

Role Perception and Performance of Agricultural Extension Agents in Maize Marketing in Delta State Nigeria

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Abstract

The rural small scale farmers have remained poor in spite of the fact that they produce the bulk of food consumed in the country. The study was designed, therefore, to investigate the role of the extension agents on maize marketing as an antidote to boosting the farmers income Fifty percent (50%) of the extension agents attached to the Delta Agricultural Development Project were randomly selected to compose the sample. Based on the affirmative responses, it was concluded that the extension agents did not perform their functions well in terms of advising the farmers about available markets for maize (10.00%), grading (4.00%), advise on transportation (10.00%), packaging (14.00%), advise on resource use efficiency (2.00%) planning and market promotion (2.00%), and sales timing (2.00%). There was a significant difference between the extension agents role perception and role performance in advisory services on available markets ($t = 3.348$; $p = 0.002$), grading ($t = 3.280$; $p = 0.002$), price information ($t = 3.934$; $p = 0.000$), advise on transportation ($t = 3.500$; $p = 0.001$), improved maize cultural practices ($t = 3.718$; $p = 0.001$), record keeping ($t = 4.583$; $p = 0.000$), and storage technologies ($t = 5.250$; $p = 0.000$). The extension agents should intensify efforts in carrying out their marketing functions to enable maize farmers derive the utmost incentives from their production endeavour.

Keywords: Maize Marketing Extension Agents, Extension Marketing, Role Perception, Role Performance.

Introduction

Poverty Alleviation Potentials of Agricultural Extension services

The rural small scale farmers appear to harvest poverty yearly in spite of the hard labour often associated with production of food and fibre in the country. According to Ibeawuchi et.al (2010), Afolabi (2010) and Okuneye (1989) over 80% of the farming population in Nigeria was dominated by small scale farmers. Members of the family participated in cultivating family lands with the wealthy ones engaging in outright purchase from others or on lease to produce food and fibre. The people were poor and most of them were small scale farmers who produced majority of the food. They were said to be resource poor and practiced small scale farming (0.1-2 ha). Ovwohio (2014) found that the average farm size in Delta State was 0.92 hectares. Apart from small farm size, poverty among rural farmers is also attributed to lack of technical know-how of production, marketing and distribution of agricultural produce. In most developing countries, the lack of technical know-how among farm families is filled by provision of government or public extension services.

Agricultural extension and advisory services were designed to help farmers boost crops and livestock production. These services enable farmers to adopt new technologies for increase production and profitability. The specific objectives of agricultural extension and advisory services were to:

- i provide advise to farmers on problems or opportunities in agricultural production, marketing, conservation and family livelihood;
- ii. facilitate development of local skills and organisations, and to serve as links with other programmes and institutions;
- iii, transfer new technologies to farmers and rural people; and
- iv. address public interest issues in rural areas, resource conservation, health and food security, monitoring agricultural production,, monitoring food safety, nutrition and family education as well as youth development (CTA,2011; and USAID 2011)

The first objective which encompasses providing advise to farmers on problems of agricultural production, marketing, conservation and family livelihood is paramount to this study. Proper marketing of agricultural products could make the farmers derive the right incentives from his farming endeavour. Agricultural marketing was defined by Mohammed et.al. (2013), and Adegeye and Dittoh (1982) as the stages of operations which aided the movement of agricultural commodities from the farms to the consumers. The stages include assemblage of goods, storage, transportation, processing, grading and financing of these activities. Adegeye and Dittoh (1982) summarised the importance of agricultural marketing as follows:

- It constitutes a process of moving agricultural produce to the consumers and urban markets.
- It ensures efficiency in the marketing of agricultural produce. An efficient agricultural marketing system also assists in the exportation of agricultural produce.
- It enables the farm firm to identify the consumer preferences based on the prices they are willing to pay. This in turn affects the production decision of the farmer.

- It stimulates research into techniques of food and meat preservation and preparation.
- It makes seasonal foods to be available all year round with little variation in costs due to storage.

