

FACTORS INFLUENCING GROUP VIABILITY AMONG CASSAVA PROCESSOR GROUPS OF THE ROOT AND TUBER EXPANSION PROGRAMME (RTEP) IN OYO STATE, NIGERIA

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Accepted: 25th July 2014

ABSTRACT

Many agricultural development interventions such as Root and Tuber Expansion Programme (RTEP) have used groups as veritable tool for accelerating contacts with project targets. However, continued existence and viability of such groups remains a challenge in the post intervention era. This paper examines factors influencing group viability among cassava processor groups of RTEP in Oyo State, Nigeria. Purposive sampling technique was used to select 116 respondents who were registered members of cassava processor groups as they have in place viable groups for the use of this study. Information was obtained on respondents' socioeconomic characteristics, the extent and frequency of participation in group activities, constraints to participation, and compliance of their groups to set guidelines. Data was analysed using both descriptive and inferential statistics at $p = 0.05$. Results show that most (44.0%) of the respondents were between 41 and 50 years with mean household size of 6 persons. More than half (56.0%) attended group meeting while a reasonable proportion (49.1%) made useful contribution during group meetings and paid dues (44.0%) while 87.1% paid such dues frequently. Respondents were however constrained by high cost of transportation (58.6%) and raw materials for processing (50.9%) and inadequate finance (49.1%) as well as poor market linkage (45.7%). Total compliance was recorded for record keeping (63.8%) and attendance at meetings (62.1%). Group viability was predicted by respondents' household size ($\beta = 0.142$), frequency of participation in group activities ($\beta = 0.142$) and group constraints ($\beta = -0.342$). More infrastructures like road and input supply as well as soft loans to members of the group will further enhance group viability.

Key words: Group viability, Participation, Compliance, Root and tuber expansion programme

INTRODUCTION AND PROBLEM STATEMENT

Nigeria is basically an agrarian country, with about 65% of the population earning their living from agriculture. The level of adoption of technology in Nigeria's agriculture is relatively low because technologies developed through research and development activities are not reaching the peasant farmers. This situation calls for a virile extension system that will link the farmers with the researchers effectively. However, the regular contact required for achieving this is highly impaired by the very low Extension Agents (EA) to farm families' ratio all over the states across the country. The ratio as at year 2000 ranged between one extension agent to 1,500 in Niger state and 1,800 in Lagos state with an overall average of 1:1, 968 as against the ratio of 1 to 500 recommended by the Food and Agricultural Organization (FAO) of the United Nations (Okoye and Ihi-

modu, 2004). The logistic difficulty confronting extension agents to reach and maintain regular contacts with farm families is what the use of groups for agricultural extension service delivery in Nigeria seeks to overcome.

The age-old practice of extension - farmer contact on one -on - one basis, though very effective, is expensive and unsustainable means of reaching farmers with agricultural technology. New methods emphasize the passing on of agricultural technology to farmers in organized groups (farmer groups). A farmer group is a collection of farmers interacting with one another towards achieving a common goal. Usually, the interaction between the members of the group is more than with those outside the group. Membership of a group varies and it is advantageous to have a small number of people in a group. A group size of between 20 and 30 is ideal and manageable in order to provide a

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face-to face interaction, better communication and free flow of information.

The farmer -group approach plays a valuable role in policy advocacy and in realizing economies of scale. One major benefit of the group is that farmers support each other to learn about and adopt innovations. Thus, an extension farmer-to-farmers system is amplified (FAO, 2001). Rather than simply be agents for technologies imposed from outside, the extension agents then play the role of catalysts, mobilizing farmers to experiment on an identified need and solution as well as recognizing local innovations (Stringfellow, Coulster, Lucy, Mekone and Hussam, 1997). Experienced farmers thus become the best discussion partners for other farmers. A farmers' network of communication then operates in a sustainable basis since it is perpetuated continually for generations.

The advantages of using groups such as farmer's cooperatives and associations according to Ladele (1995) and Conroy (2003) lies in coverage of farming community leading to improved dissemination of extension messages and agricultural innovations among farmers. Dealing with groups for extension work also confers advantage of saving time and reduction in cost per head, it allows for participation of more people, self improvement due to skill acquisition and educational opportunities offered through adult education and literacy programmes. It equally provides supportive services to complement the education function of extension.

