

Assessment of socioeconomic profile of micro-finance beneficiaries' small-scale rice processors in Jigawa State of Nigeria

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ABSTRACT

The present study assessed the socioeconomic profiles of micro-finance beneficiaries' small-scale rice processors in Jigawa State of Nigeria given that there is no exclusive study on socio-economic characteristics of these agribusiness entrepreneurs that benefitted from credit facilities in the study area. The study utilised cross-sectional data elicited through a well-structured questionnaire coupled with interview schedule from 200 processors (133 parboilers and 67 millers) selected through a multi-stage sampling technique. Besides, an easy cost-route approach was used for data collection during the 2022 processing period, and data analysis was achieved using descriptive statistics. The empirical evidence showed the enterprises to be dominated by an economically active labour force that is well experienced, literate and had a sustainable household size for a better livelihood. However, the challenges of gender stereotypes and discrimination, and the climate threat that owed to the use of black energy were visible. Therefore, the study recommends the need for gender budgeting for the purpose of supporting gender mainstreaming, and provision of cheaper and eco-friendly energy technologies as a substitute for fossil fuel energy technologies in use.

Keywords: Agripreneur, Processors, Rice, Socio-economic, Smallholder, Jigawa State

INTRODUCTION

Jigawa State, located in northern Nigeria, is characterized by a predominantly agricultural economy (Sadiq and Bashir, 2022), with small-scale rice processing playing a crucial role in the region (Sadiq and Bashir, 2023). Small-scale rice processors, often operating at the grassroots level, contribute significantly to local employment, income generation, and food security (Adam *et al.*, 2018; Abiodun *et al.*, 2019). In their pursuit of sustainable business operations, many of these entrepreneurs rely on financial support from micro-finance institutions (Phuknoi *et al.*, 2018; Akpan *et al.*, 2020; Ndubuisi and Chidimma, 2023). Jigawa State, Nigeria, is a region with a significant presence of small-scale rice processors who play a crucial role in the local economy. These micro-entrepreneurs often rely on micro-finance institutions for financial support to sustain and expand their rice processing businesses. While micro-finance has been recognized as a catalyst for economic empowerment and poverty alleviation, there is a paucity of comprehensive studies examining its impact on the socio-economic profiles of small-scale rice processors in Jigawa State. This background underscores the need for a detailed assessment that goes beyond traditional economic indicators to encompass a holistic understanding of the conditions, challenges, and opportunities faced by micro-finance beneficiaries within this specific sector. Besides, the current lack of a detailed understanding of the socio-economic dynamics within this specific demographic hampers the development and implementation of targeted policies and initiatives. Consequently, there is a pressing need to comprehensively assess the socio-economic profiles of these micro-finance beneficiary small-scale rice processors in order to

identify challenges, opportunities, and potential areas for intervention.

To address this gap, a focused study on the socio-economic profiles of micro-finance beneficiary small-scale rice processors in Jigawa State is imperative. By addressing these key issues, the study aims to provide a comprehensive understanding of the socio-economic profiles of micro-finance beneficiary small-scale rice processors in Jigawa State. To sum it up, the study is justified as it addresses critical issues related to poverty alleviation, inclusive growth, rural development, and the effectiveness of micro-finance in supporting small-scale rice processors. The findings of this study will contribute valuable insights for policymakers, micro-finance institutions, and other stakeholders, enabling them to formulate targeted strategies that will enhance the overall economic well-being of this vital sector. In other words, the insights gained from this research have the potential to inform policies, improve financial inclusion, and contribute to the overall well-being of the local communities involved in rice processing. Noteworthy, the findings will not only contribute to academic knowledge but also have practical implications for policymakers, development practitioners, and local communities in Jigawa State, Nigeria.

