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DIVERSIFICATION STRATEGIES ON LIVELIHOODS STATUS AMONG WOMEN COWPEA PROCESSORS IN MAGAMA LOCAL GOVERNMENT AREA OF NIGER STATE, NIGERIA.

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ABSTRACT

The study determined the Diversification Strategies on Livelihoods Status among Women Cowpea Processors in Magama LGA of Niger State, Nigeria. This study was carried out in four communities of Magama LGA. The women's involvement in cowpea processing was comparatively high. Multistage random sampling was used to choose 178 respondents, using a structured questionnaire. The socio-economic profile of the sampled respondents was determined using descriptive and inferential statistical methods. The results showed that most of the respondents were of active working groups and the average age of the sample respondents was 40 years, while the average family size was 6-8. The findings showed that 56.3% were married and 43.8% had primary education, and 86.5% of sample respondents were engaged in cowpea processing activities. The results showed that the mean monthly income of the respondents was ₦41309.02. The result also showed that the major constraint was severe difficulty in accessing productive resources ranked 1st. It was recommended that regular visits of extension workers should be prioritized by the government in order to increase women's access to training that will improve their livelihood.

Keywords: *Women, Diversification, Cowpea, Livelihoods.*

INTRODUCTION

The involvement of rural women in livelihood activities ensures family sustainability, hence leading to the economic development of the populace. Therefore, women have a lot of opportunities to participate in various livelihood activities ranging from agricultural to non-agricultural sectors like petty trading, food processing/crop processing, crop production, tailoring, hair plaiting, poultry keeping, dairy/making weaving of basket/mat and civil service (Abel *et al.,*2022*).* Nevertheless, cowpea processing income diversification is specifically important for rural farm families. This is because lack of liquidity and poor access to credit are the most serious problems to improve agricultural productivity among farm households in developing countries, (Demilola *et al.*, 2020) Livelihood diversification can occur in two ways, that is, either out of necessity or by choice (Elisa, 2022). Diversification out of necessity refers to conditions in which the income from the household's farm production like rice is not enough to sustain an acceptable standard of living, while diversification by choice refers to voluntary reasons for diversification, which is always connected to the desire for higher returns from cowpea processing activities. . According to Desmond (2020), having different income sources can also be considered a risk-coping strategy, because diversified farming enterprises are less vulnerable to economic shocks than undiversified farming enterprises. It is important to note that different income-generating activities cannot be viewed partly, as they are linked through investment, production, processing, and consumption. For example, income from Maize production can be used to purchase equipment for cowpea processing which can increase the productivity of the farm (Davis, *et al,* 2021). Diversification is defined as the process by which rural households construct increasingly diverse livelihood portfolios, making use of increasingly diverse combinations of resources and assets in order to meet their basic needs, improve their living standards or welfare, and manage risk (Ibrahim. 2022). In Nigeria, the government and donor agencies have been active in their efforts to analyze and find solutions to the menace of poverty. The Federal Government has also established programmes that focused on the empowerment of women involved in agricultural processing particularly some selected crops like cowpea, rice, and ground nut which increasingly play an important role and exhibits an increasing share in agricultural household income (Mohammed and Bello 2021). The objectives of this study were to:

- determine the livelihood status of women processors in the study area
- examine the effects of income diversification strategies on the livelihood status of women processors
- examine the constraints associated with women cowpea processors in income diversification in the study area

METHODOLOGY

The research was carried out in four different communities in Magama LGA of Niger state. Both descriptive and analytical methods were used for the study. The communities were: Akutu, Anale, Agido, and Alura as women participated in cowpea processing

Multi-stage sampling technique was used for the study. The first stage involved the random selection of Agricultural Zones III in the State. At the second stage, one LGA was randomly

selected, this was due to the abundance of Cowpea production and processing activities in Magama LGA of agricultural zone III. The third stage involved the random selection of four communities from the LGA. At the fourth stage, 15% of the Women Cowpea Processors were randomly selected from the sampling frame of each community. In all, a total of 178 respondents were selected for the study.