Be this as it may, most intervention programmes only had group formation and management as appendages and not the main focus of the programme. The need for beneficiary involvement in agricultural programmes has been stressed by several authors (Ekong, 2007; Chamala and Shingi, 1997; Dannson *et al*, 2004; Srivastava, 2007). The encouraging attributes of the farmers' organization makes them one of the main target group in the implementation of the Root and Tuber Expansion Programme (RTEP). At the inception of RTEP, twelve cassava processor groups were formed

in Oyo state and they all participated in the first phase of the programme between August 2001 and March 2010. However, it is worrisome to note that out of the twelve processor groups adopted under the first phase of the programme, only six survived beyond this first phase and are been considered for the sustainable phase of the programme (RTEP II). Owing to the huge financial, material and human resources sunk into the programme, it is imperative that current groups being considered for RTEP II are nurtured for sustainability and enhancement of the objectives of RTEP. It is an established fact that many agricultural development interventions such as Root and Tuber Expansion Programme (RTEP) have used groups as veritable tool for accelerating contacts with project targets. However, continued existence and viability of such groups remains a challenge in the post intervention era. It is against this background that this study investigated the six surviving groups to ascertain their viability beyond RTEP and also take advantage of subsequent programmes. This study was conceived to achieve the following specific objectives:

1. To examine the socio-economic characteristics of members of cassava processor groups under RTEP in the study area.
2. To determine the extent and frequency of participation in group activities by members of cassava processor groups under RTEP in the study area.
3. To identify constraints encountered by members of cassava processor groups under RTEP in the study area.
4. To determine compliance with RTEP set guidelines.
5. To ascertain factors influencing group viability among cassava processor groups of RTEP in Oyo State

METHODOLOGY

The study was carried out in Oyo State, which is one of the 36 states in Nigeria. The state is an inland state in southwestern, Nigeria which has its capital as Ibadan. There are 33 local government areas in the state. The population

of Oyo State according to the 2006 national population census report stood at 5,591,589 (NPC 2007). Population of the study comprised all members of cassava processor groups under RTEP in Oyo State. There are six RTEP groups in Oyo state spread across three out of the four Agricultural Development Programme (ADP) zones. Members of cassava processor groups that are participating in RTEP in the state were purposively sampled in this study as they constitute the main target of the study and also have in place viable groups for the use of this study. All the 116 registered members of the groups were used for this study. Variables measured included group members' socio-economic characteristics, extent and frequency of participation, perceived problems of the cassava processors' groups, group compliance and factors influencing group viability. Extent and frequency of participation were measured by presenting a list of regular group activities to the respondents. Respondents were then asked to indicate extent of participation in group activities and on a four-point -scale of not active, moderately active, active and very active. For frequency of participation, respondents were asked to indicate how frequently they participate in group activities on a three-point scale of not frequent, frequent and very frequent. For constraints, a list of possible constraint peculiar to the processors' group was presented and respondents were asked to indicate level of severity of each constraint as it affects their group activities. This was measured as severe, mild and not a constraint. Compliance was determined on a two-point scale of total and partial compliance to guideline moderating conduct of the activities of the cassava processors' groups. Data was collected using interview schedule and was analyzed using descriptive (frequency, percentages and means) and inferential (regression) statistics at $p=0.05$. Regression was used to isolate those variables that are germane to group viability.

RESULTS AND DISCUSSION

Respondents' personal characteristics

Table 1 indicates that most (44.0%) of the respondents fell between the age range of 41-50 years, 37.9% were 50 years and above while 13.8% were between 36-40years. It can be inferred that majority of the sampled respondents are in their economically active age. It should be noted that age is an important factor for consideration in agricultural activities; age determines the level of involvement in farming and other activities alike (Zhang and Flick, 2001). Available statistics in Table 1 further reveals that more women (64.7%) than men (35.3%) were involved in processing. This agrees with FAO (2001) that women are more involved in off-farm activities than men while Afolani and Ajani (1995) asserts that the cassava post harvest system have assigned gender roles. Majority (66.4%) of the respondents had a household size of 6 to 8 with a mean of 5.96. This implies that they have a fairly large family size which could probably serve as an insurance against short fall in labour supply. Household size has a great role to play in family labour provision in the agricultural sector (Sule, Ogunwale and

