

## Farmers' willingness to use one-stop agricultural extension services support centre in Oyo State Nigeria

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### ABSTRACT

Owing to the complexities associated with accessing inputs, requisite information and other ancillary services by farmers, one-stop agricultural extension service support centre was launched by the Federal Government. In anticipation of its take-off in Oyo state, this study assessed farmers' willingness to use the services offered by the support centre. Deploying multistage sampling procedure, a total of 123 farmers were sampled to elicit data. Majority of the sample subjects were male (65.8%), married (87.0%) and had an average age, household size and net monthly income of 42.01±12.01 years, 5.75±2.07 persons and ₦41,219.51k±₦37,063.14k, respectively. Farming experience and farm size were 7.48±5.17 years and 6.19±10.71 acres, respectively. Mechanization service ( $\bar{x}$ =2.10) and market information service ( $\bar{x}$ =1.99) were preferred most among the proposed services in the centre. Practicability of services offered ( $\bar{x}$ =1.89) and inability to appropriately communicate information in the service package ranked highest as anticipated constraints to effectively accessing proposed services. Willingness to use these services was high (76.0%) with market information services ranking highest ( $\bar{x}$ =2.07). The study established relationship between marital status ( $\chi^2=160.157$ ), farming experience ( $r=0.018$ ), farm size ( $r=0.351$ ), farmers preference' ( $r=0.766$ ), anticipated constraints ( $r=0.617$ ) and farmers' willingness to use one-stop agricultural extension services support centre. From the foregoing, it is recommended that the proposed project be upheld, however, mechanization and market information services be given priority to ensure that its overall objective and deliverables have far-reaching effect.

**Keywords:** Farmers' Willingness, One-Stop agricultural extension services, Farmers' preference.

### INTRODUCTION

The strategic position agriculture occupies in Nigeria's economy makes its development imperative. In the recent times and in the face of dwindling fortune of Nigeria's economy from its mono-economy and heavy dependence on crude oil, development in agricultural sector is being prompted as credible alternative and a condition for long term sustainable economic growth (NAERLS, 2010). It has been widely acknowledged that no other sector touches the general wellbeing of the rural majority as agriculture does, in terms of income generation, employment creation, poverty reduction, economic growth and the food security needs of the population (NFR-NFCO, 2010).

Over the years, central to this achievement in agriculture is the smallholder farmers that have been sustaining food and agricultural production in the country. Therefore, efforts have continually been geared towards the empowerment of small holder farmers with the belief that it will impact on the total picture of agricultural development in the long run. The Federal Ministry of Agriculture and Rural Development, with the new Agricultural Promotion Policy (APP), the "Green Alternative",

is adopting a holistic approach and has one of its pillars to enhance farmers' education and communication (dissemination of extension messages of farmers) (FMARD, 2016). It focuses on increased production, addressing issues in the entire value chain and improved market access.

Most of the studies agree that the Agricultural Development Programmes (ADP) have made significant impact on agricultural production in Nigeria, especially in the areas of increased agricultural output and income as well as improved rural livelihood (Okuokenye & Okoedo-Okojie, 2014 and Omonijo *et al*, 2014). However, not all the objectives of the programme have been successful. Specifically, the provision of credit facilities (Omonijo *et al*, 2014) and infrastructural developments (Adamu & Mohammed, 2009). Furthermore, despite the perceived positive impact of the ADP in agricultural outputs and income, findings also indicate that there are challenges currently being faced by the programme in a significant number of the states where it is being implemented.

These challenges could erode the credibility and worsen growing concerns about the collapse of the

project if urgent steps are not taken to mitigate the challenges. The major challenges include inadequate funding, mainly as a result of the inability of critical stakeholders, especially the federal government and state governments to fulfill their financial obligations to the programme as and when due after the end of the World Bank intervention over the years (Omonijo *et al.*, 2014; Auta & Datwang, 2010; Okuokenya & Okoedo-Okojie, 2014; Chukwuemeka & Nzewi, 2011).