Data were collected using a structured questionnaire complemented with an interview schedule. The data obtained were analyzed using descriptive statistics such as (frequency distribution, and percentage mean) Objective I was achieved using the livelihood status index. Livelihood status were categorized as ≤ 0. 35 = Very low, 0.36 - 0.59 = Low, 0.60 - 0.85 = Moderate, and > 0.86 = High livelihood.

While, objective II was achieved using a 3- a point Likert rating scale of very severe =3, severe =2, not severe = 1 That is 3+ 2+ 1 = 6 = 2.0

≥ 2 .0 = Severe

< 2 .0 = Not Severe

RESULTS AND DISCUSSION

Socio-economic Characteristics of Respondents

Table 1, revealed that the mean age of the respondents was 40.1 years. This finding indicates that women in the study area were still within their active and productive. From the Table**,** 56.3% of the respondents were married, while 32.2% and 11.5% were single and widowed respectively. This implied that most of the respondents in the study area were married. The mean household size of the respondents was 7 persons, implying that women in the study area were of large household size.

The mean year of cowpea processing activities of the respondents was 11.3. This signifies that women in the study area had improved in years of agricultural processing activities and were well exposed. Table 1 revealed that 58.2% of the respondents had one form of formal education or the other. On the other hand, 41.8% of the respondents had non-formal education. This finding shows that more than half of the women in the study area had formal education The Table also showed that the majority (86.5%) of the respondents had agricultural processing activities as their primary occupation. This is because larger percentages of Nigerian women have agricultural processing activities as their major sources of livelihood. This finding is in line with that of Baba and Majin. (2021)

For monthly income, Table 1, showed that the mean income was ₦41309, indicating that the majority of the women cowpea processors had monthly income that is above recommended minimum wage in Nigeria.

Table 1: Distribution of respondents according to socio-economic characteristics (n=178)

Variables	Frequency	Percentage	Mean
Age			
<313	13	1.4	40.1
31 – 40	90	49.5	
41 – 50	75	49.0	
Marital status			
Married	110	56.3	
Single	60	32.2	
Widowed	8	11.5	
Household size			
< 6	35	23.6	7
6 – 10	121	74.0	
11 – 15	22	2.4	
Farming experience			
< 11	81	38.9	11.3
11 – 20	127	61.1	
Educational level			
Non Formal	87	41.8	
Primary	91	43.8	
Secondary	29	13.9	
Tertiary	1	0.5	
Primary Occupation			
Farming	180	86.5	
Black smiting	2	1.0	
Petty trading	2	1.0	
Civil service	17	8.2	
Charcoal dealers	3	1.4	
Tailoring	1	0.5	
Hair dressing	2	1.0	
Mat weaving	0	0	
Monthly income			
20,001 - 30,000	5	2.4	41309.02
30,001 - 40,000	104	50.0	
40,001 - 50,000	96	46.2	
> 50,000	3	1.4	

Sources: Field survey, 2022

Livelihood status of women cowpea processors

Table 2, showed that 84.1% of the respondents had moderate livelihood, while 12.5% had low livelihood. Also, only 3.4% of the respondents had a high livelihood. This finding agreed that the majority of the respondents had moderate livelihood. Moderate and high livelihood among women in the study area is a strong indication of improved livelihood from cowpea processing activities.

This finding contradicts that of Usman and Umar (2021) who revealed that majorities of farmers in North Central Nigeria had moderate livelihoods due to agricultural processing activities.

Table 2: Distribution of the respondents based on their livelihood status (n=178)

References

Status	Frequency	Percentages
Very High	0	0.0
High	7	3.4
Moderate	150	84.1
Low	28	12.5
Total	**178**	**100.0**
Mean Livelihood Index	**0.328**	
Minimum Livelihood Index	**0.125**	
Maximum Livelihood Index	**0.625**	

Source: Field Survey, 2022

Note: Livelihood index is classified as ≤ 0.26 = Low, 0.26 – 0.50 =Moderate, 0.51 – 0.75 = High, > 0.75 = Very High.

