Available online at www.elixirpublishers.com (Elixir International Journal)

Marketing Management

Elixir Marketing Mgmt. 91 (2016) 38228-38231

ISSN: 2229-712X

Analysis of information communication technology its perception and role in cassava(fufu) marketing in Imo State, Nigeria

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ARTICLE INFO

Article history:

Received: 16 December 2015;

Received in revised form:

1 February 2016;

Accepted: 6 February 2016;

Keywords

Communication technology,

Mobile phone,

ICT tool.

ABSTRACT

The study on the analysis of information communication technologies uses and perception of its role in cassava marketing in Imo state, Nigeria. Sample sizes of 60 respondents were used for the study. Data were collected through the use of structured questionnaire. The finding revealed that the mean age of the respondents was 51.2 years, about 66.7% of the respondents consist of female marketers, majority (83.3%) of the marketers in the study area were married, the mean household size of the respondents was 6 persons, the mean years spent in school was 9.6 years, the mean marketing experience was 14.2 years. The finding also showed that majority of the marketers (60%) made use of mobile phone as their main ICT tool for cassava marketing. It is therefore recommended that adequate power supply and electricity be provided to enable the farmers utilize their ICT tools.

Introduction

Cassava is one of the most important food crops in Africa. It derives its importance from the fact that it's starchy, thickened, tuberous roots are a valuable source of cheap calories [1]. It is a major crop in the tropics and according to [6] production in Nigeria accounted for about 35% of the output of Africa. This large harvest in Nigeria is attributed to rapid population growth, internal market demand, availability of high yielding improved varieties of cassava tuber, and increase hectare of farm land allocated to cassava in the country [13]. In addition to providing food for consumption, employment for rural youths, cassava products can be exported to generate more foreign earnings. Its relative ease of production, high resistant ability, moderate ability to withstand drought in the face of any prevailing climate variability gives cassava an advantage over other crops as regards hunger and poverty alleviation [10].

In Nigeria, cassava has assumed a prominent role as one of the major staple food for not only among the rural people but also among a lot of urban dwellers opined [2]. Cassava became popular with the introduction and implementation of structural adjustment programme (SAP) since 1986 with increasing output. This policy made those imported cereal to be more costly, this increasing trend in output has continued to make Nigeria the World leading producer of cassava since early 1970's with an estimated contribution of 40 million metric tonnes per annum and an average yield of 10.2 tonnes per hectare [8]. The popularity increased to its peak following the pronouncement of a presidential initiative on the crop which was aimed at using cassava production as an engine of economic growth in Nigeria.

Cassava is majorly produced by smallholder farmers cultivating less than two hectares of land. As a food crop, it fits well into the farming system of smallholder farmers in Nigeria because it is available all year round thus, providing household food security. Cassava can be processed into several forms for industrial and household uses, these includes; garri, fufu, tapioca, flour etc. it can also be industrially processed into chips, pellets, flour, adhesive and alcohol which are vital raw materials in livestock feed, textile, confectionary, wood, food and soft drink industries. However, it is widely acknowledged that the scope for agricultural production can be expanded and sustained by peasant farmers within the limits existing results base and available technology if farm productivity is raised by efficient use of resources [16] This exposition therefore, become forms the fundamental point why the concept of farm efficiency has remain important economic study especially in developing agricultural economics like Nigeria, where resources are meagre and opportunities for developing and adopting better technologies are dwindling. Efficiency analysis in agricultural production is generally associated with the possibility of farms producing a certain level of output from a given bundle of resources or certain level of output at least cost [4]. [11] confirmed that farmers are doing well in the production of cassava, however poor market signal is likely to deal a great blow to the ability of farmers to produce more. Hence, efficiency in cassava marketing is an important determinant of producer's income and ways or means of marketing it also shows the potentials of cassava marketing to agricultural and overall economic development. In Nigeria, the problems with smallholder agriculture dwell on the use of traditional technology which is associated with low productivity, the extension services which are not properly funded, and lack of farmers access to agricultural inputs due to lack of credit facilities[13].