METHODOLOGY

Jigawa State is in the North-Western part of Nigeria (Figure 1). The State has a total land area of approximately 22,410 km² or 2.2 million hectares and lies between latitude 10° 57' North to 13° 03' North and Longitudes 8° 08' East to 10° 37' East (Nigeria Information Guide (NIG), 2004). The State has a population of 4,361,002 people according to National Population Commission (NPC, 2006) while the projected population in 2019 at 2.9%

growth rate stood at 6,005,100. Eighty-five per cent of the population of the State lives in rural areas (Mamman, 2016). According to Jigawa State Government Official Directory of information (2017), Jigawa State's topography is characterised by undulating land, with sand dunes of various size spanning several kilometres in parts of the State. Most part of Jigawa State lies within the Sudan savannah vegetation zone with elements of Guinea savannah in the southern part. The state is endowed with fertile arable land to which almost all tropical

crops could adopt, thus constituting one of its highly prized natural resources. Farming is among the major occupation of the people who are predominantly Hausa/Fulani (Jigawa State Diary, 2017). Out of the 4,361,002 people, about 90% of the population are predominantly engaged in rural and subsistence farming *viz.* arable crop production, livestock rearing etc. The State economy is largely characterised by informal sector activities with agriculture as the major economic activity.

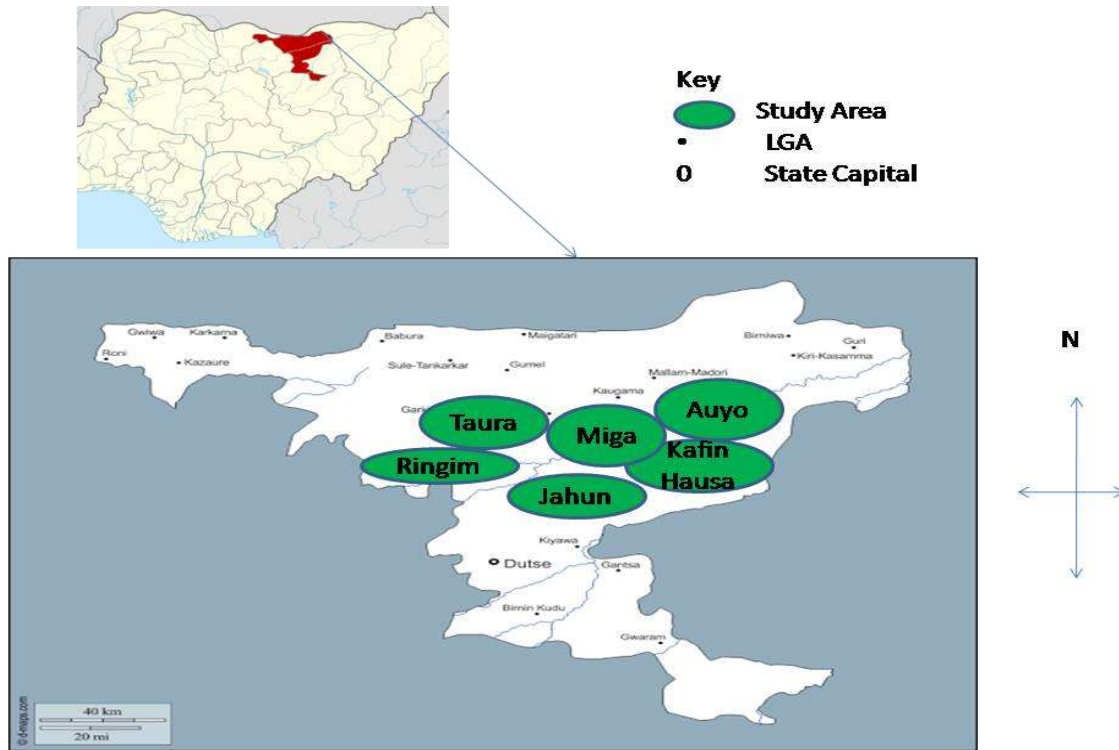


Figure 1: Map of Jigawa State showing Study Area

Using a multi-stage sampling technique, a total of 200 processors were selected for the study based on the sampling frame obtained from both reconnaissance survey and the state's agricultural agencies. The first stage involved purposive selection of three (3) Agricultural zones *viz.* Zone 1, 2, and 3 based on high concentrations of rice production/farming in the study area. The second stage involved random selection of two Local Government Areas (LGAs) from each of the selected zones. The chosen LGAs were Miga and Jahun; Ringim and Taura; and, Kafin-Hausa and Auyo from Zone 1, 2 and 3 respectively. The third stage involved random selection of three villages from each of the selected LGAs, thus given a total of Eighteen (18) villages. The random selection of

the LGAs and villages was done *viz.*, inbuilt Microsoft sampling tool. In the fourth stage, the sampling frame was stratified into two target groups: millers and parboilers: using Taro Yamane formula (1967) (Equation 1) as adopted by Ndubuisi (2023), 200 respondents were randomly drawn from the sampling frame (Table 1). Afterward, a simple random sampling technique was used to select the representative sample size from each of the strata (133 parboilers and 67 millers). Using an easy cost-route approach, a well-structured questionnaire coupled with an interview schedule was used to elicit information from the respondents and after which descriptive statistics was used to analyse the data.