Livelihood Activities

The coefficient of mat weaving (0.000212) was positively significant at a 5% level of probability. This indicates more engagement in mat weaving by women will increase their livelihood. This could be as a result of profits involved in the making of mats. This finding is in agreement with that of Damilola *et al.* (2020) who reported engaging in income-generating activities are incentives to improve livelihood in Kwara State, Nigeria. The coefficient of sewing/ tailoring (0.0002211) was positively significant at a 1% level of probability, indicating that an increase in sewing/tailoring will definitely increase the livelihood of women in the study area. The coefficient of petty trading (0.0001975) and food vendor (0.0003129) were both significant at a % level of probability, signifying that engaging in black smiting and petty trading will improve women processors' income in the study area. This finding is in line with that of Babatunde *et al*., (2022) who posit that livelihood activities such as petty trading, food vendor, and sewing/tailoring are the major income sources of livelihood for farmers in Southwestern Nigeria. The coefficient of dry cleaning (0.0002261) and hairdressing 0.0001885 were both significant at a 5% level of probability. This shows that more engagement in dry cleaning and hairdressing will add more income to women and also improve their livelihood. The coefficient of domestic work (0.0002629) was positively significant at a 5% level of probability, implying that an increase in women's participation in domestic work will reduce the amount they spend in hiring domestic workers and also improve their livelihood. The coefficient of telecommunication services (0.0001041) was positively significant at a 5% level of probability, signifying that the involvement of women in telecommunication will change livelihood.

Table 3: Livelihood activities of women processors (n=212)

Variables	Coefficient	Z-value	Y=0	Y=1	Y=2
Mat weaving	0.000212	2.33**	-2.12**	2.07**	1.27
Cap weaving	0.0001348	1.32	-1.31	1.29	1.01
Mortar and pestle making	0.000014	0.10	-0.10	0.10	0.10
Sewing tailoring	0.0002211	2.95***	2.57***	2.47**	1.37
Black smiting	0.0003467	1.43	-1.52	1.52	1.05
Petty trading	0.0001975	3.00***	2.59***	2.51***	1.33
Food vendor	0.0003129	3.81***	3.20***	2.94***	1.52
Knitting	-0.0003476	-0.79	0.78	-0.77	-0.73
Dry cleaning	0.0002261	2.07**	1.90*	1.85*	1.25
Hairdressing	0.0001885	2.28**	2.15**	2.10**	1.27
Charcoal production	-0.0000869	-0.94	0.93	-0.93	-0.78
Domestic work	0.0002629	2.78***	2.52**	2.42**	1.36
Telecommunication services	0.0001041	2.19**	1.93*	1.91*	1.17
Pseudo R2	0.3515				
Chi2	75.96***				
Log likelihood	-70.06068				

Sources: Field survey, 2022

Diversification Strategies of Women Processors

The result of the linear regression model showing diversification strategies among women processors is presented in Table 4, showing an R^2 value of 0.8008 which implies that 80% variation in income diversification strategies was explained by the independent variables included in the model. The F-statistic is significant ($P< 0.01$), indicating a good fit of the model and that all the variables have a joint influence on the dependent variable. The coefficient of age (-0.1212965) was negatively significant at a 1% level of probability, which is an indication that as women advance in age their tendency to diversify into income reduces. The coefficient of marital status (0.1311921) was positively significant at a 10% level of probability, implying that women are more likely to diversify into income than men. The coefficient of experience (0.0958885) was positively significant at a 1% level of probability. This denotes that women with experience in income generating activities are more likely to diversify. Also, the coefficient of income (0.0000149) was positively significant at a 5% level of probability, showing that as women access more income, their tendency of diversifying into income strategies increases. This finding tends to agree with a priori expectation as women with high income are eager and as such the propensity to diversify may be high. This result agrees with Davis *et.al* (2021) who reported that an increase in annual income played an important role in income diversification in Southeast Nigeria.

The coefficient of the livelihood index (9.693681) was positively significant at a 1% level of probability, signifying that women with an improved livelihood are likely to diversify into income activities due availability of capital needed for diversification. This finding is in consonance with that of Babatunde *et.al* (2022) who indicated that an increase in the productive asset will increase

income diversification among rural households in Nigeria. The coefficient of cooperative (0.3532093) was positively significant at a 1% level of probability, implying that women that belong to the cooperative will diversify because of benefits attached to the cooperative ranging from access to information, capital, and other incentives required for diversification. This finding is in line with that of Damilola *et al.* (2020) who reported that membership of cooperatives increases rural household diversification in Nigeria.

