

Contributions of Social Networking to Accessing Resources for Irrigation Farming among Farming Households in North Central Nigeria

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Abstract

This study focused on the contributions of social networking in accessing resource for irrigation farming among farming households in north central Nigeria. Systematic random sampling was used to select 194 respondents from Oke-oyi and shonga (Kwara State) and Ejiba (Kogi State). Data were obtained using structured questionnaire. The data were analyzed using descriptive statistics and Pearson Product Moment Correlations. The findings indicated that market information with the mean score of 2.75, was the most important contribution of social networking in accessing resource for irrigation farming while lack of input with mean score of 2.27 was the highest ranked constraint faced by the farmers using irrigation for crop production. The result of correlation analysis revealed that there was no significant relationship between the contributions of social networking in accessing resources for irrigation and the constraints faced by the farmers using irrigation for crop production. Based on this results, it is therefore recommended that there should be creation of awareness on various opportunities that are available for irrigation farmers participating in social networking.

Keywords: Contribution; Social networking; Irrigation; Resources

Introduction

Irrigation is the artificial application of water to the soil for the purpose of supplying moisture for plant growth to supplement insufficient soil moisture especially during the dry season in Nigeria. Irrigation based farming in Nigeria only covers 7 percent of irrigable land [1]. The public irrigation sector in Nigeria accounts for 13% of the irrigated area and an estimated 0.25% of total agricultural area [2]. The place of irrigation in Nigeria's agricultural development cannot be overemphasised. The National Irrigation Policy is based on boosting domestic agricultural production using irrigation because rain-fed production alone cannot meet demand [3].

A social network is a set of individuals or groups who are connected to one another through socially meaningful relationships [4]. A social network can consist of groups and sub-groups of actors. Examples of such socially meaningful relationships include family, friends, or relations based on trust, giving advice, or sharing information [5]. Understanding the individual, groups or entity that enable people to access resources and collaborate to achieve shared goals is an important part of the concept of social capital. Social networkings could be spontaneous, informal, and unregulated exchanges of important information and resources among farmers, as well as efforts at cooperation, coordination, and mutual assistance that help maximize the utilization of available resources. Such networks often clearly stated rules that govern how group members cooperate to achieve common goals. These social networks have the potential to nurture self-help, mutual help, solidarity, and cooperative efforts among farmers.

In Nigeria, there are many irrigation schemes which are constructed and managed by the River Basin and Rural Development Authorities (RBRDAs) for provision of food especially during the dry season. In these irrigation schemes there are many organizations and institutions that are working together to ensure that farmers can access resources for irrigation farming. These organizations and institution are known as social networking. For this study the social networking that are available within the River Basin in Nigeria are water users association, agric extension agency, input suppliers, religious group, cooperative societies, farmers group, community based organization, non-governmental organization, neighbourhood and family. It is therefore necessary to carry out a research in order to determine the

contribution of social networking in accessing resources for irrigation farming. In the light of the above, the general objectives of the study is to determine the contributions of social networking in accessing resources for irrigation farming among farming household in North Central Nigeria.

The specific objectives of the study are to:

1. Identify the socio-economic characteristics of farmers using irrigation facilities in the study area.
2. Determine the degree of participation of farmers in social networking.
3. Determine the contributions of social networking in accessing resource for irrigation farming.
4. Determine the constraints faced by farmers using irrigation for crop production.

Statement of hypothesis

The hypothesis tested;

H1: There is no significant relationship between contributions of social networking in accessing resource for irrigation farming and the constraint faced by farmers using irrigation for crop production.

Methodology

This study was carried out in two states of North Central Zone Nigeria (Kwara and Kogi State) under the Lower Niger Irrigation Development Scheme. The respondents for the study were Lower Niger

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River basin irrigation farmers who used their facilities in Kwara and Kogi States. The villages were Oke-oyi, shonga and Ejiba of which 194 farmers were interviewed (Table 1).

The population of the study comprises of all farmers using the Irrigation scheme of Lower Niger River Basin in Kogi and Kwara State (North Central, Nigeria). Lower Niger River Basin Authority (LNRBA) irrigation farmers (Kogi and Kwara States) were purposively selected for the study. The list of all the farmers at lower Niger River Basin Authority Irrigation sites were provided of which Simple Random Sampling technique was used to select 50% of the farmers in each irrigation sites (Oke-oyi 15 farmers, Shonga 25 farmers and Ejiba 154 farmers). A total of 194 respondents were interviewed for the study.

Results and Discussion

Demographic characteristics of respondents

Age: The age of farmers to a large extent affect their labour productivity and output. It also affects the adoption of innovation in traditional farming. The results showed that majority of respondents were youths and less than 40 years of age. The average age is 35.80 years. The result from Table 2 showed that 46.40% of the respondents' age falls between 31-40 years, 40.20% of them are in the age bracket 20-30 years, 8.25% of the respondents fall between 41-50 years of age while 5.1% are within the age bracket 51-60 years of age. The result therefore indicates that a good proportion of the study respondents are youths based on African Union definition of youths to be every person between 15 – 35 years of age [6]. The fact that most of the respondents are youths could imply that irrigation farming is viable and profitable, this is more so since youths would most likely undertake only paying jobs.