Table 1: Sampling Procedure and Sample Size

Zone	LGA	Village	Sampling frame		Sample size	
			Parboiler	Miller	Parboiler	Miller
Zone 1	Miga	TSakuwawa	15	7	8	4
		Hantsu	10	11	5	5
		Gwari	8	9	4	5
	Jahun	Harbosabuwa	13	6	7	3
		Harbotsuhuwa	18	10	9	5
		Agufa	15	8	8	4
Zone 2	Ringim	Sintilmawa	21	9	11	4
		Yan-Dutse	18	8	9	4
		Yakasawa	19	6	10	3
	Taura	Maje	11	10	6	5
		Gilma	10	6	5	3
		Majiya	12	4	6	2
Zone 3	Kafin-Hausa	Bulangu	11	7	5	4
		Kafin-Hausa	13	6	6	3
		Baushe	19	5	9	2
	Auyo	Arawa	21	5	10	2
		Gatafawa	17	10	8	5
		Ayama	14	7	7	4
Total = 3	6	18	265	134	133	67

Source: JARDA, Co-operative Society, Micro Finance Bank, and Reconnaissance survey (2019)

$$n = \frac{N}{1 + N(e)^2} \text{----- (1)}$$

Where:

n = sample size

N = population size

e = level of precision or Giant of tolerable error (5%)

RESULTS AND DISCUSSION

Age distribution of paddy rice processors

The results in Table 1 revealed that the majority (75.2%) of the parboilers and 65.7% of the millers were within the age range of 30-39 years old. This implies that most of the processor falls within the active and economic age range recommended by FAO (2019) to be productive and economically viable. Besides, the enterprise population is youthful compared to the previous situation that characterised the enterprise population to be dominated by early ageing people. The implication is that under a favourable business climate, the enterprise stands to benefit from efficient labour productivity, a catalyst for the enhancement and sustainability of the up and downward supply chain streams and rice food security in the study area. In addition, it could be assumed that the processors would be rational in making decisions and choice regarding their enterprises.

Household size distribution of paddy rice processors

The distribution of household size showed majority of the processors to have a fair household size of an average six (6) persons representing 42.1 and 47.8% respectively for parboilers and millers. Therefore, it can be suggested that both the actors in the rice value chain maintained a sustainable households which is healthy for a decent and favourable or good standard of living, Besides, this shift in the old norms of maintaining large households owing to culture and belief might be attributed to positive yield of sensitisations by stakeholders on the importance of a rational household size for healthy economic and society growth and development in the study area in particular and the nation in general. More so, literacy as evident from the fair to good level of formal education play a crucial role in the drive towards achieving this sustainable household size among most of the processors in the study area.

Furthermore, the implication is that the processors are likely to face little or no population pressure on their economic wherewithal, thus enhancement in the business going concern of these actors in the rice value chain of the study area. This result disagreed with the findings of Ibitoye (2014) who reported large households among majority of the rice processors in his study area. However, these findings conform to the findings of Tondo (2015) who discovered small households among most the rice processing actors in his study area. had a household size between 4 and 6 persons respectively. The result implies there is high dependency ratio and can be assume that food expenditure in non - food expenditure increases with increase in household size, and this could influence their income inequality in their enterprises.

Experience distribution of paddy rice processors

The distribution of the small-scale rice milling, and parboiling experience presented in Table 1 indicated the mean experiences of parboilers and millers to be 8 and 7.66 years

respectively. The implication is that most of the processors have been in the milling and parboiling enterprises for quite some time, thus have adequate experience required for managerial efficiency. Therefore, it can be suggested that both the actors in the rice value chain had adequate years of experience vital for competitive turnaround of the downstream supply chain. Besides, it is expected that these actors should be efficient and rational in resource allocation, thus strengthen both the upstream and downstream supply chain of rice enterprise in the study area. Year of experience in parboiling and milling is important because management skills of processors improve with experience thorough understanding of the technical procedures of doing the business profitably and proper utilisation of credit. This s finding is supported by Oyediran and Wasiru (2016); and Adam *et al.* (2018) who in their various studies indicated that most of the rice processors in their study areas had plentiful years of experience in rice processing activities.

