Determinants of mass media utilization by rural households for accessing agricultural information in Cross River State, Nigeria

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Abstract

This study accesses the determinants of mass media utilization by rural households for accessing agricultural information in Cross River State, Nigeria. The specific objectives of the study were to; identify the types of mass media available to farmers in the area, ascertain the extent of mass media utilization by rural households in the area, and ascertain the determinants of mass media utilization by rural households in the area. The study was carried out in Cross River State. The population of the study comprised all the rural farming households in the state, and a total of 200 respondents were randomly sampled for the study. Data were collected with the aid of a validated semi structured questionnaire, administered by the researchers and analyzed using percentages, mean, ranking and logit regression model. The results of the analysis revealed that the most readily available mass media in the area were television, radio, newspapers and mobile phones, and these media were equally the most utilized by the farmers. It was also observed that income level, educational level and farming experience etc. were some of the socioeconomic variables that determined farmers utilization of mass media for agricultural information. It was recommended, among others, that community/farm radio should be introduced in rural areas to enhance farmers access to agricultural information.

Keywords: Mass Media, Rural Households, Agricultural Information

Introduction

In recent times, the international community has been awakened to the realization that traditional farming techniques and the current food production strategies being deployed by farmers and governments around the world cannot guarantee sustainable food supply to meet the consumption demands of a rapidly growing world population. The world is equally confronting an unprecedented global food crisis that has become a major international humanitarian concern.

Farmers in different parts of the world are facing profound multi-sectorial challenges that are silently threatening the core of human survival. Food, at whatever level it is produced or supplied, is fundamental to our existence, essential to the survival of all living things and a key component of global economy. Food shortages, particularly in conflicts ravaged

regions around the world is putting massive pressure on the United Nations budget, and the United Nations Food Programme has continued to play crucial role in food intervention across different continents. An increased food distribution and intervention in one region is almost always met with new calls for engagement and interventions in other regions.

Conflicts in sub-Saharan Africa and in the Middle East, for example, have brought all forms of farming activities to a near halt, while issues of growing terrorism and communal hostilities have continued to ask questions of the sustainability of farming initiatives and humanitarian interventions. The number of food refugees has increased exponentially in contemporary times, and the international community can no longer take for granted that a natural restoration process will inevitably reset the cascading food trajectory to convenient threshold. It is equally dangerous to presume that food distribution and interventions conducted by the United Nations and its allied humanitarian organizations around the world is a panacea to global food emergencies. At best, these efforts can only help to conceal, if not postpone, the calamity associated with hunger, starvation, famine and poverty.

The hesitation of some governments to pursue a robustly genuine food production programme is a well-implicated dimension of food shortages and agricultural underdevelopment in those areas. Some countries including Nigeria have dangerously politicized agricultural interventions, with the implication that government–sponsored initiatives are either being embezzled or distributed purely on ethnic, religious or party patronage. This disposition has been perceived as one of the main reasons for the comatosed state of agriculture in developing countries.

Similarly, the consistent use of crude farm implement and traditional farming methods, lack of mechanization, problem of illiteracy, poverty, cultural and religious barriers and land tenure issues have conspired to threaten food production and consumption. The emergence of information and communication technologies was perceived as a major source of comfort for addressing agricultural problems. The initial permutations were that with technologies, farmers can now have unrestrained access to unlimited volume of useful information on their farming needs and this would give them opportunity to adopt innovations that could enhance yields.

However, there is still a massive rural – urban digital dichotomy. It can no longer be argued that 80% of the food consumed around the world is produced by rural households (farmers) with limited access to modern technologies and information. Modern communication or teaching

technologies such as defined by Jagbore in Ugwulebo and Okoro (2016) as a rich, multi-layered complex for information dissemination and a medium for collaborative interaction between individuals and computers without regards for geographical limitations of space; video conferencing, print media (newspaper, magazines, pamphlet, flyers) radio, television, social media platforms like facebook, whatsapp, electronic mail and computer-aided instructions among others have been deployed by public and private sector organizations to reach farmers with innovations. According to Nawab, Badar, nanak, Zulfiger, Sohaib, Hufiz, Siyad, Rizwan, Tahir and Awais (2020) most people still depend on traditional mass media such as newspapers, radio and television as effective sources for disseminating information about agriculture. Studies by Nawab *et al.* (2020) in the Bahawalpur district of Punjab, Pakistan, for instance, suggests that the radio broadcasts, television, mobile phones and internet etc. were effective means of sharing agricultural information. The advantages of these forms of mass media have equally been acknowledged by Aiyesimaju and Awonigi (2012) and Ashraf, Khan, Ali, Ahmed and Iftikhar (2015). The study by Abubakar, Ango and Buhari (2009) shows that access to mass media on agricultural information is through radio and television and indicates that the cost of purchase and maintenance were farmers major challenges in utilizing these media.