Adegeye and Dittoh (1982) further drew a generalised marketing channel for food stuff in Nigeria (Fig. 1). It started with the producer and ended with the final consumer in a sequential order. The changing roles of agricultural extension services demands that extension agents should have knowledge of their roles in marketing agricultural produce for the purpose of enhancing farmers income. and welfare. CTA (2003) averred that the conventional way of selling products at the farm gate was gradually being replaced with structured trading especially in eastern and southern Africa. Structured trade was an outcome of market liberalization surge in the late 1980s. EAGC (2011) defined structured trading system as the process of establishing a market where participants have a more open and orderly market. The main components of structured trading system include farmers' aggregation, storage capacity, rules of trade and contracts, warehouse receipt system and market intelligence system

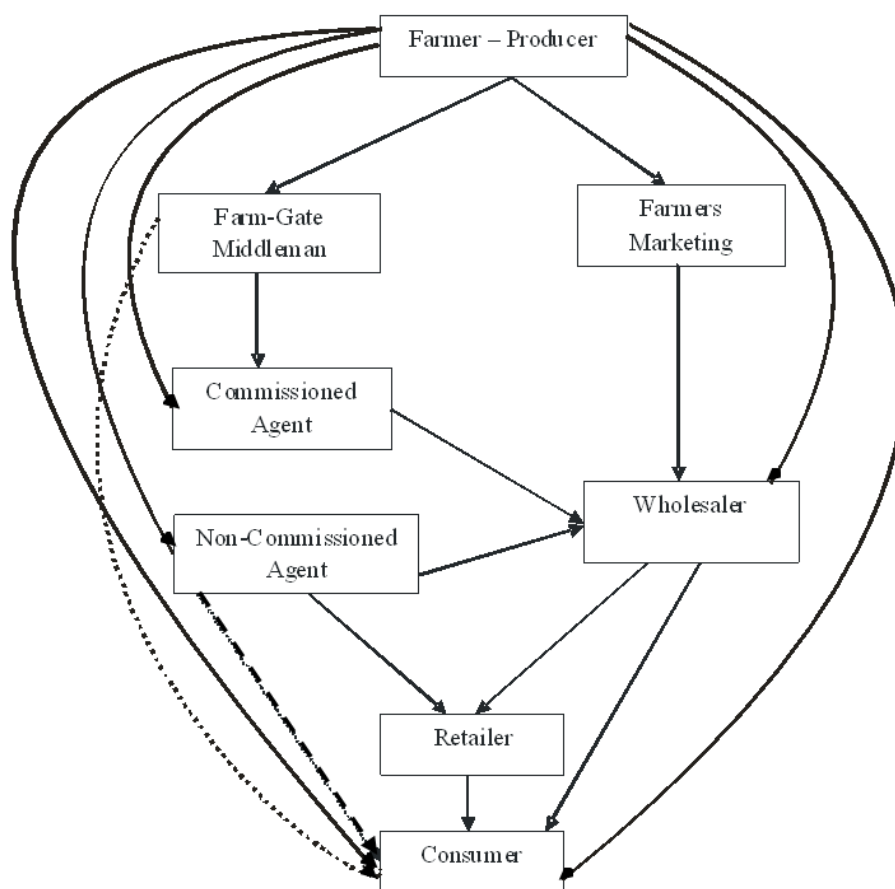


Fig. 1: Generalized distribution channels for foodstuffs.

Source: Adegeye, A. J. and Dittoh, J. S. (1982). *Essentials of Agricultural Economics*.

Importance of Role Perception and Performance in Achieving Organisational Goals

In any organisation the individuals' role perception and its performance are intrinsic to the survival and achievement of the organisational goals and effectiveness. Role perception could have a definite impact on job performance (Gibson et.al., 1982). Role perception and performance of agricultural extension agents were crucial in determining their effectiveness. This was because role performance of agricultural extension agents was influenced by role perception. Thus, any discrepancy between extension agents role perception and performance could result in ineffectiveness (Ajieh, 2009). Norman et. al.. (1982) defined perception as a process by which people select, organize and interpret sensory stimulation into a meaningful and coherent picture of the world. It is a process which gets structured, organized and modified as the individual matures. Role refers to responsibilities, obligations or expected behaviours attached to any social position (Ekong, 2010). In any given job, there are expectations in terms of roles to be performed for the purpose of achieving the organisational goals.