In a bid to address some of the challenges faced by the ADP, a one-stop Agricultural Extension Service Delivery Centres in all the Seven Hundred and Seventy-Four (774) Local Government Areas (LGAs) was proposed. It seeks to bring technology and innovation to the doorsteps of the farmers in the 774 LGAs of Nigeria. The one-stop extension services is proposed as a lead strategy for the strengthening and reforming agricultural extension innovation delivery systems in Nigeria in a holistic and coordinated manner using a multiplicity of approaches including e-extension/knowledge management, innovation platform/farmers' learning points and establishment of farmer delivery in the 774 LGAs to reach the teeming population of farmers in Nigeria (FMARD, 2016).

The strategic objectives of the one-stop Agricultural Extension Service Delivery (AEDS) centre include providing an easy access to multi-purpose extension services, access to quality inputs and agricultural market information. The centre will attract agro dealers and other vendors to showcase, demonstrate and sell their products (inputs) and services to farmers and other end-users. The facility will also be used to host exhibitions and demonstration of value adding services to farmers and other stakeholders. It is a market place for agriculture offering services under the following thematic areas: soil testing services, agro-meteorological services, agro-input services, mechanization services, technology demonstration and adoption services, information and communication technologies kiosk services, market information service, access to agricultural extension agents and loan/credit sourcing services.

The pilot phase of one-stop agricultural extension services support centre has been launched in few states across the country and there are plans to replicate it across the country as outlined in the implementation document. It is against this background that the study looked at farmers' willingness to use the one-stop agricultural extension services support centre in Oyo state. vis a vis the services it intends to offer farmers. It is hoped that this will further address growing

concerns and place in perspective issues relating to its implementation and eventual utilization.

The study sought to achieve this through the following objectives:

1. describe the social economic characteristics of the farmers in the study area;
2. describe the enterprise characteristics of the farmers in the study area;
3. ascertain farmers' preference for services offered by the support centre;
4. identify anticipated constraints to accessing services offered by the support centre;
5. determine farmers willingness to use one-stop agricultural extension services support centre.

## METHODOLOGY

The study was carried out in Oyo State Nigeria. Oyo state covers approximately 28,454 square kilometres. It is homogeneous, mainly inhabited by the Yoruba ethnic group, its indigenes mainly comprise the Oyos, the Oke-Oguns, the Ibadans and the Ibarapas. The climate of the state favours the cultivation of maize, yam, cassava, millet, rice, plantains, cocoa and cashew. The population of the study comprised all farmers in the state. A multi stage sampling procedure was used to select respondents for the study. In the first stage Saki Agricultural Development Programme (ADP) was purposively selected because of the prospect of hosting the proposed pilot centre for the one-stop shop. In the second stage, out of 30 blocks, 20% of the blocks in the zone was selected which gave a total of 6 blocks. In the third stage, out of 20 cells, 10% were randomly selected. Each cell constitutes a group of farmers with 70 members of which 123 farmers were interviewed.

Variables assessed includes socio-economic characteristics (sex, marital status, age, household size, average net monthly income), enterprise characteristics (enterprise primarily engaged in, farming experience and farm size) and anticipated constraints to accessing the services provided by the support centre. This was elicited by presenting a set of anticipated constraints from which the respondents rated severity from a response option of severe constraint, mildly severe, not severe and not a constraint with scores of 3, 2, 1 and 0 assigned respectively. The grand mean was used in isolating the anticipated constraints to accessing the services provided. Other variables are farmers' preference of services provided by the support centre and willingness to use one-stop agricultural extension service delivery centre. Both variables were measured by presenting a set of services that

the service centre offers, while preference was operationalized as highly preferred, preferred, moderately preferred, and not preferred, willingness to use was operationalized as highly willing, willing, moderately willing and not willing. Scores of 3, 2, 1 and 0 was assigned in the measurement of both variables. Data were collected using interview schedule and analyzed with descriptive (frequency, percentage, means) and inferential (Pearson Product moment Correlation) statistics at  $p=0.05$ .