Table 1: Socio-economic characteristics of respondents (n = 116)

Variables	Frequency	Percentage	Mean
Age			
31-35	5	4.3	
36-40	16	13.8	
41-50	51	44.0	
50 and Above	44	37.9	45.6
Total	116	100.0	
Sex			
Male	41	35.3	
Female	75	64.7	
Total	116	100.0	
House hold size			
1-5	32	27.6	
6-8	77	66.4	
9-12	7	6.0	6.10
Educational Attainment			
No formal education	41	35.3	
Quranic education	2	1.7	
Adult education	5	4.3	
Primary education	44	38.0	
Secondary education	11	9.5	
Tertiary education	13	11.2	
Total	116	100.0	

Atala 2002). The table further reveals that more than one third (38.0%) had primary education, 35.3% had no formal education and 11.2 % had one form of tertiary education. This population can be said to be comparatively literate. Recent development with participants in agricultural intervention programmes like Fadama and RTEP is that quite a reasonable proportion of members of users groups have some level of educational attainment.

Extent of participation of respondents in group activities

Table 2 presents data on extent and frequency of respondents’ participation in group activities. Available statistics in Table 2 reveals that majority (64.7%) of the respondents actively participated in processing activity, more than half (56.0%) attended group meeting while quite a reasonable proportion (49.1%) made useful contribution during group meetings and paid group dues (44.0%). These findings suggest that that the respondents are more active in processing activities which was the major activity of the group. This finding corroborates RTEP report (2010) that having embraced RTEP and invested over 700 million Naira in the establishment of improved cassava processing sheds and centers, 211 of which were fully operational, it is unlikely that programme beneficiaries would want to see their investments go down the drain, hence their active participation in processing activities. More than one third of members of the RTEP groups were equally active in activities like payment of dues (34.5%) and active contribution during group meetings

(33.6%). On a general note, it can be concluded that core activities of the group attracted reasonable participation to have nurtured the groups beyond the first phase of the intervention programme going to the sustainability phase.

Respondents’ frequency of participation in group activities

Information in Table 2 further reveals the frequency of participation in group activities by the respondents. It shows how often RTEP group members are engage in group activities. The frequency of participation of most RTEP group members in group activities was high as up to four members out of every five members frequently participated in group activities. This was the picture for involvement in processing activities (88.0%), payment of group dues (87.1%), contribution during group meetings (86.8%) and attendance of capacity building workshop (77.6%). This trend possibly accounted for the survival of these groups beyond the first phase.

Constraints encountered during RTEP

Available statistics in Table 3 reveal that high cost of transportation (58.6%), high cost of raw materials for processing (50.9%), inadequate finance (49.1%), inadequate infrastructure at processing sites (46.6%) and poor market linkage (45.7%) were severe constraints encountered during RTEP. This finding is in tandem with Dipeolu et al (2003) and Onyenweaku and Nwaru (2005) that enhancing access to finance, business skills and appropriate technologies, ensuring quality of products and

Tables 2: Distribution of respondents according to their extent and frequency of participation in group activities

Activities	Extent of participation				Frequency of participation			
	Not active	Moderately active	Active	Very active	Not frequent	Frequent	Very frequent	Frequent
Involvement in processing activities	4(3.4%)	13 (11.2%)	24(20.7%)	75(64.7%)	14(12%)	43(37.1%)	59(50.9%)	
Attendance in capacity building workshop	16(13.8%)	14(12. %)	35(30.2%)	51(44.0%)	26(22.4%)	41(35.3%)	49(42.3%)	
Attending group meetings	1(0.9%)	21(18.1%)	29(25.0%)	65(56.0%)	8(6.9%)	50(43.1%)	58(50.0%)	
Contribution during group meetings	8(6.9%)	12(10.2%)	39(33.6%)	57(49.1%)	15(12.9%)	39(33.4%)	62(53.4%)	
Payment of group dues	12(10.3%)	13(11.2%)	40(34.5%)	51(44.0%)	15(12.9%)	39(33.7%)	62(53.4%)	

reliability of supply and integration of activities have been shown to have strong potential for sustainable value chains development (processing).