Farmers in Cross River State, like those in other parts of the country have continued to rely on traditional news media such as the use of town crier, folklore, family, friends, rumours and local gossips to access information. Some of local sources of agricultural information are rarely reliable and hardly capture the very current and important information on innovations that farmers need. The law rate of utilization of mass media in Cross River State has also been linked with farmers socioeconomic variables.

Despite the globally recognized role of mass media in promoting the dissemination of agricultural information to farmers, there are still great concerns about the level of access to media channels and extent of utilization among rural farmers in Cross River State. This is partly because farmers in the rural areas of the state have continued to depend on traditional news channel such as the town crier and oral tradition for information on agriculture. The consequences of this has been that farmers in the area are short of knowledge about modern farming techniques with implication for low productivity. This has become a concern to all stakeholders in the agricultural sector and the scientific community in Cross River State. It is

against this background that his study was carried out.

Research Questions

The study was based on the following research questions:

i. What are the types of mass media available to rural households in the study area?
ii. What is the extent of utilization of mass media by rural households in the study area?
iii What are the determinants of mass media utilization for agricultural information by rural households in the study area?

Objectives of the study

The main objective of this study was to ascertain the determinants of mass media utilization by rural households for accessing agricultural information in Cross River State, Nigeria.

The specific objectives of the study were to;

i. identify the types of mass media available to rural households in the study area;
ii. ascertain the extent of mass media utilization by rural households in the study area; and,
iii assess the determinants of mass media utilization for agricultural information by rural households in the study area.

Research Hypothesis

The study was anchored on the following null hypothesis;

H_o: There is no significant relationship between the socioeconomic characteristics of rural households and their utilization of mass media for agricultural information in the study area.

Research Methodology

The study adopted a survey design and was carried out in Cross River State. Cross River State is a coastal state in the South South geopolitical zone of Nigeria, in the Niger Delta region, and occupies approximately 20,150km^2. The state shares both local and international boundaries; it is bounded by Benue State to the North, Ebonyi and Abia States to the West, Akwa-Ibom and the Atlantic Ocean to the South, and the Republic of Cameroon to the East. The state is predominantly a farming area with large fertile arable land suitable for farming activities. The state has eighteen (18) Local Government Areas, divided into three Agricultural (Calabar, Ikom and Ogoja) Zones. Some of the major crops cultivated in the area are yam, rice, cocoa, cassava, oil palm and vegetables etc.

The population of the study comprised all rural farming household in the 18 blocks. The study adopted a multi-stage sampling technique: stage one involved a random selection of three local government areas from each of the three agricultural zones (Calabar, Ikom and Ogoja) of the state. Stage two was the random selection of two (2) farming cells from each of the blocks selected, while stage three was the random selection of 200 rural farming households across the communities sampled. The instrument used

for data collection was a set of validated semi structured questionnaire, administered by the researchers. Data obtained were analyzed using descriptive statistics such as percentage, mean and ranking, as well as inferential statistics specifically the logistic regression was deployed to test the hypothesis.

Results and discussion

Types of mass media available and used in the area

The results in Table 1 show the various types of mass media available and used by the rural farming households. It reveals that the television, radio, newspapers, mobile phones, pamphlets/handbills, whatsapp and fliers were available and used by the farmers in the area. However, computer/internet services, facebook, micro blogs and news portal etc. are less common among rural farming households in the study area.

