn above ₦20,000.00 constitute 9.4% of the sample. The rural farmers are poor. Hence, income level is a factor of coping strategies of the farmers in the use of resources during conflict for sustainable livelihood.

Table 1: Socio-Economic Characteristics of Farmers

Characteristics	Fadama		Frequency Non-fadama		Total	
	No	%	No	%	No	%
Age						
≤30	6	7.5	5	6.3	11	6.9
31-40	25	31.5	22	27.5	47	29.4
41-50	40	50	43	53.7	83	51.9
>50	25	11.25	10	12.5	19	11.8
	80	100	80	100	160	100
Educational level						
No formal education	45	56.25	48	60	93	58.1
Primary education	20	25	19	23.75	39	24.4
Secondary education	10	12.5	9	11.25	19	11.9
Tertiary education	5	6.25	4	5	9	5.6
	80	100	80	100	160	100
Gender						
Male	12	15	15	18.75	27	17
Female	68	85	65	81.25	133	83
	80	100	80	100	160	100
Income level						
Low income (≤ ₦20,000)	46	57.5	43	53.75	89	55.6
Middle income (₦20,000)	26	32.5	30	37.5	56	35
High income (> 20,000)	8	10	7	8.75	15	9.4
Mean income (20,000)	80	100	80	100	160	100

Source: Field survey data, 2009

Impacts of Conflicts on Resource Use and Income of Fadama and Non-Fadama Respondents

The results on table 2 prove that fadama respondents perceived that drastic conditions that hinder the efficient use, productivity and income of resources include: Destruction of crops, physical body injuries on parties involved, unquantifiable resources expended on seeking legal redress, unfavourable government policy and unplanned relocation of farmers to other areas during conflicts. On the other hand, the non fadama respondents identified destruction of crops, income spent on medication and unplanned relocation of farmers to be affecting resource use and income.

Table 2: Perceptions of the Respondents on the Effect of Conflicts on Resource Use and Income of Micro Enterprises.

Effects	Mean scores (measured on a 5 point likert scale)		Remark	
	Fadama	Non-fadama	Fadama	Non-fadama
Destruction of crops	4.51	3.74	A	A
Losses of livestock	2.82	2.54	D	D
Physical body injuries	3.85	3.63	A	A
Income spent on legal redress	4.01	2.53	A	D
Relocation of farmers	3.50	3.40	A	A
Denial of access	4.34	3.82	A	A
Unfavourable government policy	3.14	2.74	A	D
Income spent on medication	3.94	3.86	A	A
Grand x score	3.76	3.28		

Source: Field survey data, 2009

Where: A = Agree > 3, D = Disagree ≤ 3

These results are in line with documented literature, which portrays resource use and income of micro-enterprises being affected severely by conflicts (Meludu, 2006). However, there appeared to be divergent views held by the respondents as to the cost of conflicts to the parties involved. Respondents from both enterprises admitted that denial of access to use of resources, destruction of crops affects productivity when they are facing conflict situations. The income of fadama-based micro-enterprises is affected severely. This is because considerable portions are spent on seeking legal redress. This is serious considering the low-income status of farmers, especially in the rural areas of Nigeria. Furthermore, unplanned relocation of the farmers to other areas during conflict was agreed to severely affect resource use and income of farmers in both enterprises. Losses of livestock are viewed not to significantly affect resource use. Focus group discussion suggested that the discontent leading to conflict could be due to unequal treatment. It may lead to aggrieved party destroying the farm produce of another party still holding title to resource in contest.

Comparison of the Effect of Conflict on Resource Use and Income of both Enterprises

The Mann Whitney U tests were adopted to assess differences in the effect of conflict on resource use and income of fadama and non-fadama respondents.

Summary of the results are presented on table 3. Five of the eight effects were found to have significant enterprise differences. These include destruction of crops, income spent on legal redress, unfavorable government policy, denial of access and unplanned relocation. These imply that there are significant differences in the level at which resource use and income of respondents in both enterprises is affected.

Table 3: Results of Mann Whitney U test on the Differences in Respondents' Perception on the Effect of Conflict on Resource Use and Income

S/N	Effects	Mann Whitney U	P values	Remarks
1	Destruction of crops	786.000	0.000	Significant
2.	Losses of livestock	1413.400	0.841	Not sig.
3.	Physical body injury	875.000	0.000	Significant
4.	Income spent on legal redress	1384.00	0.347	Not sig.
5.	Unplanned relocation of farmers	924.00	0.001	Significant
6.	Denial of access	798.000	0.000	Significant
7	Unfavourable government policy	1165.500	0.032	Significant
8	Income spent on medication	1476.500	0.891	Not sig.

Source: Findings of Analysis from field survey data, 2009.

Findings show that none of the two enterprises was free from conflict resulting from competition over control of resources. There appeared to be higher frequency of clashes among the fadama resource users. The contending groups for the use of fadama resource were mainly farmers and grazers. Destruction of crops and unplanned relocation of farmers tend to be more often in the fadama sector. Most fadama farms are located near grazing areas and water resources. Suleiman (1998), noted that Fadama are usually replete with natural resources. The surrounding environments that flourish with luxuriant pasture and fertile land satisfy the need of pastoralists and farmers. In terms of food security (usually in the form of assorted fruits, seeds and vegetables), phytomedicine, timber and other non-timber resources, fadama environments are veritable sources of livelihood in traditional societies.

Consequently, violence usually ensued between the farmers and pastoralists from either of the groups encroaching on land claimed by the other or drainage of available water sources, resulting to body injuries. On the average, there is relatively high demand of fadama land. Denial of access associated with traditional tenure system, is mainly characterized by controversies of title ownership.

CONCLUSION AND RECOMMENDATIONS

The findings of the study reveal that farmers perceived some factors as serious effects of conflict on resource use and income in the study area. These include; denial of access right, destruction of crops, losses of livestock, physical injuries, reasonable part of low income of respondents being spent to seek legal redress, unplanned relocation for farms, unfavourable government policies and income spent on medication.

In the light of the above, the following suggestions are made: resources users should respect the right of one another. A symbiotic relationship could be established between the pastoralists and farmers where the incidences of clashes appeared to be more frequent. Government should clearly define areas of operation for grazers and farmers. Functional resolution strategies and mechanism should be employed by both government and other institutions. This is feasible by establishing a link between the traditional institutions responsible for conflicts resolution and government law enforcement agents. Conflict management strategies should be included in agricultural extension package for efficient agricultural and rural development. Above all,

participatory planning process involving all stake holders and firm support for the development of resolution mechanism will foster cooperation, rather than conflict.

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