**RESULTS AND DISCUSSION**

**Socioeconomic characteristics**

Data in Table 1 reveals that 65.9% of the respondents were male. This distribution further attests that we have a preponderance of male to female engaged in on-farm operations, this is partly due to the labour demands and drudgery associated with farming. Majority (87.0 %) of the respondents were married. It is noticed that this status comes with some responsibilities, hence its most likely that the respondents will be willing to make use of this initiative that will enable them boost their economic activities and raise income to meet with marital responsibilities. This view is supported by Nnadi and Akwiwu (2008) that marriage increases

a farmer’s concern for household welfare and food security which is therefore likely to have a positive effect on their decision to participate in an agricultural project.

Table 1 presents an average age of the respondents as  $42.01\pm 12.01$  years. It is appropriate to capture the respondents within the productive age. Hence, they are still active, enterprise conscious and can cope with the labour demands of their enterprise. Also they will be willing to make use of the one stop service centre and take advantage of the resources provided by this strategy to enhance their enterprise. Table 1 further reveals that the respondents had a fairly large ( $6.0\pm 2.07$  persons) household size. This depicts that the respondents have reasonable supply of labour that can augment the labour demands of their enterprise while they access the services offered by the support centre. Table 1 also reveals that respondents earned an average of  $\text{₦}41,219.51k \pm \text{₦}37,063.14k$  as net monthly income. Considering present economic indices in the country, this is not encouraging. However, it surpasses the minimum wage paid to public servants. It further suggests that they will be willing to make use of the services offered by the support centre to boost production which will in turn impacts their income.

**Table 1: Distribution of respondents by their socio-economic characteristics (n=123)**

<b>Variables</b>	<b>Frequency (percentage)</b>	<b>Mean and standard deviation</b>
<b>Sex</b>		
Male	81 (65.9)	
Female	42 (34.1)	
<b>Marital status</b>		
Single	12 (9.8)	
Married	107 (87.0)	
Divorced	2 (1.6)	
Separated	2 (1.6)	
<b>Age</b>		
20-32	59 (48.0)	42.01±12.01
33-45	57 (46.4)	
46-58	7 (5.6)	
<b>Household size</b>		
1-3	30 (24.4)	5.75±2.07
4-6	86 (69.9)	
7-9	7 (5.7)	
<b>Average net monthly income (₦)</b>		
10,000-47,000	37 (30.1)	41,219.51±37,063.14
47,001-84,000	66 (53.7)	
84,001-121,000	18 (14.7)	
121,001-158,000	2 (1.6)	

Source: Field Survey, 2018

### Enterprise characteristics of respondents

Table 2 shows that a fair share (58.2%) of the respondents primarily engaged in crop farming, compared to 30.9 % and 10.6% who were engaged in livestock farming and fish farming, respectively. Their engagement in crop production could be attributed to the reduced risk associated with this venture when compared with the others. However, it is appreciated that they may be primarily engaged in this venture, they are also engaged in other farming venture as it is the usual characteristic of farmers to practice mixed farming

in a bid to have alternative source of income and spread risk. Average farming experience was  $7.48 \pm 5.17$  years. This establishes that they are not novice in their respective ventures. This attests that they would have been sufficiently equipped to identify the services that they are in need of vis a vis the services they would be willing to use from the support centre when inaugurated. Table 2 also reveals that they have expanse of land ( $\bar{x} = 6.17$  acres), with this land area the respondents will be willing to make use of services proffered by the support centre to boost their production and maximize this land area.