Extent of utilization of mass media

Results in Table 2 reveals that six of the thirteen mass media channels identified were utilized by the rural farming households, while seven of the channels were not utilized by the respondents. Specifically, the study indicates that traditional news media such as the radio (rank = 1st), television (rank = 2nd) and newspaper (rank = 3rd) were the most frequently utilized mass media in the study area. The findings however, suggests that micro blogs, facebooks, electronic mail and computer/internet channels were rarely used by the respondents as these media recorded mean scores below the decision rule of 2.50. This result indicates that the respondents were still largely dependent on the more conventional mass media for agricultural information.

Socioeconomic determinants of mass media utilization

Table 3 shows the relationship between the socioeconomic characteristics of the respondents and their utilization of mass media for accessing agricultural information. The results of the logit estimates revealsthat 35% of the rate of utilization of television in the area was explained by the explanatory variables included in the model. Similarly, the Model Pseudo R^2 Value of 0.1244 indicates that only 12% of the rate of utilization of radio in the area was explained by the socioeconomic characteristics of the respondents. The strongest association between the socioeconomic variables and mass media utilization was found in the use of mobile phone, where 53% of phones utilization in the area was accounted for by the explanatory variables as shown by the Model R^2. Generally, the estimates shows a weak connection between the socioeconomic characteristics of the respondents and their utilization of mass media for agricultural information.

Discussion of Findings

The findings of the study presented in Table 1 indicates that a wide range of mass media exists but some of these media were not available to

farmers in the study area. Rural farming households in Cross River State have access to the television, radio, newspaper and the more popular mobile phones. These are very conventional news media that have existed for decades and have penetrated rural settlements. This result supports the findings of Nawab *et al.* (2020) and Abubakar *et al.* (2009) who reported the use of television and radio among farmers in Punjab district and Birnin Kebbi Local Government Areas, respectively.

Table 2 shows the mean ratings of the extent of utilization of mass media for agricultural information by rural households in Cross River State. The finding suggests that traditional mass media such as radio (which ranked first as the most utilized media for agricultural information), television (which equally ranked very highly among the rural households), newspapers (and other print media) and mobile phones were the most utilized media in the area. This is partly because these media are common, accessible, easy to use and probably cheap to acquire. Other media that requires some level of sophistication such as micro blog, computers/internet and facebook are not popular among farmers in the area. This can be explained by the level of literacy among rural households and the fact that using these media have additional cost implication. For example, using facebook requires extra cost for data, which many low income households are clearly reluctant to incure. These findings agrees with that of Aiyesimoju and Awoniyi (2012) and Ashraf *et al.* (2015).

The result of hypothesis test presented by the logit regression estimates shows the influence of farmers socioeconomic variables on their utilization of mass media for agricultural information in Cross River State. From the findings in Table 3, there is a link between farmers socioeconomic characteristics and their use of mass media. For example, the annual income level was significantly related to the use of mass media which suggests that rural households' utilization of media for agricultural information is a function of their economic power. The cost requirement therefore influences the choices and use of mass media. This corroborates the position of Abubakar *et al.* (2009) when they noted that cost and maintenance were key factors in farmers media utilization. Educational level and farming experience were particularly highly influential or significant in determining rural households' use of mass media for agricultural information. This is in line with the findings of Arowolo, Abiola, Awotunde and Olaoye (2013). The findings also agrees with Oto (2011).

Conclusion and Recommendations

The mass media is a very important machinery for getting useful information to farmers, not only in urban areas, but also to those in rural area.

Farmers rely heavily on conventional, less expensive and accessible media for agricultural information, therefore, creating opportunities to increase their access to those media will enhance agricultural production and development. In line with the findings of this study, the following recommendations were made:

i. Rural farming households in the study area should be given basic computer/ICT training to enable them acquire the skills needed to utilize modern media for agricultural information.
ii. Government should partner the private sector agencies to provide grant and other credit incentives to rural farming households to enhance their capacities to acquire and utilize modern mass media.
iii. Agricultural information broadcast on radio/television should be done using the local languages understood by the farmers since these media are their dominant sources of information.
iv. The government should equally introduce rural community and farm radio to help disseminate agricultural information to farmers.

