GENDER INVOLVEMENT AND RESOURCE USE EFFICIENCY IN FARM LEVEL CASSAVA-GARRI PROCESSING IN LAGOS STATE, NIGERIA.

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ABSTACT
The study examined the resource use and gender involvement in garri processing in Lagos State, Nigeria. Data used for the study were obtained using structured questionnaire administered to 100 randomly selected cassava-garri processors in Epe Local Government Areas of the state. Data collected were analysed using descriptive statistics, Likert scale, production function analysis and marginal analysis model. Findings revealed that majority of the sampled processors were women with mean age of 38.7years, married with mean household size of 6 people and average year of processing experience of 11.4 years. Gender involvement analysis revealed that women were more involved in all the processing activities than men in the study area. Comparison of the ratio of the marginal value product (MVP) to marginal factor cost (MFC) showed that cassava tubers, land and processing equipment were being underutilized during the processing operations while labour was over-utilized. The major limitations to garri processing in the study area were high cost of processing inputs, high perishability of cassava tubers, unstable weather conditions, shortage of water for processing, high cost of transportation and poor pricing of garri. The study therefore recommended that government should invest in local processing units as well as provide basic amenities such as constant electricity, accessible roads water and constant availability of petrol and diesel will help reduce the cost of garri processing, improve the competitiveness of emerging cassava-based processing factories and attract investors, both local and foreign.

Keywords: Cassava-garri, Efficiency, Gender Involvement, Cassava processing, Resource use

INTRODUCTION

Cassava is an important staple food crop and a cheap source of carbohydrate grown in almost all parts of Nigeria. Nigerian cassava production is by far the largest in the world with an annual production of about 37 million metric tons of tuberous roots (CBN, 2011). Total area harvested in 2011 was 3.21 million hectares with an average yield of 11.7 tons per hectare; a third more than production in Brazil and almost double the production of Indonesia and Thailand. The crop is produced in 24 of the country's 36 states. It is produced predominantly (99%) by small scale farmers with 1-5 ha of land intercropped with yams, maize or legumes in the rain forest and savannah agro- ecologies of southern, Central and Northern Nigeria (Aboki *et al*, 2013). Major limitations of cassava are its rapid postharvest physiological deterioration, which often begins within 48 hours after harvest and the presence of cyanogenic compounds. This means that roots greater than 48 hours old have little market value and limits the range over which fresh roots can be marketed. Processing as a form of value addition appears to be the best method of preserving the highly perishable cassava roots and for removing 'cyanogenic glucosides' which impart toxicity to the roots. The most effective ways of reducing the total cyanide content of cassava products are to adopt the processing methods involving different combinations of soaking, grating, fermentation, boiling and drying/roasting of whole or fragmented roots (Dziedzoave *et al*. 2010). Cassava processing provides sources of income and employment for thousands of farmers. The wide-spread importance of cassava to poor rural farmers, processors and both rural and urban consumers means that investments in the processing of cassava are likely to have a positive impact on both rural and urban livelihoods. Adeniyi and Akande. 2015).

One of the major and most important products of cassava is Garri. Garri is a widely consumed Nigerian food; produced following harvesting of cassava, peeling, grating, dewatering, fermentation (optional), sieving, frying and bagging. This process will give white or creamy white garri while addition of palm oil prior to dewatering will add yellow colour to garri. Garri is commonly consumed either as a paste made with hot water and eaten with soup or by soaking in cold water with sugar, coconut, roasted peanut, fish, boiled cowpea as complements (Afolabi, 2009). Garri appears to be a "food of choice" even in the face of alternative food options in urban area (Maziya-Dixon *et al*, 2004).