**Table 2: Distribution of the respondents by enterprise characteristics (n=123)**

Variables	Frequency (percentage)	Mean and standard deviation
<b>Enterprise primarily engaged in</b>		
Crop farming	72 (58.5)	
Livestock farming	38 (30.9)	
Fish farming	13 (10.6)	
<b>Farming experience (years)</b>		7.48±5.17
1-6	105 (85.4)	
7-12	13 (10.6)	
13-18	5 (4.0)	
<b>Farm size (Acres)</b>		6.19±10.71
1-12	117(95.1)	
13-24	6 (4.9)	

Source: Field Survey, 2018

### Farmers' preference of the services offered by the support centre

Mechanization services ( $\bar{x}=2.10$ ), market information services ( $\bar{x}=1.99$ ) and technology demonstration and adoption services ( $\bar{x}=1.98$ ) ranked highest as services most preferred by the farmers among the proposed services in the one-stop agricultural extension services support centre as shown in Table 3. Their preference for mechanization could be hinged on the need to ease-off the use of crude tools and implement, increase acreage cultivated and replace the associated costs incurred from using human labour in production. Mechanization has become a topic of interest as labour rates for farm operation continue to rise in Nigeria, as of 2015, only two percent of farmers reported to be engaged in agricultural mechanization (Mba, 2017). The preference for market information services may be informed by their desire to make remunerative income from the sale of their produce. Poor bidding processes and weak marketing structure has been contributory factors of poor income from produce of farmers, hence their preference to seek relevant information that will enable them enhance sale. The need to be

abreast with modern production technologies would have informed their preference for technology demonstration and adoption services. It is worthy to note that modern technology confers greater advantages one of which is increased output when compared with practicing stale technology.

Also preferred were agro-input services ( $\bar{x}=1.95$ ) and loan/credit sourcing services ( $\bar{x}=1.95$ ). The preference for these services could be hinged on the need to curtail the challenges they face when sourcing for agricultural input. The provision and supervision of this service by the extension personnel at the service centre has equally been advocated for by previous policy documents, with this, the constraints associated with accessing inputs by farmers will no longer be experienced. In addition to a department of extension and a national extension policy, the Agricultural Extension Transformation Agenda also intended to ensure provision of seeds, fertilizers and credit without (FMARD, 2012). Access to loans under friendly terms (mild collateral requirements, low interest rates and flexible pay back duration) is noticeable among some of the demand of farmers; hence, preference for this service is not surprising.

**Table 3: Distribution of farmers by preference of the proposed services by the support centre (n=123)**

Services offered by the support centre	HP	P	MP	NP	WM	Rank
Soil testing services	52 (42.3)	55 (44.7)	16 (13.0)	-	1.86	7 <sup>th</sup>
Agro-meterological services	54 (43.9)	46 (37.4)	19 (15.4)	4 (3.3)	1.80	8 <sup>th</sup>
Agro-input services	68 (55.3)	37 (30.1)	18 (14.6)	-	1.95	4 <sup>th</sup>
Mechanization services	71 (57.7)	42 (34.1)	10 (8.1)	-	2.10	1 <sup>st</sup>
Technology demonstration and adoption services	78 (63.4)	26 (21.1)	14 (11.4)	5 (4.1)	1.98	3 <sup>rd</sup>
Information and communication Technologies kiosk services	55 (44.7)	42 (34.1)	24 (19.5)	2 (1.6)	1.80	8 <sup>th</sup>
Market information service	66 (54.1)	45 (36.9)	11 (9.0)	-	1.99	2 <sup>nd</sup>
Access to agricultural extension agents	55 (44.7)	55 (44.7)	11 (8.9)	2 (1.6)	1.88	6 <sup>th</sup>
Loan/credit sourcing services	60(48.8)	42(34.1)	28 (22.8)	8 (6.4)	1.95	4 <sup>th</sup>

**HP: Highly Preferred, P: Preferred, MP: Moderately Preferred, NP: Not Preferred, WM: Weighted Mean. Source: Field Survey, 2018**

**Anticipated constraints to effectively access services offered by the support centre**

Table 4 identifies practicability of services offered ( $\bar{x}$ =1.89), inadequate extension personnel at the support centre ( $\bar{x}$ =1.88) and intermittent supply of services ( $\bar{x}$ =1.84) as anticipated constraints to accessing services proposed by the one-stop agricultural extension delivery support centre. The practicability of intended services may stem from the age long reservations expressed towards government policy, perhaps, rightly so, due to policy somersaults in the recent past. Also, failure in the past for such programme to optimally benefits the clientele may account for this posture,

which is a potential threat to the success of this novel idea.