Statement of the Problem and objectives

Extension agents in the study area are often involved in technology transfer at the expense of marketing services to maize farmers. The Ministry type extension organisations depend largely on technology transfer rather than services that impinge on improved income and profit maximisation. FAO (2013) stated that the conventional transfer of technology models were the top-down and feedback models. The top-down technology transfer is a one-way process where technologies developed by scientists are passed on to extension services to be transferred to users. The weakness of this model is that it does not involve farmers in identifying the constraints and adapting the research to local conditions. This model has failed in areas where the farming system is complex. The feedback model is an attempt to overcome the weaknesses of the top-down model. In this model the response of users to the new technology is gathered. However, this feedback model is considered to be weak as the users remain passive recipients of technology. The functioning of the feedback model solely rests with the extension service organisation

According to Swanson (2008), the term agricultural extension has changed over times. It is no longer restricted to the emphasis on technology transfer reflected by the Training and Visit (T & V) System but has moved towards broader concepts which include developing the skills and management capacities of farming families. Extension helped to facilitate the access of farmers, their organisations and other market actors to knowledge and technology, and facilitate their interaction with similar organisations.

Maize is the commonest grain produced in Delta State, Nigeria. It is produced within two seasons: early and late maize. Its major economic importance is hinged on human consumption, livestock feeds and industrial processes including breweries and confectioneries (MANR, 2007). It is common to find farmers in the state to harvest their maize cobs and take them directly to the roads side where they put them on sale. In many cases, the farmers boil or roast the maize cobs and present them on sale along the road side or street. The maize marketing in the study area could best be adjudged as primitive and unsustainable. Efficient marketing of agricultural products would enable the farmer sustain himself economically on his chosen farm production enterprise. The role which agricultural extension could play in maize marketing to enable the maize farmers make profit remains the crux of the study.

As farmers become more market oriented, so extension workers need to be in a position to advise them not only on how to grow crops but also on how to market them. Knowledge of produce handling, storage and packaging was essential to the performance of the farmer in his farming business (FAO, 2013). In this study, the roles involved in maize marketing would be investigated in relation to extension workers role perception and performance. Several studies have been conducted on marketing functions but none on extension workers role in maize marketing. The study, therefore, sought to investigate the extent to which extension workers perform their marketing functions of maize marketing in Delta State, Nigeria. The specific objectives were to:

- i describe the role perception of the extension agents about their Maize marketing functions;
- ii ascertain the role performance of the extension agents in Maize marketing; and
- iii establish the relationship between role perception and performance in Maize marketing

Hypothesis: The following null hypothesis was tested at 0.01 level of significance in the course of the study.

Ho: There is no significant relationship between role perception and performance of the extension agents in maize marketing.

Methodology

Sampling Procedure and Sample Size

The study was conducted in Delta state, Nigeria with the major purpose of evaluating the role of extension agents in maize marketing. Simple random sampling was used in selecting the respondents. The Delta Agricultural Development Project (DADP) is the main organ charged with responsibility of agricultural extension services in Delta State. The others are the Ministry of Agriculture and Natural Resources, Delta Agricultural Procurement Agency and the Fadama III Agricultural Development Project. The population of the Agricultural Extension agents in DADP was 100. Fifty per cent (50%) of the extension agents corresponding to 50 were randomly selected to compose the sample. Thus the sample size was 50 extension agents.

Method of Data Collection and Analysis

Data were collected by use of structured questionnaire. The questionnaire measured the role perception and performance of 12 expected roles of extension agents in maize marketing. The role perception and performance were measured by yes (1) or no (0) dichotomy (Table 1). Data were analysed by use of percentage, mean and t-test

Results and Discussion

Role Perception of Maize Marketing Functions by Extension Agents

The extension agents roles perception of maize marketing functions were presented in Table 1.

Table 1: Distribution of extension agents according to role perception of maize marketing functions

S/N	Marketing Function	Frequency yes/percent	Frequency No/percent	Remarks
1	Advise on available markets	16 (32)	34 (68)	Poor
2	Grading	11 (22)	39 (78)	Poor
3	Price information	39 (78)	11 (22)	Good
4	Advise on transportation	15 (30)	35 (70)	Poor
5	Packaging	15 (30)	35 (70)	Poor
6	Advise on resource use efficiency	3 (6.00)	47 (94)	Poor
7	Planning and market promotion	5 (10)	45 (90)	Poor
8	Sales timing	5 (10)	45 (90)	Poor
9	Maize cultural practices	50 (100.00)	0 (0.00)	Good
10	Record keeping	50 (100.00)	0 (0.00)	Good
11	Proven maize varieties	50 (100.00)	0 (0.00)	Good
12	Maize storage technologies	50 (100.00)	0 (0.00)	Good

NB: Below and above 50% for yes responses were accepted as poor and good respectively.