For sustainable food security, strategies have to be developed to increase food production. One of the ways to achieve this is through efficient use of resources by farmers/processors which is one of the major agricultural problems in Nigeria. Other problems include how the various factors that explain production efficiency could be examined so as to improve the crop production in the country. One way of approaching the problem of increasing production therefore, is to examine how efficient the farmers are using their resources, if resources use is inefficient, production can be increased by making adjustment in the use of factors of production in optimal direction. This implies that for producers to

achieve their goals in earning more profit the available resources used in production should be efficiently utilized. Inefficient use of these resources and technologies by producers will end in more cost-effective to increase output (Ike, 2008). The importance of resource efficiency in increasing production has been widely recognized by researchers (Ike, 2008; Okoye, 2006; Ike and Inoni, 2006; Nwaru, 2005). However, considerable research on the availability, affordability and resources use efficiency of cassava-garri processors in the study area is observed to be very weak. Cassava farmers are often unable to process harvested roots and have to sell their crops at a very low price to middlemen who are willing and able to reach them (Nweke, 2004). Cassava processors encounter losses when processing fresh cassava tubers especially into garri. Losses of 23% for local centres and 17% for improved technology centres have been reported (Ajav, 1998; Akosua and Bani, 2007). As a result, the garri output is decreased and since garri is essential in nutrition issues and food security, there is need to reverse the foregoing scenario with a view to improving the productivity and efficiency of resource use among cassava-garri processors through the investigation of the nature of productivity and efficiency in their production.

Gender is a term associated with roles and responsibility of males and females in the society. It is the socio-cultural differences between males and females as against the biological differences (Sinkaiye, 2005). The interrelations of these roles produce a mutual understanding of each other's capabilities and constraints. It is believed that some crops are produced by men and some by women (Ajayi, 1995). Over the years women have become a strong productive force in subsistence agriculture. They are involved in almost all phases of food production and they execute certain farm operations that are thought to belong to men (Okorji, 1985). Adegeye (1999) asserted that women are active in the cassava industry and that they are more predominant in the processing and marketing than the men folk. The purpose of this study is therefore to analyse gender involvement and resource use efficiency in processing cassava to garri in the study area.

Objectives of the study

The main objective of the study was to examine gender involvement and resource use efficiency in farm level cassava-garri processing in Lagos state, Nigeria

Specifically, the study sought to:

- describe the socio-economic characteristics of garri producers in the study area;
- ascertain the gender roles in cassava processing;
- determine the resource-use efficiency of factor inputs in processing cassava to garri in the study area.
- identify the limitations to cassava-garri processing in the study area

METHODOLOGY

Study area: The study was conducted in Lagos state, Nigeria. The state was created on May 27, 1967 and located in the mangrove-swamp forest region of the south-western part of Nigeria. The State lies between latitudes $6^0$35N and 6.58^0N; longitude 3^0 45'E and 3.75^0 E. The state has a population of 17 million according to 2006 population census and a land mass of 3,577 square kilometers with a marine shoreline of about 180 km extending inland to a maximum distance of about 32km. The state has a humid tropical climate characterized by distinct dry and wet seasons with moderate mean annual rainfall which varies between 1381.7 mm and 2733.4 mm. Lagos State is Nigeria's most industrialized State. It accounts for over 60% of the Federation's total industrial investment. Primary agricultural production typifies the rural economy of Lagos State with industrial activities. While the State is essentially a Yoruba-speaking environment, it is a socio-cultural melting pot attracting both Nigerians and foreigners alike.

Nature and Sources of Data: Primary data was used for this study. These were collected through the administration of structured questionnaires to randomly selected cassava-garri processors. The data collected included respondents' personal information, processing inputs, and cost of production, income and expenditure, gender roles in garri processing and constraints militating against the processors.

Sampling techniques: A multi-stage sampling technique was used for this study. The first stage involved the purposive selection of Epe Local Government Areas for ease of data collection. The second stage involved the purposive selection of two local council development areas (LCDAs) from the three LCDAs in Epe LGA due to the presence of large cassava-garri processors; the third stage involved the random selection of ten communities from the selected LCDAs and the final stage involved the random selection of 10 garri processors from each community making a total of 100 respondents for the study. However, data from 70 interviewers were used in the analysis. The other 30 were excluded due to lack of information. The sampling frame is the list of cassava-garri processors in each of the chosen communities.