The dearth of extension personnel has been a growing concern in the discharge of extension services in the country. With this, it was not surprising it was identified as an anticipated constraint in accessing the services offered by the support centre. This is consistent with FMRAD (2012) that extension agent coverage was one agent to 1,000 – 1,500 farm families. The possibility that these services may not be regularly available when sought after was also a concern. This may discourage the farmers from further seeking services from the support centre, thus undermining the achievement of its laudable objectives.

**Table 4: Distribution of farmers by anticipated constraints to accessing proposed services by the support centre (n=123)**

Anticipated constraints to effectively access services offered	Weighted mean	
High cost of services offered	1.57	7 <sup>th</sup>
Practicability of services offered	1.89	1 <sup>st</sup>
Waning interest in the support centre	1.75	4 <sup>th</sup>
Sharp practices by personnel of support centre	1.71	6 <sup>th</sup>
Inability to appropriately communicate information package of service	1.74	5 <sup>th</sup>
Inadequate extension personnel at the support centre	1.88	2 <sup>nd</sup>
Intermittent supply of services	1.84	3 <sup>rd</sup>

**Source: Field Survey, 2018**

**Willingness to use one-stop agricultural extension services support centre**

Available data in Table 5 reveals that market information services ( $\bar{x}$ =2.07), loan/ credit sourcing services ( $\bar{x}$ =2.04), and mechanization services ( $\bar{x}$ =2.03) ranked highest among the services the respondents were willing to use. Their willingness to make use of market information may be premised on the fact that this service is the high point of the entire production value chain. With this service they will be able to obtain prompt and

relevant information on the supply and demand dynamics of their produce, make informed choices on the sale of their produce from various options that will be presented, thereby make remunerative sale from their produce.

In a bid to sustain the activities of their enterprise, expand the scale of production or probably take advantage of other complementary services offered would have informed their willingness to make use of the loan/credit sourcing services. It is also prominent to state that this service is not likely to follow the path of other formal credit/loan services

farmers make use of which often is fraught with untimely release of funds, short duration of payback, high interest rates, complex collateral requirements among others. The drudgery associated with agricultural activities, the desire to expand scale of production, increase their pace of work and enhance economics of scale among others would have prompted their willingness to make use of the mechanization services offered by the support centre.

Technology demonstration and adoption service ( $\bar{x}=1.94$ ) and agro-input services ( $\bar{x}=1.92$ ) were also identified as services respondents were willing to use. In a bid to be abreast with latest technology deployed in production, the respondents will be willing to use this service. Identified as one of the

key mandates of agricultural extension is dissemination of improved technologies, hence the delivery of this service was also notable among those proposed services and willing to be used by the respondents. The fundamental objective of agricultural extension program is to help the farm i.e., holding to gain new information and develop new abilities, as well as to apply directly on the farm the latest scientific knowledge (transfer of technology) (Dragic, Sreten and Zoran, 2009). Willingness to use agro input services may be as a result of the desire to remove the bottleneck experienced when sourcing inputs which include but not limited to supply of substandard inputs, delay in supply of inputs, a trim down in quantity supplied among other sharp practices.