Table 1: Age, Household size, and processing experience of the sample Processors (n= 200)

Variable	Respondents' category					
	Parboilers		Millers		Pooled	
	Frequency	%	Frequency	%	Frequency	%
Age						
<20	6	4.5	5	7.5	11	5.5
20-29	50	37.6	16	23.9	66	33
30-39	50	37.6	28	41.7	78	39
40-49	18	13.5	16	23.9	34	17
50-59	8	6.0	2	3.0	10	5
>=60	1	0.8	-	-	0.5	0.5
Min	14		17			
Max	60		50			
Mean	31.37		33.03			
Std. Dev.	8.895		8.562			
Household Size						
1-3	27	20.3	13	19.4	40	20
4-6	56	42.1	32	47.8	88	44
>=7	50	37.6	22	32.8	72	36
Min	1		1			
Max	13		20			
Mean	5.90		5.81			
Std. Dev.	2.724		3.412			
Years of processing experience						
1-3	11	8.3	14	20.9	25	12.5
4-6	57	42.9	20	29.9	77	38.5
>=7	65	48.8	33	49.2	98	49
Total	133	100	67	100	200	100
Min	1		1			
Max	30		22			
Mean	8.08		7.66			
Std. Dev.	5.338		5.163			

Source: Field survey, 2022

Gender distribution of paddy rice processors

Gender is a socially constructed roles, behaviours, and attributes that a given society consider appropriate for masculine and feminine. It

also refers to the natural segregation of human race in to male or female. Sex roles are those functions which are naturally bestowed on an individual to perform. The analysis in Table 4 showed that

females constituted majority (87.2.7%) of the parboiling enterprise with fewer males of 12.8% which implies that parboiling enterprise was dominated by females in the study area. The result agrees with the findings of Ibitoye (2014) who reported that female constitute most of the rice processors with fewer males but disagrees with the findings of Tondo *et al.* (2015) who revealed that male constituted majority of the rice parboiling processors in their study area. The result of the millers indicated that majority (98.5%) of the rice millers were males with 1.5% females, thus an indication that the milling enterprise is male dominated in the study area. The result is in tandem with the findings of Adam *et al.* (2018) who revealed that most of the milling processors were males in their study area. The high number of males might be attributed to the relative strenuous nature involved in using processing machines and purchasing of raw paddy rice in distance local markets.

Marital status distribution of paddy rice processors

The result of the parboilers in Table 2 indicated that majority (73.7%) of the parboilers were married, while 7.5% were single. This implied that most of the parboilers had families to cater for, which subject them to more liabilities and likely to discourage them to save more as the income of individual is spent on his family consumption. For the millers, evidence showed majority (85%) to be married while 13.4% found to be single. These results agreed with the findings of Saleh *et al.* (2016) and Shuaibu *et al.* (2018) who in their various studies reported that most of the rice processors in their study area to be married. Akerele and Ambali (2012) opined that marital status determined the level of farmers' household size with likely consequences on the family labour availability, income composition, household expenditure, saving pattern and as well as the enterprise going concern.

Educational distribution of paddy rice processors

In Table 2, the results revealed that that majority of the parboilers (54.1%) had Quranic education while 45.9% had one form of formal education. Contrarily, most (58.2%) of the millers had various forms of formal education while 41.8% didn't exceeds Quranic education. Therefore, it can be suggested that the milling categories were more informed educationally contrary to the parboilers in which the margin is just barely one-third. Besides, milling enterprise is technically inclined or involved intensive technologies unlike the parboiling enterprise that is technically passive. Consequently, the processors with formal education are more likely

to take incisive decision that affects their enterprises compared to those with little or no formal education as the case maybe. This is supported by the fact that educated processors will relies on market information- feed forward and backward: input and output supply markets, credit sources, globalisation as a guide for their enterprise's operational activities. Nevertheless, the technical know-how among most of the millers if adequately harnessed will strengthen the downstream rice supply value chain due to pecuniary advantage of economies of scale and size of milling industry compared to parboiling industry. However, in line with Adam *et al.* (2018), it can be argued that given the low level of post-secondary education across the parboiling and millers supply value chain actors, hence the rate of adoption of processing technology, information, and management of their income management. The implication is that processing innovation especially among the parboilers will have reception but with doubt as a low level of education is a characteristic of the adoption category of early majority adoption category. This result disagreed with the findings of Riffat *et al.* (2018) who observed most of the rice millers in their study area not to have formal education. Similarly, in a general scenario, Adam *et al.* (2018) reported that most of the rice processors in their study area had no formal western education.