Analytical techniques

1. Descriptive statistics such as frequencies, means and percentages were used in

analysing the socio-economic characteristics of the respondents.

2. Likert scale rating technique was used to ascertain the gender roles in cassava-garri processing in the study area. The 4-point scale was graded as Highly Involved = 4, Moderately Involved = 3, Less Involved = 2 and Not Involved = 1. The level of contribution was ranked using weighted mean (X). The mean score is 4+3+2+1 = 10/4 = 2.5 (cut-off point). Therefore, using the cut-off point value of 2.50, any item with mean value of 2.50 and above was regarded as "High" while items with mean value of less than 2.50 was regarded as Low. The severity of the constraints militating against the processors was also analysed using the Likert scale technique. The 3-point scale was graded as high = 3, moderate = 2 and low = 1. The mean score is 3+2+1 = 6/3 = 2. Therefore any item with mean value of 2 and above was regarded as "Severe" while items with mean value of less than 2 was regarded as "Not severe".

3. Multiple regression analysis was used to develop production function for garri processing and measure the efficiency of resources use. The implicit form of the model is as follows;

$Y= f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, U)$…….(1)

Where, Y = Garri output (Kg)
X_1 = Age of farmers (Years)
X_2 = Gender (1 = female; 0= otherwise)
X_3 = Cassava tubers (₦)
X_4 = Educational Status (years of formal schooling)
X_5 = Household size (No of people)
X_6= Size of land (plots)
X_7 = Labour input (in man days)
X_8= Depreciated processing equipment (₦)
b_0 = Constant term
b_1– b_9 Regression coefficient to be estimated
U = Error term.

Different functions, linear, semi-log, double-log and exponential were tried and the double log (Cobb-Douglas) was chosen for the analysis based on goodness of fit(economic, econometric and statistical criteria). The model was explicitly expressed as follows:

$LnY = lnb_0 + b_1 lnX_1 + b_2 lnX_2 + b_3 lnX_3 + ….. + b_9 lnX_9 + U_1$ ……(2)

The *apriori* expectation was that the coefficient of X1-X8 would be positive.

4. Resource -use efficiency was determined by the ratio of marginal value product (MVP) to marginal factor cost (MFC) of inputs based on the estimated multiple regression coefficient. Following Rahman and Lawal (2003); Adeniyi and Akande (2015), efficiency of resource use is given as:

r = MVP/MFC…….... (3)

$MVP_{xi} = MPP_{xi}.P_y$

Where:
Px= Unit price of input
Py =Price of output

If we assume an implicit function as follows:

$Y= f (X_1, X_2, X_3, X_4, X_5, u)$ …… (4)

The explicit forms can be shown in various functional forms as follows:

Linear: Y1 = b0 + b1x1 + b2 x2 + b3 x3 + b4x4 + b5 x5 +u …….. (5)

Semi-log: Y1 = b0 +b1ln x1 +b2ln x2 + b3ln x3 + b4ln x4 + b5ln x5 + u ……. (6)

Double-log: lnY1 = b0 +b1ln x1 +b2ln x2 + b3lnx3 + b4ln x4 + b5ln x5 + u ……. (7)

From the above functional forms, the MPPs can be derived as follows:

In linear form: MPPxi = bi
In semi-log form: MPPxi = bi / Xi
In double log form: MPPxi = bi.Y / Xi

Where:
Px= Unit price of Input.
Py= Price of Output.
bi= Estimate of Regression Coefficient.
Y = Output
Xi = Varying inputs

The rule provides that when r = 1, there is efficient use of resource, r>1 indicates under -utilization of resource; while r<1 shows over - utilization of resource.