Table 3: Distribution of respondents based on perceived problems encountered during RTEP

S / N	Constraints	Severe Con-straint		Mild Con-straint		Not a Constraint	
		F	(%)	F	(%)	F	(%)
1	High cost of raw materials for processing	59	50.9	41	35.3	16	13.8
2	No market linkage	53	45.7	46	39.7	17	14.6
3	Inadequate infrastructure in processing sites	54	46.6	41	35.3	21	18.1
4	Lack of pricing policies	44	37.9	42	36.2	30	25.9
5	Lack of national standard for cassava products	52	44.8	44	37.9	20	17.2
6	High cost of transportation	68	58.6	37	31.9	11	9.5
7	Poor access of vehicles to processing sites	50	43.1	51	44.0	15	12.9
8	Inadequate finance	57	49.1	31	26.7	28	24.1

Compliance to RTEP Guidelines

Information in Table 4 shows that of the four RTEP guidelines, total compliance by respondents was highest in their record keeping (63.8%) and attendance at meetings (62.1%). This can be adduced to the fact that the respondents' record is the first port of call by RTEP officers when they are on routine visit hence was properly rendered. Compliance with payment of dues (50.9%) and attaining process flow specification (50.0%) were only partially complied with. Attaining process flow specification means separation of wet processing area from dry processing area. Though, partially complied with, this can be attributed to the fact that the respondents are

still used to their old method of cassava processing because of its ease. However, there is the need to comply totally because this will enhance the quality of processed products.

Table 4: Distribution of respondents extent of compliance with RTEP Set Guidelines

S / N	Guidelines	Partial compliance		Total compliance	
		F	P (%)	F	P (%)
1	Record keeping	42	36.2	74	63.8
2	Payment of dues and contribution by members	57	49.1	59	50.9
3	Attendance at meetings which are held fortnightly	44	37.9	72	62.1
4	Attaining process flow specification (separation of wet processing area from dry processing area)	58	50	58	50

Regression analysis on group viability with the independent variables

Available statistics in table 5 show that three variables; household size ($\beta = 0.142$), frequency of participation in group activities ($\beta = 0.142$) and constraints ($\beta = -0.342$), were the significant predictors of group viability. This implies that participants at the RTEP activities with less distraction from his or her household size, groups with lesser constraints and those that record frequent membership participation are more likely to be viable for the sustainable phase of the RTEP.

CONCLUSION AND RECOMMENDATIONS

On the premise of the available information, it is apparent that RTEP group members attend meetings, made useful contributions and reasonably live up to their responsibility by paying their dues.

Tables 5: Contribution of variable in regression equation to group viability

Variables	Unstandardised coefficient		Standardized Co-efficient	T	Sig
	B value	Std error	Beta		
Constant	8.265	2.119	-	3.900	.000
Age	2.540	0.873	0.181	2.909	0.172
Sex	-0.303	0.411	-0.051	-0.737	0.463
Marital Status	-0.420	0.608	-0.051	-0.691	0.491
Education attainment	-0.997	0.525	-0.172	-1.899	0.060
Household size	0.206	0.098	3.142	2.100	0.038
Year of formal education	0.027	0.052	0.048	0.508	0.613
Duration of membership in group	-0.160	0.085	-0.134	-1.891	0.062
Amount made from personal processing per month	2.27E 0.005	0.000	0.086	0.518	0.606
Extent of participation in group activities	0.130	0.067	0.163	1.935	0.056
Frequency of participation in group activities	0.242	0.092	0.237	2.640	0.010
Constraints	-0.125	0.026	-0.342	-4.722	0.000

Furthermore, up to four members out of every five members frequently participated in group activities ranging from group processing activities, payment of dues and capacity building workshop attendance. They were however severely constrained by high cost of transportation and raw materials for processing, inadequate finance and poor market linkage. Members agreed that total compliance was achieved in record keeping and meeting attendance. Group viability was predicted by respondents' household size, frequency of participation in group activities and constraints they encountered in participation in group activities. In the light of the findings of this study, it is recommended that;

- Road infrastructures should be built for ease of market access
- Input supply as well as soft loans to members of the group will further enhance group viability.
- Capacity building on group cohesion is needed to further strengthen the group and consequently group viability

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