Membership of Association Distribution of the Rice Paddy Processors

The results in Table 2 revealed that most of the parboilers and millers vis-à-vis 73.7 and 68.7% respectively did not belong to any form of social association, while on few 25.6 and 28.5% respectively for the parboilers and millers joined social association. The consequence of this poor utilisation of social power among most of these actors, a vital instrument of capital/investment boost given that economic power is presumed to be almost absent/lacking, is that, the pace of sustainability of the rice supply value chain in terms of growth and development in the study area is under a serious threat which if not properly addressed will have toll long-run effect on the study area's rice food security. It is assumed that being in a group or association can enhance processors' ability to improve their processing activities because one of the important obligations of member of association or cooperate society is acquiring loan collectively, sharing of ideas, experience and other technical skills. Generally, these results disagreed with the submissions of Oyediran and Wasiu (2016) who reported that majority of the paddy rice processors in their study area belonged to the rice processing association.

Table 2: Gender, Marital Status, Educational Status, and Membership Association of the Sample Processors (n= 200)

Variable	Parboilers		Millers		Pooled	
	Frequency	%	Frequency	%	Frequency	%
Gender						
Female	116	87.2	1	1.5	117	58.5
Male	17	12.8	66	98.5	83	41.5
Marital Status						
Single	10	7.5	9	13.4	19	9.5
Married	98	73.7	57	85.1	155	77.5
Widow	12	9.0	-	-	12	6.0
Divorce	13	9.8	1	1.5	14	7.0
Educational Status						
Quranic	72	54.1	28	41.8	100	50
Primary	28	21.1	12	17.9	40	20
Secondary	27	20.3	21	31.3	48	24
Tertiary	5	3.8	4	6.0	9	4.5
Others	1	0.8	2	3.0	3	1.5
Mem. Association						
Yes	34	25.6	23	34.3	63	31.5
No	98	73.7	44	65.7	137	68.5
Total	133	100	67	100	200	100

Source: Field Survey, 2022

Major occupation distribution of paddy rice processors

The analysis in Table 3 showed that majority (59.4%) of the parboilers engaged in agro processing as their major occupation, 36.8% engaged in trading, 2.3% in farming, and 1.5% in formal employment. On the other hand, majority (68.7%) of the millers take to milling as their major occupation, 17.9% in farming, 11.9% in trading and 1.5% as casual worker. The implication is that more time will be devoted to the rice supply value chain in the study, thus a plus to the growth and development of this sector. Besides, credit given to the paddy rice processors will be utilised for the purpose of the processing. Despite rice processing being the major occupation, these actors tends to diversify into other augmenting income generating activities, thus enhancement of their livelihoods and the turnover ratio of the rice processing enterprises in the study area. These results are in line with the findings of Abdulazzez *et al.* (2012); Muhammad (2014); and Tondo *et al.* (2015) who in their various studies established processing to be the major occupation of most of their respondents.

Secondary occupation distribution of paddy rice processors

The findings of the study in Table 4 discovered that majority (47.8%) of the parboilers were engaged in trading; 39.8% in agro-processing; while in a marginal proportion, 8.3, 5.3 and 3% respectively take to casual work, farming and formal employment. For the milers, it was observed that majority (49.3%) of the respondents engaged in farming activities; distance followed by 23.9% that

engaged in agro-processing; 17.9% engaged in trading while a marginal proportion of 7.5 and 1.5% respectively keyed into casual and formal employments. . The results implication explained that paddy rice processors in the study area had other means of livelihood and sources of income to sustain their processing activities. These results agreed with the findings of Riffat *et al.* (2018) who found rice processors in in their study to be engaged in subsidiary occupations that include, sewing sacks, sewing clothes, livestock rearing, and working in the neighbour household as a temporary servant.