Results and Discussion

Socio-economic characteristics of cassava-garri processors in the study area

Table 1 presents the result of the socio-economic characteristic of the garri processors. The table reveals that majority (61.4%) of the processors were female while 38.6% were male. The dominance of garri processors by female in the study area was because processing and marketing of garri were seen as the female job while the men were more involved in cassava farming. This result agreed with those of Adekanye *et al.* 2013; Inyanda, 2014; and Adeniyi and Akande, 2015. The age distribution of the respondents' showed that a larger percentage of the respondents (32.9%) were within the age range of 31-40 years. The mean age of 38.7 years implies that the respondents were within the economic active age group and are able to cope with the rigours associated with garri processing. The result further revealed that 24.3% of the respondents had no formal education while most (28.6%) had secondary education and only 4.3% had tertiary education. This implies that the educational level of the respondents is low and could be responsible for their reliance on local technologies for their operations. This is in consonance with Adeniyi and Akande, 2015 who opined that education is considered highly necessary in the adoption of new technology and the various technical operations involved in the use of mechanized systems. Majority (72.9%) of the sampled respondents were married with a mean household size of 6 people. This indicates that the sampled household heads are responsible bread winners who have a duty to provide for their household members. This result corroborated the finding of Omolehin *et al* (2007) who opined that in African traditional settings, married men are

considered to be more responsive since it is assumed that a person having family would want to have the best results that would translate to more output and consequently income to meet family needs. Majority of the respondents (78.6%) had garri processing experience of between 10 and 15 years, 17.1% had more than 10years experience while 4.3% had less than 5years processing experience. The mean year of garri processing experience was 11.4years. This implies that the garri processors in the study area are well experienced in their trade.

Table 1: Socio-economic characteristics of the respondents ***N = 70***

Variable	Frequency	Percentage	Mean
Gender			
Female	43	61.4	
Male	27	38.6	
Age			
20-30	15	21.4	
31-40	23	32.9	38.7
41-50	19	27.1	
>50	13	18.6	
Educational Level			
No Formal Education	17	24.3	
Primary	16	22.9	
Secondary	20	28.6	
Adult/vocational	14	20.0	
Tertiary	3	4.3	
Marital Status			
Single	5	7.1	
Married	51	72.9	
Divorced	4	5.7	
Widowed	10	14.3	
Household Size			
1-4	20	28.6	
5-8	43	61.4	6
9-12	7	10.0	
Processors Experience			
<5	3	4.3	
5-10	55	78.6	11.4
>10	12	17.1	
Religion			
Christianity	32	45.7	
Islam	27	38.6	
Traditional	11	15.7	
Other Occupation			
Garri Processing Only	20	28.6	
Self-Employed	15	21.4	
Paid Employment	7	10.0	
Farming	28	40	

Source: Field Survey Data, 2016

This is substantiated by the findings of Olaoye (2010) and Aminu *et al.* (2014) who observed that experience is important in determining the profit levels, the greater the experience, the more the processors understand the system, conditions, trends terrains, prices etc. Nwaru (2000) supported the finding that experience reduces management risk and that the number of years a producer spent in garri production is an indication of the practical knowledge acquired.

Cassava-garri processors characteristics

Results on Table 2 revealed that most (34.3%) of the respondents had no cassava farms while the remaining 65.7% had cassava farmlands with size ranging from 0.5ha-4ha. The means farm size of 1.49 implies that the farmers were operating on medium scale. This assertion is based on Babatunde (2004) farm size classification. According to him, farm size classification of 0.01-1.0ha is classified as small scale, 1.1-2.0 ha is medium scale and above 2.0ha are large scale farms respectively. The study also revealed that most (36%) of the respondents finance their operations through Ajo/Esusu, 23% through cooperatives, 6% through loans/ gifts from friends and relatives while 5% finance with bank loans. Majority (58%) had no assess to bank loans and only 48/6% belong to a cooperative society. This could have a negative effect on credit

mobilisation and expansion of the processing operations. The result also revealed equal usage of either family or hired labour (37.1%) in the study area while 25.1% employ both family and hired labour. The mean labour cost was ₦12,952.86 while the mean income from garri processing was ₦57,570.29. Furthermore, 67.1% of the sampled respondents did not own processing equipment and 70% had no contact with extension agents