In parenthesis = %

The responses of the extension agents in the affirmative showed that they had a good perception of their functions of providing price information (78.00%), advise on maize cultural practices (100.00%), record keeping (100.00%), proven maize varieties (100.00%), and maize storage technologies (100.00%). Based on the affirmative responses it was concluded that the extension agents had poor perception of their marketing functions with regards to advise on available markets for maize (32%), grading (22%), advise on transportation (30%), packaging (30%), advise on resource use efficiency (6.00%), planning and market promotion (10%), and sales timing (10%)

Advise on price information could be due to the increasing availability of information and communication technologies particularly the GSM. CTA (2007) found that a woman in Ghana could receive prices from 380 African markets for her products through the cell phone. She noted that the GSMs provided farmers with real-time agricultural commodity prices. They enabled farmers make informed decisions on which crops to grow and when to sell their products for best returns. Most of the extension agents were still tied to their traditional practices of providing advise on maize cultural practices, record keeping, proven maize varieties, and maize storage technologies. The more technical aspects of maize marketing functions including availability of markets, grading, advise on means of transportation, packaging, advise on resource use efficiency, planning and market promotion, and sales timing were not popularly perceived as roles by the extension agents

Roles Performance of Maize Marketing Function by Extension Agents

The performance of maize marketing functions by extension agents were analysed in Table 2.

Table 2: Distribution of extension agents according to role performance of maize marketing functions

S/N	Marketing Function	Frequency yes/percent	Frequency No/percent	Remarks
1	Advise on available markets	5 (10.00)	45 (90.00)	Poor
2	Grading	2 (4.00)	48 (96.00)	Poor
3	Price information	27 (54.00)	23 (46.00)	Good
4	Advise on transportation	5 (10.00)	45 (90.00)	Poor
5	Packaging	7 (14.00)	43 (86.00)	Poor
6	Advise on resource use efficiency	1 (2.00)	49 (98.00)	Poor
7	Planning and market promotion	1 (2.00)	49 (98.00)	Poor
8	Sales timing	1 (2.00)	49 (98.00)	Poor
9	Improved Maize cultural practices	39 (78.00)	11 (22.00)	Good
10	Record keeping	35 (70.00)	15 (30.00)	Good
11	Proven maize varieties	47 (94.00)	3 (6.00)	Good
12	Storage technologies	32 (64.00)	18 (36.00)	Good

NB: Below and above 50% for yes responses were accepted as poor and good respectively.

In parenthesis = %

The affirmative responses by the extension agents showed that they performed their maize marketing functions of providing price information (54.00%), improved maize cultural practices (78.00%), record keeping (70.00%), proven maize varieties (94.00%), and storage technologies (64%). The extension agents did not perform their functions satisfactorily in terms of advising the farmers about available markets (10.00%), grading (4.00%), advise on transportation (10.00%), packaging (14.00%), advise on resource use efficiency (2.00%)

planning and market promotion (2.00%), and sales timing (2.00%). The farmers were supposed to benefit from advisory services on available markets for maize especially feed breweries and related industries. It should be noted that when farmers sell in large quantities they are able to make substantial profit to cater for other necessities of life. Other areas of maize ,marketing neglected by the extension agents were grading, transportation, packaging, planning and market promotion, sales timing and resource use efficiency. When farmers are efficient in resource management, they will derive more incentives from their production efforts.

Differences between Role Perception and Performance of Maize Marketing Functions by Extension Agents

The total scores for each role perceived and performed by the extension agents were added up and compared by the use of *t*-test (Table 3).

Table 3: Comparison of role perception and performance of extension agents

S/N	Variables	Mean Perception	Mean Performance	Std. error	T	T.sig
1	Advise on available markets	0.320	0.100	0.06571	3.348	0.002*
2	Grading	0.220	0.040	0.05488	3.280	0.002*
3	Price information	0.780	0.540	0.06101	3.934	0.000*
4	Advise on transportation	0.300	0.100	0.05714	3.500	0.001*
5	Packaging	0.300	0.140	0.06615	2.419	0.019
6	Advise on resource use efficiency	0.060	0.020	0.02799	1.429	0.159
7	Planning and market promotion	0.100	0.020	0.03876	2.054	0.044
8	Sales timing	0.100	0.020	0.03876	2.064	0.044
9	Improved Maize cultural practices	1.000	0.780	0.05918	3.718	0.001*
10	Record keeping	1.000	0.700	0.06547	4.583	0.000*
11	Proven maize varieties	1.000	0.940	0.03393	1.769	0.083
12	Storage technologies	1.000	0.640	0.06857	5.250	0.000*