Source of credit distribution of paddy rice processors

The analysis revealed that the majority (67.2%) of the millers acquired their start - off capital through Bank credit, and then followed by 20.9% that sourced their finance from friends and relatives; while 7.5, 3 and 1.5% sourced got their capital take-off from savings, co-operatives and inheritances (Table 3). Further, evidence showed that most (39.1%) of the parboiler used personal savings for capital take-off; and then followed by 28.6% each that acquired their take-off capitals from banks and friends and family; while at a distance, 2.3% and 0.8% respectively got their capital take-off from co-operatives, inheritances and money lenders (Table 3). The implication is that the characterised capital intensiveness of the milling industry forced most of the milling actors to resort into banking loan for a capital take-off against their counterparts in the parboiling chain that is less capital intensive, thus mostly utilised personal savings as start-up capital. Besides, it can be suggested that micro finance Bank

credit contributed immensely to the take-off of milling industry in the study area. Generally, these results disagreed with the findings of Abiodun *et al.* (2019); Oyediran and Wasiu (2016) who in their various studies reported that majority of the rice processors in their study areas respectively used their personal savings and cooperatives as capital sources.

The operational scale distributions of paddy rice processors

The results showed most of the actors in the value chains of parboiling and milling vis-à-vis 75.2 and 80.6% respectively operated on small-scale

basis while few across the selected value chains operated on mini/micro level. Based on economic theory, both are presumed to be faced with diseconomies of size but in a typical traditional economic setting as suggested by Shankayan (1988); Subba *et al.* (2015), a small-scale firm stands a better position to explore the advantages of economies of scale against the marginal/mini scale firm. Generally, this result contradicts the findings of Nasiru (2016) who reported that groundnut processing in his study area, though a distinct enterprise but similar supply value chain was small-scale dominated.

Table 3: Major occupation, secondary occupation, sources of finance and scale of operation of the sample processors

Variable	Parboilers		Millers		Pooled	
	Frequency	%	Frequency	%	Frequency	%
Major Occupation						
Farming	3	2.3	12	17.9	15	7.5
Trading	49	36.8	8	11.9	57	28.5
Formal Employment/Casual	2	1.5	1	1.5	2	1.0
Casual					1	0.5
Agro-Processor	79	59.4	46	68.7	125	62.5
Secondary Occupation						
Farming	7	5.3	12	17.9	39	19.5
Trading	58	43.6	8	11.9	70	35.0
Formal Employment	4	3.0	1	1.5	6	3
Casual	11	8.3	46	68.7	16	8.0
Agro-Processor	53	39.8	10	-	69	34.5
Source of Finance						
Friend And Relative	38	28.6	14	20.9	52	26.0
Co-Operative	3	2.3	2	3.0	5	2.5
Inheritance	1	0.8	1	1.5	2	1.0
Saving	52	39.1	5	7.5	57	28.5
Money Lenders	1	0.8	-	-	1	0.5
Banks	38	28.6	45	67.2	83	41.5
Scale of operation						
Mini/Micro Scale Opera	13	24.8	33	19.4	46	23.0
Small Scale Operation	54	75.2	100	80.6	154	77
Total	67	100	133	100	200	100

Source: Field Survey, 2022

Sources of processing power supply distribution of paddy rice processors

The result shows that majority (99.2%) of the parboilers used firewood as their sources of energy for paddy rice processing, while 0.8% used diesel as their energy source (Table 4). This implies that firewood served as the major source of energy for parboiling process. However, the result of the millers was different as 100% of the respondent's used diesel as their energy source for the milling enterprise. This implies that diesel was the only applicable and available energy source for rice milling as electricity supply in the study area is limited. This result disagreed with the findings of Akpan *et al.* (2020) which reported that most of the millers their study area used firewood as energy source for steaming.