Table 2: Cassava-Garri Processing Characteristics ***N = 70***

Variable	Frequency	Percentage	Mean
Cassava Farm Size (ha)			
Do not have a farm	24	34.3	
0.5 – 1	20	28.6	
1.1 – 1.5	5	7.1	1.49
1.6 – 2	10	14.3	
>2	11	15.7	
Sources of Finance			
Bank Loans	5	7.1	
Friends/Relatives	6	8.6	
Ajo/Esusu	36	51.4	
Cooperatives	23	32.9	
Assess to Bank Loans			
No	58	82.9	
Yes	12	17.1	
Cooperative Membership			
No	36	51.4	
Yes	34	48.6	
Type of Labour Employed			
Family	26	37.1	
Hired	26	37.1	
Both	18	25.7	
Labour Cost (₦)			
None	26	37.1	
1000-10000	27	38.6	
10100-20000	4	5.7	12952.86
20100-30000	6	8.6	
>30000	7	10.0	
Income (₦)			
<10000	1	1.4	
10000-30000	21	30	57570.29
30100-60000	30	42.9	
>60000	18	25.7	
Ownership of Processing Equipment			
No	47	67.1	
Yes	23	32.9	
Extension Contact			
No	49	79	
Yes	21	30	

Source: Field Survey Data, 2016

Gender Involvement in Garri Processing Activities in the Study Area

Table 3 presents the mean comparison of men and women involvement in cassava-garri processing in the study area. The result revealed that men were highly involved in some activities they considered too laborious for women as shown by their means which were more than the cut-off point value of 2.50 on a 4-point rating scale. These activities include: grating (2.81), soaking/fermenting (2.57), dewatering/pressing (3.07), bagging (2.74) and storing (2.64). The involvement of men were however low in other activities such as peeling (2.13), washing (1.33), sieving (1.81), frying (1.83) and drying (1.76). Women on the other hand were highly involved in all the stages of cassava- garri processing except grating as indicated by its mean (2.10) which was less than the cut-off point value of 2.50. The women were highly involved in peeling (3.06), washing (3.60), soaking/fermenting (2.53), dewatering/pressing (2.81), sieving (2.94), frying (3.70), drying (2.96), bagging (2.54) and storing (2.76). This implies that the bulk of garri processing activities in the study area were in the hands of women. The result is in line with Sabo (2006) who reported that women contribute between 46 and 65%

of all hours spent on traditional agricultural production and processing and also undertake about 60 to 90% of the rural agricultural product marketing.

Table 3: Mean Comparison of Men and Women Involvement in Cassava-Garri Processing in the Study Area

	MEN			WOMEN		
Processing Activities	**χ**	**SD**	**Rmk**	**χ**	**SD**	**Rmk**
Peeling	2.13	1.382	LI	3.06	1.328	HI
Washing	1.33	0.829	LI	3.60	0.969	HI
Grating	2.81	1.365	HI	2.10	1.298	LI
Soaking/Fermenting	2.57	1.430	HI	2.53	1.420	HI
Dewatering/Pressing	3.07	1.278	HI	2.81	1.195	HI
Sieving	1.81	1.035	LI	2.94	1.284	HI
Frying	1.83	1.035	LI	3.70	0.598	HI
Drying	1.76	1.122	LI	2.96	1.209	HI
Bagging	2.74	1.357	HI	2.54	1.328	HI
Storing	2.69	1.322	HI	2.76	1.319	HI