The coefficient of extension (0.0789821) was positively significant at a 5% level of probability, implying that women with constant extension access will diversify in order to attract better livelihood. The coefficient of non-formal credit (-0.272561) was negatively significant at a 5% probability level. This shows that the non-availability of credit from non-formal institutions will increase diversification into income in order to augment insufficient credit. The coefficient of formal credit (0.2191768) was positively significant at a 10% level of probability. This shows that access to formal credit will ease the stress of diversification. This finding corroborates (Desmond 2020) who reported that informal sources of credit especially personal savings have contributed positively to determining the maize production in Yewa North of Ogun State.

Table 4: Diversification strategies among women Processors (n=212)

Variables	Coefficient	Z-value
Age	-0.1212965	-8.74***
Marital status	0.1311921	1.91*
Household size	0.0212329	0.84
Experience	0.0958885	5.93***
Education level	0.0099419	1.14
Income	0.0000149	2.25**
Livelihood index	9.693681	15.17***
Cooperative	0.3532093	4.35***
Extension	0.0789821	1.94*
Nonformal credit	-0.272561	-2.24**
Formal credit	0.2191768	1.77*
Training	-0.0063296	-0.14
Constant	4.843314	8.82***
R-squared	0.8008	
Adj R-squared	0.7886	
F-value	1%	

Sources: Field survey, 2022

Constraints associated with women cowpea processors

Table 3, showed the result of constraints associated with women cowpea processors as a diversification strategy. The result showed that the following constraints were severe difficulty in accessing productive resources ($\bar{X}$ =2.81) ranked 1st, signifying that non-accessibility of accessing productive resources was the most ranked constraint in the study area. Lack of information and training on non-farm activities ($\bar{X}$ =2.74) ranked 2nd. This implies that inadequate training in agricultural processing activities affects income in the study area. This finding agreed with that of Desmond (2020) who reported that lack of productive resources and inadequate training, were the major problems to livelihood diversification. This also agreed with the finding by Ibrahim (2022)

who stressed that non-availability of productive resources is a major challenge to livelihood diversification among rural households in Kano State, Nigeria.

More so, inadequate access to credit ($\bar{X}$ =2.70) ranked 3rd. This indicates that women in the study area do not have adequate access to credit. Also, the poor educational level of rural women ($\bar{X}$ = 2.64) and poor transportation (2.49) were ranked 4th and 5th respectively. Ebenezer and Madiu (2022). Other severe constraints in the study area were; poor government policies ($\bar{X}$ = 2.17) and socio-cultural problems ($\bar{X}$ 2.08) ranked 6th and 7th respectively.

Table 5; Distribution of respondents according to constraints associated with women cowpea processors (n=212)

Variables	Very severe	Severe	Not severe	Sum	Mean	Decision
Inadequate access to credit	163 (78.4)	28 (13.5)	17 (8.2)	562	2.70	Severe
Poor government policies	78 (37.5)	88 (42.3)	42 (20.2)	452	2.17	Severe
Poor transportation means	126 (60.6)	58 (27.9)	24 (11.5)	518	2.49	Severe
Poor educational level of rural women	149 (71.6)	44 (21.2)	15 (7.2)	550	2.64	Severe
Lack of information and training on non-farm activities	162 (77.9)	37 (17.8)	9(4.3)	569	2.74	Severe
Difficulty in accessing productive resources	174 (83.7)	29 (13.9)	5 (2.4)	585	2.81	Severe

Sources: Field survey, 2022

CONCLUSION AND RECOMMENDATIONS

Based on the findings, it can be concluded that women cowpea processors in the study area were in their active and productive age and married. Also, the majority of the women cowpea processors had large households and were well experienced in cowpea processing activities. Most of the respondents had formal education while the majority had agricultural processing activities as their primary occupation.

More so, the majority of the respondents had moderate livelihood status while the Settlement of children's school fees, contribution to food security, and improved procurement of processing inputs were the major benefits of diversification strategies. The most severe constraints associated with women cowpea processors were difficulty in accessing the productive resource, lack of information and training on agricultural processing activities, and inadequate access to credit, it was recommended that regular visits of extension workers should be prioritized by the government in order to increase women access to training that will improve their livelihood

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