**Table 5: Willingness to use one-stop agricultural extension services support centre (n=123)**

Services offered by the support centre	HW	W	MW	NW	WM	Rank
Soil testing services	5 (40.7)	60 (48.8)	13 (10.6)	-	1.87	7 <sup>th</sup>
Agro-meterological services	53 (43.1)	53 (42.3)	18 (14.6)	-	1.85	8 <sup>th</sup>
Agro-input services	64 (52.0)	40 (32.5)	19 (15.4)	-	1.92	5 <sup>th</sup>
Mechanization services	76 (51.8)	33 (26.8)	14 (11.4)	-	2.03	3 <sup>rd</sup>
Technology demonstration and adoption service	69 (56.0)	27 (30.1)	13 (10.6)	4 (3.3)	1.94	4 <sup>th</sup>
Information and communication Technologies kiosk services	53 (43.1)	50 (40.7)	12 (9.8)	8 (6.5)	1.79	9 <sup>th</sup>
Market information service	78 (63.4)	35 (28.5)	10 (8.1)	-	2.07	1 <sup>st</sup>
Access to agricultural extension agents	66 (53.7)	42 (34.1)	15 (12.2)	-	1.88	6 <sup>th</sup>
Loan/credit sourcing services	70(56.9)	47 (38.2)	6 (4.9)	-	2.04	2 <sup>nd</sup>

**HP: Highly Willing, W: Willing, MW: Moderately Willing, NP: Not Willing, WM: Weighted Mean**

**Source: Field Survey, 2019.**

#### **Categorization of willingness to use one-stop agricultural extension services support centre**

Data in Figure 1 shows that on the overall, majority (78.8%) of the respondents were willing to use the one-stop agricultural extension services support centre. Their willingness to make use of this centre is attributed to the myriads of benefits they would

derive from the support centre which will eventually increase productivity. From the statistics, one can conclude that if implemented, the objective of the one-stop agricultural extension services support centre which include but not limited to bringing technology and innovation to the doorsteps of farmers, providing easy access to multi-purpose extension service will be attained.



**Figure 1: Categorization of farmers' willingness to use one-stop agricultural extension services support centre**

**Source: Field Survey, 2018**

**Hypothesis testing**

In Table 6, it is revealed that significant relationship existed between marital status ( $\chi^2=160.167$ ), farming experience ( $r=0.018$ ), farm size ( $r=0.351$ ), farmers’ preference among the services offered ( $r=0.766$ ), anticipated constraints to accessing the services offered ( $r=0.617$ ) and farmers’ willingness to use one-stop agricultural extension services support centre. Owing to the responsibilities attached to marriage, the respondents will be favourably disposed to making use of the services provided by the support centre to increase productivity and income. Increase in farm size and farming experience depicts that they

are not novice hence, they would have identified the immense benefit attached to making use of the services of the support centre, thus increase in these variables made them more attuned to the use of the support centre. The established relationship between farmers’ preference among services offered and willingness to use the support centre is ascribed to the fact they have observed that these services will sufficiently address production related constraints hence, their willingness to use the proposed services in the support centre to address such. The observed benefits far outweighing the constraints will be a sufficient reason for their willingness to use these services despite its anticipated constraints

**Table 6: Relationship between causal variables and willingness to use one-stop extension services support centre**

Variable	$\chi^2$	r	p
Marital status	160.157		0.000
Farming experience		0.018	0.040
Farm size		0.351	0.000
Farmers’ preference among the services offered		0.766	0.000
Anticipated constraints to effectively accessing services offered		0.617	0.000

Source: Field Survey, 2018

**CONCLUSION AND RECOMMENDATIONS**

From the foregoing; the study concludes that mechanization and market information services were most preferred of all the identified services being proposed by the support centre. Practicability of the services offered by the support centre and inability to appropriately convey information of service package were prominent as anticipated constraints to accessing services offered. Willingness to use one-stop agricultural extension services support centre was high with marketing information and loan/credit sourcing services prominent among the services they are willing to use. Owing to the profound willingness to use the one-stop agricultural extension services support centre, the study recommends that the idea is sustained with emphasis placed on effective communication of service packages to clientele while mechanization and market information services should be accorded attention to enhance overall effectiveness of the initiative.

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