Gender: The findings in Table 2 showed that all the respondents 100% are male. This suggests that irrigation farming is dominated by male farmers in the study area. This may be as a result of fact that operation of the irrigation farming may be cumbersome for females. The result is in line with what Salisu reported that irrigation was a male affair only in northern Nigeria [7].

Marital status: Table 2 shows that 96.4% of the respondents are married while 3.6% are single. The reason for this result may be because irrigation farming requires high labour demand, many farmers relied on their family members to supply the needed labour requirement.

Religion: Findings from Table 2 showed that majority 94.8% of the respondents are Muslim while 5.2% are Christians. This shows that there was no religious barrier to participation in irrigation farming.

Years of Experience: Table 2 shows that 37.19% of the respondent's years of experience ranges between 6 –10 years, 30.9% of them had their years of experience ranges between 11–15 years, 14.9% of the respondents had their years of experience ranges between 1–5 years, 13.4% ranges between 16–20 years while 3.61% between 21---25 years and the mean farmers' irrigation farming experience is 10.87 years. This implies that the farmers have considerable experience in irrigation farming which could be as result of their participation in social networks over the years.

Educational level: The results from Table 2 showed that more than

Irrigation site	Sample frame	Sample size
Oke-oyi	30	15
Shonga	50	25
Ejiba	308	154

Table 1: Sampling population.

Demographic Characteristics	Frequency	Percentage	Mean
Age Years			
20-30	78	40.2	35.8
31-40	90	46.4	
41-50	16	8.25	
51-60	10	5.1	
Total	194	100	
Gender			
Male	194	100	
Female	0	0	
Total	194	100	
Marital Status			
Married	187	96.4	
Single	7	3.6	
Total	194	100	
Religion			
Islam	184	94.8	
Christian	10	5.2	
Traditional religion	0	0	
Total	194	100	
Years of Experience (years)			
1-5	29	14.9	10.87
6-10	72	37.19	
11-15	60	30.9	
16-20	26	13.4	
21-25	7	3.61	
Total	194	100	
Educational Level			
No-formal	105	54.1	
Primary	76	39.2	
Secondary	13	6.7	
Total	194	100	
Quantity of land under irrigation(ha)			
≤ 1	142	73.19	1.0832
1.1-1.5	19	9.79	
1.5-2.0	20	10.33	
2.1-2.5	14	7.2	
Irrigation farming income (Naira)			
≤ 100000	125	64.43	1,16,881.44
100000-200000	54	27.84	
210000-300000	12	6.18	
310000-400000	3	1.55	

Source: Field survey, 2013

Table 2: Demographic characteristics of respondents.

half (54.1%) of the respondents had no-formal education, 39.2% had primary education while 6.7% had secondary education. The above result confirmed the findings of Fakayode et al. who reported that majority of the irrigation farmers have not had any form of formal education [8].

Quantity of land under irrigation: The result showed that 73.19% of the respondents practiced irrigation based farming on a farm size that is less than 1 hectare, 10.33% of them had a farm size that ranges between 1.5 - 2 hectares, 9.79% have farm size ranges between 1.1 - 1.5 hectares while 7.2% have farm size ranges between of 2.0—2.5 hectares. The result shows that majority of the irrigation farmers cultivate on a farm land that is less than 1 hectare. This implies that all the respondents are all small scale irrigation farmers with little or no farm mechanization. The result is in line with what Dixon et al. reported

that smallholder farmers usually cultivate less than one hectare of land, which may increase up to 10 ha or more in sparsely populated semi-arid areas [9].

Irrigation farming income: The results from Table 2 showed that more than half (64.43%) of the respondents' income from irrigation farming were less than # 100,000 Naira, 27.84% of the respondents had between #100,000 --- #200,000 as their annual income from irrigation farming. 6.18% of the respondents had between #210,000--- #300,000 as annual irrigation farming income while 1.55% got between #310,000--- #400,000 as their income from irrigation farming. The mean farmers' annual income is # 116,881.44 Naira, this implies that irrigation farmers are better off. Besides, irrigation farming had greatly reduce poverty level and improved the living standard of the farmers in the study area.

Degree of participation in social networks: The data in Table 3 showed that all the respondents (100%) are ordinary members of religious groups, neighbourhood and family, 5.12% are executive members of the water users association while 1.5% are executive members of cooperative societies.

Contribution of social networking in accessing resources for irrigation farming

The results of data analysis in Table 4 showed that market information has the highest mean score of 2.75, this is followed by access to input/technology with the mean score of 2.58, provision of information on labour with the mean score of 2.56, access to information on irrigation (2.53), provision of information on land acquisition (2.26), training of farmers / extension services (1.91) and access to credit (1.76). The result shows that market information is the most important contribution of social networks to the use of irrigation by the respondents. This implies that more farmers would likely show interest in participating in social networking and irrigation farming since the contributions are vast and visible. The result is in agreement

with Dauda et al. which states that the benefit of irrigation in Nigeria is not limited to food supply alone but it also serves as a source of income and employment during the slack period of rain-fed agriculture [10].