Source: Field Survey, 2016 LI = Less Involved; HI = Highly Involved

Production Function of Garri Producers

Table 4 presents the result of multiple regression analysis for the garri producers. The linear, exponential, semi-logarithm and Cobb-Douglas functional forms were tried with data on the production function. The Cobb-Douglas functional form gave the best fit and was chosen as the lead equation, the choice was based on conformity of estimates with the a-prior expectation of their signs and statistical significance as well as value of coefficient of multiple regressions R^2 and significant F value. As indicated in Table 4, the R^2 value of 0.746 implied that about 75% variation in garri outputwas jointly explained by the socio-economic variables included in the model. The F-statistics of 12.614 was significant at 1% level of significance attesting to the goodness of fit of the model. The coefficients of cassava tubers ($p<0.01$), education ($p<0.05$), size of land ($p<0.05$) and processing equipment ($p<0.05$) had positive significant relationship with garri output, indicating that increasing the use of these inputs will increase garri output in the study area. Age of the respondents ($p<0.01$) was found to have an indirect relationship with garri output in the study area. This implies that the younger processors were more productive and efficient in the study area. Gender of the processors was also negative but significant at 5% level. This further confirms that women were more involved in garri processing than men in the study area. Furthermore, the cost of labour used in garri processing had a negative significant relationship with garri output, this connotes that reducing the cost expended on labour will increase profit from garri processing in the study area.

Table 4: Multiple Regression Estimates for Garri Processors in the Study Area

Variable	**Coefficient**	**T-ratio**
Constant	7.916*(0.619)*	4.27***
Age (X_1)	-1.64*(0.303)*	-2.89***
Gender (X_2)	-0.61 *(0.84)*	-2.07**
Cassava tubers (X_3)	0.688 *(0.216)*	3.188***
Education (X_4)	1.113*(0.35)*	2.23**
Household size (X_5)	0.001*(0.116)*	0.15
Size of land (X_6)	0.09*(0.324)*	2.14**
Labour (X_7)	-0.422*(0.216)*	-3.15***
Processing equipment (X_8)	0.875*(1.023)*	2.43**
R^2	0.746	
Adj. R^2	0.618	
F- Stat	12.614***	

****, **, indicates significant at 1%, and 5% respectively*
Standard errors are in parenthesis
Source: Computed from Field Survey Data, 2016

Resource Use Efficiency

Economic efficiency of resources use in cassava-garri processing was determined using the ratios of their Marginal Value Product (MVPs) to the Marginal Factor Cost (MFC). The results of economic efficiency of resources are presented in

table 5 below. Comparison of the ratios of the MVP to MFC for each input factor shows that three resulting ratio were greater than unity; cost of cassava tubers, size of land and equipment, indicating that these inputs were under used or being underutilized during the production process hence increasing their rate of use will increase output and profit level. Cost of labour input was less than unity, indicating that this input was excessively used or over utilized hence decreasing quantity of the input use will increase output and profit level.

Table 5: Resource Use Efficiency Indicators in Garri Processing in the Study Area

Resource	MVP	MFC	MVP/MFC	Decision
Cassava tubers	144.53	98.23	1.47	under-utilized
Labour used	-24.63	200	-0.12	over-utilized
Land	4080	2500	1.63	under-utilized
Equipment	136.33	18.63	7.32	under-utilized

Source: Computed from Field Survey Data, 2016

Major Limitations to Cassava-Garri Processing in the Study Area

Table 6 presents the major limitations of cassava-garri processors in the study area. The result reveals that all the outlined limitations were severe except one as shown by their mean values which are greater than the cut-off point value of 2 on a 3-point rating scale. The severe constraints include: high cost of processing inputs, high cost of transportation, poor pricing of garri, poor storage facilities, unstable weather condition, high perishability of cassava tubers, shortage of water for processing, lack of assess to bank loans, labour shortage and lack of technical know-how to adopt improved cassava processing technologies.