Information and communication technology (ICT) is an umbrella term that includes any communication device or application encompassing radio, television, cellular phone,

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Computer network hardware and software, satellite system and so on as well as the various services and application associated with them such as video conferencing and distance learning. The incorporation of ICT in the marketing of cassava and its products as well as other agricultural products promotes agricultural marketing efficiency, transparency and competitiveness. There is a vast scope for adoption of ICT in cassava marketing for improving its efficiency. Dissemination of market information to various farmers through SMS and call in cassava marketing will reduce collision among traders, increase price competition and reduce market evasion fee as marketing will be done on air without contact. ICT application in cassava marketing tends to mitigate time spent on sale of

product and increases level of awareness. Most attention has been paid to the process of agricultural production with little given to agricultural marketing [3]. While there exist a large opportunities for marketers to earn good income and live comfortably, there is still a lot of poverty [15]. Agricultural marketing efficiency has been bedevilled by both external and internal market related factors. These factors are also peculiar to cassava (fufu) marketing in Nigeria [5]. Agricultural markets are poorly developed and have remained so for years. The market may have served the economy well in the past but currently inadequate in the face of growing demand for products due to population growth and changing dietary demand pattern. Agricultural marketing information is scarce in Nigeria because the required data are not available and those available are not well managed to generate the required information to support decision making by the marketers and consumers. There are no official or organised ways of transmitting information in Nigerian agricultural markets; therefore there is no mechanism for co-ordinating production activities of the millions of marketers with the demand of millions of individuals and consumers. The broad objective of the study is the analysis of information communication technologies uses and perception of its role in cassava marketing in Imo state. The specific objectives are to: describe the socio-economic characteristics of cassava marketers in the study area, identify the various information communication technologies used by cassava marketers, evaluate the respondents' perception of the role of ICTs in cassava marketing, and to examine the cassava marketers' income level.

Methodology

The study was carried out in Imo state, located in the southeast geopolitical zone of Nigeria. The state is located between latitude $5^0\ 40^1$ and $8^0\ 35^1$ North and longitude $6^0\ 25^1$ and $9^0\ 40^1$ East of the Meridian [9]. The study area experiences two major climatic season, the rainy season (March- October) and a four month dry season usually between November and February.

Administratively, Imo state is divided into 27 local government areas and three agricultural zones namely; Owerri, Orlu and Okigwe zone [7]. Multistage sampling was used to select sample from the existing 3 agricultural zones in Imo State. One local government was purposely selected from each agricultural zone; making a total of 3 local government areas based on the high concentration of cassava marketers. One community was selected from each of the three local government areas making a total of 3 communities. In the second stage, one major market was selected each from the 3 communities each making a total of 3 markets. In the third stage, 20 fufu marketers were randomly selected from the 3 markets giving a total of 60 fufu marketers. Data were analysed using descriptive and inferential statistical tools such as mean, percentage, frequency distribution and likert scale. Objective 1 and 2 were analysed using descriptive statistics such as mean, percentages and frequency distribution. Objective 3 was achieved using a 5 point likert scale with legends ranging from;