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Table 1: Percentage distribution of types of mass media available and used by the rural farming households in the study area

Mass Media	Available		Not available	
	Frequency	Percentage	Frequency	Percentage
Television	190	95*	10	5
Radio	180	90*	20	10
Newspaper	162	81*	38	19
Posters	167	83.5*	33	16.5
Mobile phones	193	96.5*	7	3.5
Email	84	42	116	58
News portals	99	49.5	101	50.5
Micro blogs	95	47.5	105	52.5
Pamphlets/handbills	175	87.5*	25	12.5
Facebook	156	7.5	185	92.5
Whatsapp	136	71.6*	54	28.4
Fliers	169	84.5*	31	15.5
Computer/internet	13	6.5	187	93.5

Source: Field Survey, 2021' * Available

Table 2: Mean distribution of respondents according to extent of utilization of mass media (N=200)

Mass Media	Extent of utilization						
	Very High (4)	High (3)	Low (2)	Very Low (1)	Cum	Mean $\bar{x}$	Rank
Television	171 (684)	14 (42)	15 (30)	-	756	3.78	3rd
Radio	185 (740)	15 (45)	-	-	786	3.93	1st
Newspaper	38 (152)	54 (162)	107 (214)	1(1)	529	2.65	4th
Posters	15 (60)	40 (120)	140 (280)	5 (5)	460	2.30	9th
Mobile phones	172 (688)	17 (51)	10 (20)	1 (1)	760	3.80	2nd
Email	-	14 (42)	96 (192)	90 (90)	324	1.62	10th
News Portals	-	14 (42)	55 (110)	131 (131)	283	1.42	11th
Micro blogs	-	15 (45)	49 (98)	136 (136)	279	1.39	12th
Pamphlets/Handbills	-	45 (134)	128 (256)	127 (127)	518	2.59	6th
Facebook	59 (236)	83 (249)	30 (60)	28 (28)	273	1.36	13th
Whatsapp	106 (424)	73 (219)	21 (42)	-	685	3.43	5th
Fliers	25 (100)	55 (165)	115 (230)	5 (5)	500	2.50	7th
Computers/Internet	28 (112)	44 (132)	102 (204)	26 (26)	474	2.37	8th

Source: Field Survey, 2021; Cum = Comulative frequency; Cut = Off$\bar{x}$ or decision rule = 2.50; ≥2.50 = Utilized; <2.50 = Not utilized

Table 3: Logistic regression model estimates of the determinants of mass media utilization by rural farming households

Variable	Television	Radio	Newspaper	Posters	Mobile Phones	Pamphlets /Handbills
Constant	2.956	79.82**	1.821	1.598	607176.6**	0.1708
	(9.523)	(158.26)	(2.653)	(0.990)	(3735451)	(0.274)
Age	1.118	0.979	1.095***	1.016	1.052	1.0497**
	(0.085)	(0.0287)	(0.0291)	(0.026)	(0.098)	(0.0256)
Marital Status	1.377	1.053	1.504	0.723	0.8383	1.444
	(0.068)	(0.353)	(0.452)	(0.193)	(0.715)	(0.487)
Gender	0.213*	0.727	0.434*	1.082	0.101	0.895
	(0.195)	(0.427)	(0.189)	(0.572)	(0.156)	(0.445)
Household Size	1.256	0.918	0.982	1.090	1.028	0.8699
	(0.364)	(0.122)	(0.107)	(0.136)	(0.347)	(0.0961)
Education	0.875*	0.019	0.851***	1.057	0.814*	0.992
	(0.069)	(0.0568)	(0.041)	(0.054)	(0.094)	(0.0529)
Income	1.872	1.426	0.871**	5.150***	0.0927**	1.111
	(1.181)	(0.527)	(0.156)	(1.984)	(0.0875)	(0.379)
Farm Size	1.424	0.96	1.0146	0.925	4.831**	0.994
	(0.417)	(0.136)	(1.0146)	(0.117)	(2.416)	(0.143)
Farming experience	0.760**	0.850***	0.998	0.844***	0.6003***	1.354**
	(0.0664)	(0.430)	(0.051)	(0.0430)	(0.1056)	(0.162)
Log-likelihood	-25.98	-56.92	-80.427	-67.094	-14.35	-64.09
LR Chi2 (8)	27.46	16.18	33.64	44.96	31.98	22.52
Pseudo R^2	0.3458	0.1244	0.1729	0.2501	0.5257	0.1495

Source: Field Survey (2021), Note: *** Significant at 1% ** Significant at 5% * Significant at 10%. Figures in parenthesis are standard errors.