Table 6: Mean Ratings of the Major Limitations to Cassava-Garri Processing in the Study Area

Limitations	χ	SD	Remark	Rank
High cost of processing inputs	2.64	0.51	severe	1st
High cost of transportation	2.30	0.69	severe	5th
Poor pricing of garri	2.27	0.74	severe	6th
Poor storage facilities	2.27	0.67	severe	6th
Unstable weather condition	2.39	0.60	severe	3rd
High perishability of cassava tubers	2.53	2.58	severe	2nd
Shortage of water for processing	2.33	0.61	severe	4th
Lack of assess to bank loans	2.21	0.80	severe	9th
Lack of space to sundry produce	1.91	0.72	not severe	11th
Labour shortage	2.20	0.71	severe	10th
Lack of technical know-how to adopt improved cassava processing technologies	2.29	0.76	severe	8th

Source: Field Survey, 2016

The result also reveals that space to sundry produce was not a challenge in the study area. This finding is in line with the findings of Odebode (2010) and Inyanda (2014) who found on their separate studies on cassava processing that, the problems encountered by cassava processors in Oyo and Kogi States of Nigeria included high cost of processing equipment, transportation difficulties, poor infrastructural facilities, shortage of labour, poor access to market, lack of fund and poor storage facilities. The findings also agreed with the finding of Okeowo (2015) that some of the problems encountered by cassava processors in Epe LGA of Lagos state were inadequate capital, price fluctuation, high transportation cost due to poor access roads, high perishability due to inadequate storage facility and poor electricity supply.

Conclusion and Recommendations

Findings from this study revealed that most of the cassava-garri processors in the study area were female in their economic active age, married with a moderate household size, highly experienced in their enterprise, financed their enterprises through Ajo/Esusu, had no assess to bank loans and not members of cooperative societies. The study also revealed that women were highly involved in all the processing operations except grating, while men were only involved in few operations considered to be too laborious for women such as operating the grating machine. The result of the multiple regression analysis revealed that costs of cassava tubers, education, size of land and processing equipment had positive significant influence on garri output while age, gender, and cost of labour had negative significant relationship with garri output in the study area. Comparison of the ratio of the MVP to MFC shows cassava tubers, land and processing equipment were being underutilized during the

processing operations hence increasing their rate of use will increase garri output and profit level, while labour was over-utilized hence decreasing the cost expended on labour will increase output and profit level The major limitations to garri processing in the study area were high cost of processing inputs, high perishability of cassava tubers, unstable weather conditions, shortage of water for processing, high cost of transportation and poor pricing of garri.

Based on the findings of the study, the followings recommendations are made for the garri processors and policy makers

- Garri processors should be encouraged to join viable cooperative associations that can be used as a drive for acquiring loans for members at affordable interest rates. Such loans could be used to communally purchase some processing machines that are beyond individual processor such as grating machines, dewatering machines, peelers, dryers and fryers. These machines could be used by members for their gari processing at the payment of token amount cheaper than the cost of manual labour that are currently being used. This will also make garri processing faster and allow more processing cycle to be covered and consequently more employment opportunities created and more profit accruable to garri processors.
- Provision of basic amenities such as constant electricity, accessible roads water and constant availability of petrol and diesel will help reduce the cost of garri processing, improve the competitiveness of emerging cassava-based processing factories and attract investors, both local and foreign. Similarly, investment in local processing units and the necessary power and water supplies, which could be small-scale community or group-based enterprises, will create employment and increased source of livelihood in the study area in particular, the state in general and the country as whole .
- In addition, there is need to develop new products and equipment in order to reduce processing drudgery. Policy efforts should be geared towards assisting processors with locally fabricated machines to reduce the bottleneck of technical know-how, while policy, research and extension regarding food processing at the rural farm-gate should be tailored to meet the needs and constraints of women since they are more involved in processing operations.

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