- Significant at 0. 01

There was a significant difference between the extension agents role perception and role performance in advisory services on available markets ($t = 3.348$; $p = 0.002$), grading ($t = 3.280$; $p = 0.002$), price information ($t = 3.934$; $p = 0.000$), advise on transportation ($t = 3.500$; $p = 0.001$), improved maize cultural practices ($t = 3.718$; $p = 0.001$), record keeping ($t = 4.583$; $p = 0.000$), and storage technologies ($t = 5.250$; $p = 0.000$). This meant that the extension agents role perception and performance were not equal. This is often the case, most workers are not able to perform their jobs optimally. There was no significant difference between the extension agents role perception and performance in providing advisory services for maize packaging ($t = 2.419$; $p = 0.019$), advise on resource use efficiency ($t = 1.429$; $p = 0.159$), planning and market promotion ($t = 2.054$; $p = 0.044$), sales timing ($t = 2.064$; $p = 0.044$), proven maize varieties ($t = 1.769$; $p = 0.083$). A further comparison was made to draw a relationship between responses to perception and performance, and level of significance (Table 4)

Table 4: Overall rating of Extension Agents performance of maize marketing functions

S/N	Marketing Function	Perception	Performance	Significance	Overall Judgement
1	Advise on available markets	Poor	Poor	0.002*	Poor
2	Grading	Poor	Poor	0.002*	Poor
3	Price information	Good	Good	0.000*	Good
4	Advise on transportation	Poor	Poor	0.001*	Poor
5	Packaging	Poor	Poor	0.019	Very poor
6	Advise on resource use efficiency	Poor	Poor	0.159	Very poor
7	Planning and market promotion	Poor	Poor	0.044	Very poor
8	Sales timing	Poor	Poor	0.044	Very poor
9	Maize cultural practices	Good	Good	0.001*	Good
10	Record keeping	Good	Good	0.000*	Good
11	Proven maize varieties	Good	Good	0.083	Very Good
12	Maize storage technologies	Good	Good	0.000*	Good

NB:

Very poor = Poor perception + Poor performance + No significant difference

Poor = Poor perception + Poor performance + Significant difference

Good = Good perception + Good performance + Significant difference

Very Good = Good perception + Good performance + No significant difference

In Table 4, we can deduce that the extension workers were very good only in dissemination of proven maize varieties. This of course has been the traditional role of agricultural extension services. The roles of agricultural extension to farmers have changed over the years to encompass areas which enhance the immediate

welfare of the farmers. Swanson and Rajalahti (2010) maintained that the technology transfer model of extension was prevalent during colonial times and re-emerged with intensity during the 1970s and 1980s when the Training and Visit (T&V) system was established in many Asian and Sub-Saharan African countries. They admonished that agricultural development goals should go beyond the primary focus on technology transfer in the twentieth century. They maintained that in addition to transferring new technologies in this modern era, priority should be given to increasing farm incomes, maintaining national food security, empowering farmers by building social capital within rural communities, training farmers to use sustainable natural resource management practices and improving rural livelihoods. The extension performances were good in providing advisory services on price information, improved cultural practices, record keeping and maize storage technologies. The extension agents performed very poorly in providing advisory services for packaging, resource use efficiency, planning and market promotion, and sales timing. The Table also showed that the extension agents were poor in providing advise on available markets, grading and transportation.

Conclusion

The extension agents are charged with the dissemination of extension services to the farmers. Extension services ramify into technology dissemination, leadership skills development, agricultural marketing extension, Women-in Agriculture, home economics, human capital development and capital formation. The study showed that the extension agents seldom perceived and performed their duties of advising the farmers about available markets, grading, advise on transportation, packaging, advise on resource use efficiency, planning and market promotion and sales timing. The performance of the extension agents was very good with regards to dissemination of proven varieties of maize. The prevailing poverty among small scale farmers in the country could be reduced through provision of marketing advisory services. Maize is the most popularly cultivated cereal grain in the state and farmers would benefit so much if adequate marketing extension services are provided. It becomes imperative to admonish that extension agents working with the Delta Agricultural Development Project should intensify efforts in carrying out their marketing functions so that maize farmers can derive the utmost benefits from their production endeavour.

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