Excellent = 5
Very Good = 4
Good = 3
Poor = 2
Very poor =1

Results and discussion

Table 1 shows that majority (41.7%) of the marketers were between the ages of 51 and 60 years. The mean age of the respondents was 51.2 years. It can be inferred that majority of the respondents were above their youthful and active stage of life in terms of energy requirements cassava marketing, being the most important energy-giving food to people in the area, age have a lot to do in this regard and it is logical to think that an individual's performance efficiency or productivity in marketing declines with increasing age [14]. The result further showed that about 66.7% of the respondents consist of female marketers while 33.3% were male. The dominance of the females in the cassava marketing activities particularly at the retail level may be due to small capital based required to start the business. This finding goes to support that by previous researchers on consumption [12] that as far as household consumption management in south-eastern Nigeria is concerned, women are in charge. It also revealed that majority (83.3%) of the marketers in the study area were married while (16.7%) were still single. The result of the analysis showed that the mean household size of the respondents was 6 persons. The result further indicated that majority of the respondents (48.3%) spent between 7 and 12 years in school, 35% spent between 1 and 6 years in school, 11.7% spent above 12 years in school while 5% had no formal education. The mean years spent in school was 9.6 years. The table also revealed that majority 46.7% of the marketers had between 1 and 10 years of marketing experience, 43.3% of them had between 11 and 20 years experience, 8.3% had between 21 and 30 years of marketing experience while 1.7% of them had between 31 and 40 years of marketing experience. The mean marketing experience was 14.2 years. Marketing experience is used as a measure of management ability, the more experienced the marketer is, the more his/her ability to make market decision. This result showed that most of the marketers had experience, implying that such marketers are likely to make decisions that would increase their profit, income, savings as well as their investment. Result in Table 2 shows that majority of the marketers (60%) made use of mobile phone as their main ICT tool used in cassava marketing, 36.7% made use of radio, 8.3% made use of television, 1.7% made use of media van while only 3.3% made use of internet computer as their own means of cassava marketing. This implies that mobile phone has become a popular tool for communication among the marketers.

As earlier stated, mean score of 2.5 and above implied "effective" with the enlisted items while mean score below 2.50 implied "ineffective". The data in table 3 shows how effective the roles of ICT tools are in the marketing of cassava to consumers in the area. Improve education (4.3), Effective & efficient healthcare (3.8), Global recognition and partnership

(3.8), Mass enlightenment (3.4), Market development (4.5), Entertainment (3.2), Improve communication (4.6) and Enhanced decentralization (3.1) were all perceived by the marketers as being "effective" in the marketing of their cassava and its product.

Table 1 . Distribution of respondents according to socio-economic characteristics

Variables	Frequencies Percentage (%)	
Age (years)		
21-30	1	1.7
31-40	8	13.3
41-50	18	30
51-60	25	41.7
61-70	8	13.3
Sex:		
Male	20	33.3
Female	40	66.7
Marital status:		
Single	10	16.7
Married	50	83.3
Household size:		
1-5	30	50
6-10	23	38.3
11-15	6	10
16-20	1	1.7
Education of respondents:		
No formal education	3	5
Primary education	21	35
Secondary education	29	48.3
Tertiary education	7	11.7
Marketing Experience:		
1-10	28	46.7
11-20	26	43.3
21-30	5	8.3
31-40	1	1.7

Source: Field survey, 2014.

Table 2. Distribution of ICTs used in Cassava Marketing by Respondents

ICT Tools	Frequency	Percentage
Radio	22	36.7
Television	5	8.3
Mobile phone	36	60
Media Van	1	1.7
Internet Computer	2	3.3
Total	60	100

Source: field survey, 2014.

Table 3. Mean Score of Respondents on the Roles of ICT Tools in Cassava Marketing

Roles of ICT Tools	Mean Score	Remark
Improve education	4.3	effective
Effective & efficient healthcare	3.8	effective
Global recognition and partnership	3.8	effective
Mass enlightenment	3.4	effective
Market development	4.5	effective
Entertainment	3.2	effective
Improve communication	4.6	effective
Enhanced decentralization	3.1	effective

Source: field survey, 2015.

Conclusion

Based on the findings, the study concludes that mobile phone was the main ICT tool used in cassava marketing. Improvement in education, Effective & efficient healthcare, Global recognition and partnership, Mass enlightenment, Market development, Entertainment, Improve communication and Enhanced decentralization were the effective roles of ICT to cassava marketers**.** It can be seen that majority of the respondents were female, married and with a mean age of 51.2 which inferred that majority of the respondents were above their youthful age and active stage of life in terms of energy requirement in cassava marketing. Mean score of 2.5 and above implied "effective" with the enlisted items while mean score below 2.50 implied "ineffective".

Recommendation

It is advised that government and other concerned agencies should ensure adequate power supply and provision of electricity in the area to enable the farmers utilize their ICT tools more effectively. Also, timing of agricultural programmes should be made more suitable for the farmers so as to enable them be part of the programmes. The entire marketing system should also be restructured. Traders should be encouraged to form agricultural marketing cooperatives in order to eliminate the exploitative activities of the middlemen.

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