Constraints faced by farmers using irrigation for crop production

The result in Table 5 showed that lack of inputs was the most severe constraint and was ranked first with the highest mean score of 2.27, this result is in agreement with what Ifabiye et al. reported that lack of input and access to credit facilities was the least motivating factors in irrigation farming [11]. This is followed by poor maintenance of irrigation facilities with mean score of 2.14, lack of access road (2.11), lack / inadequate of labourers (1.94), lack of transportation (1.91), lack of access to irrigation facilities (1.63), lack of extension services (1.56), flooding / erosion (1.49) and lack of market (1.37). This implies that farmers' productivity would be reduced due to lack of access to input such as viable seeds, fertilizer, herbicides and insecticides etc.

Testing of hypothesis

H1: There is no significant relationship between contributions of social networking in accessing resource for irrigation farming and the constraint faced by farmers using irrigation for crop production.

The result shows that there is no significant relationship between the contributions of social networking in accessing resources for irrigation farming and constraint faced by farmers using irrigation facilities ($r = -0.106$; $p = 0.141$). This study therefore accepts the null hypothesis Table 6. This implies that the contribution of social networking in accessing resources for irrigation farming does not have significant influence on the constraints faced by the farmers using irrigation to discourage farmers from engaging in irrigation farming.

Conclusion

The contributions of social networking were discovered to be vast

	Social networks	Executive member		Ordinary member		No participation	
		Freq	%	Freq	%	Freq	%
1	Water user association	10	5.12	184	94.86	-	-
2	Cooperative society	3	1.5	191	98.5	-	-
3	Agriculture extension service	-	-	194	100	-	-
4	Input supplier	-	-	177	91.2	17	18.8
5	Non-governmental agency	-	-	22	11.3	172	88.7
6	Farmers groups	-	-	60	30.9	134	69.1
7	CBO	-	-	23	11.9	171	88.1
8	Religious group	-	-	194	100	-	-
9	Neighbourhood	-	-	194	100	-	-
10	Family	-	-	194	100	-	-

Source: Field survey, 2013

Table 3: Distribution of respondents based on their degree of participation in social networks.

S.No	Contribution of social networking	High		Undecided		Low		Mean	Rank
		Freq	%	freq	%	Freq	%		
1	Market information	170	87.6	-	-	24	12.4	2.75	1
2	Access input/ technology	133	68.6	41	21.1	20	10.3	2.58	2
3	Provision of information on labour	141	72.7	20	10.3	33	17	2.56	3
4	Access information on irrigation farming	132	68	33	17	29	15	2.53	4
5	Provision of information on land acquisition	110	56.7	24	12.4	60	30.9	2.26	5
6	Training of farmers/extension service	57	29.4	63	32.5	74	38.1	1.91	6
7	Access to credit facilities	57	29.4	34	17.5	103	53.1	1.76	7

Source: Field survey, 2013

Table 4: Distribution of respondents based on the contribution of social networking in accessing resources for irrigation farming.

S.No	Constraints	Severe		Undecided		Not severe		Mean	Rank
		freq.	%	freq.	%	freq.	%		
1	Lack of inputs	118	60.8	10	5.2	66	34	2.27	1
2	Poor maintenance	99	51	24	12.4	71	36.6	2.14	2
3	Lack of access road	91	46.9	34	17.5	69	35.6	2.11	3
4	Lack/inadequate labourers	86	44.3	10	5.2	98	50.5	1.94	4
5	Lack of transportation	76	39.2	24	12.4	94	48.5	1.91	5
6	Lack of access to irrigation facilities	61	31.4	-	-	133	68.6	1.63	6
7	Lack of extension services	47	24.2	14	7.2	133	68.6	1.56	7
8	Flooding/erosion	39	20.1	17	8.8	138	71.1	1.49	8
9	Lack of market	32	16.5	7	3.6	155	79.9	1.39	9

Source: Field survey, 2013

Table 5: Distribution of respondents based on the constraints faced by farmers using irrigation for crop production.

Variable	r value	p value	Decision
Contribution of social networking in accessing resource	-0.106	0.141	Not significant

Table 6: The result of correlation between contribution of social networking in accessing resource for irrigation farming and the constraint faced by farmers using irrigation for crop production.

and rewarding among irrigation farmers in north central Nigeria. The result shows that market information was the most important contribution of social networkings to the use of irrigation while lack of input was the highest ranked constraint faced by farmers using irrigation farming.

Recommendations

The following recommendations were suggested;

1. Government and Non-governmental organization should create more awareness about irrigation farming.
2. Farmers participating in irrigation farming should form functional groups through which they can access resources for irrigation farming.
3. Government should expand the various irrigation facilities in the country so as to attract new farmers.

There should be training of farmers.

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