Sources of paddy rice distribution of the paddy rice processors

The result in Table 4 indicated that the majority (41.8%) of the respondents sourced their paddy rice from the local markets, followed by 26.9% from individuals, 17.9% from owned farms, and 13.4% from the research institutions. Further, the findings of the millers revealed that 52% of the respondents which is the majority sourced their paddy rice from the local markets, 23.5% from individuals, 18.0% from owned farms and 6.5% from the research institutions. This implies that local market is the de facto source of raw material for the rice supply value chain in the study area. In addition, the market serenity of rice in the study area being competitive will help to contain price imperfection to some reasonable extent, thus strengthen the rice supply value chain of the study area. Generally,

these results disagreed with the findings of Abiodun *et al.* (2019) who reported that most of the rice processors their raw materials from the middlemen. Though a distinct enterprise but a similar value chain, these agreed with the findings of Nasiru (2016) who identified local market to be the major source of raw material for processors in a ground supply value chain in his study area.

Sources of labour supply distribution of paddy rice processors

The result of the millers in Table 4 showed that majority (67.5%) of the respondents used family and hired labour for their milling enterprise, followed by 26.5% that used family labour only, and fewer (6.0%) that used only hired labour. Also, for the parboilers it was observed that majority (68.4%) of the respondents used family and hired labour, 26.3% used family labour only, and 5.3% used only hired labour for their parboiling enterprise. This implies that household size was paramount or significant for the contribution of family labour for the paddy rice processors and these results agreed with the findings of Nasiru (2016) who revealed that groundnut processing in his study area relied heavily on hired and family labour.

Credit utilisation distribution of paddy rice processors

The result revealed that majority (95.5%) of the parboilers utilised all their credit in their parboiling enterprise while 4.5% failed to utilise all their credit in the enterprise. While in the case of millers, majority (97.0%) utilised their credit while few (3.0%) failed to judiciously utilise the credit advanced for the milling purpose. The implication is

that the purpose advanced credit of the financial intermediaries was not diverted, thus the viability of the rice value supply chain in the study area given the little or no risk of default and delinquency of the credit repayment liquidity. Besides, these value chain actors in the study can be said to be credit trustworthy. However, the possible reason might be associated with the stable/steady and flourishing marketing of rice in the study area, thus contained the risk of credit diversion which is a common feature of smallholder entrepreneurs in a typical agrarian setting.

Annual income classification of paddy rice processors

The results of the income distribution among the parboilers revealed that most (92.5%) of the respondents had an annual income of less or equal to half a million naira while few (7.5%) had an annual income of greater than half a million naira. Furthermore, for the millers, it was observed that majority (56.7%) had an annual income of more than half a million while 43.3% had an annual income of less or equal to half a million naira in the study area. Therefore, from the foregoing and given the economies of size, it can be suggested that paddy rice processing enterprise is lucrative in the study area, thus justifies the facts that most of the processors (millers and per-boilers) used the proceeds gotten from the business to support their families. These results conform with the findings of Saleh *et al.* (2016); Akpan *et al.* (2020) who in their various studies suggested agro-processing enterprises to be a lucrative industry in their study areas.

Table 4: Sources of power supply, sources of paddy distribution, sources of labour credit utilisation and annual income of the sample processors

Variable	Parboilers		Millers		Pooled	
	Frequency	%	Frequency	%	Frequency	%
Sources of power supply						
Diesel	1	0.8	67	100	68	34.0
Firewood	132	99.2	-	-	132	66.0
Total	133	100	67	100	200	100
Sources of paddy Rice Dis						
Local Market	76	57.1	28	41.8	104	52.0
Owned farm	24	18.0	12	17.9	36	18.0
Research institute	4	3.0	9	13.4	13	6.5
Others	29	21.8	18	26.9	47	23.5
Total	133	100	67	100	200	100
Sources of Labor						
Family Labor	35	26.3	18	26.9	53	26.5
Hired Labor	7	5.3	5	7.5	12	6.0
Family and Hired Labor	91	68.4	44	65.7	135	67.5
Total	133	100	67	100	200	100
Credit Utilisation						
Yes	127	95.5	65	97.0	192	96.0
No	6	4.5	2	3.0	8	4.0
Total	133	100	67	100	200	100
Annual Income Classification						

Variable	Parboilers		Millers		Pooled	
	Frequency	%	Frequency	%	Frequency	%
< 100000	17	12.8	2	6.4	34	17.0
>=100000	40	30.1	7	15.4	95	47.5
>=200000	39	29.3	11	20.4	48	24.0
>=300000	21	15.8	23	34.3	19	9.5
>=40000	11	8.3	19	18.7	4	2.0
>=500000	5	3.8	5	4.8	-	-
Total	133	100	67	100	200	100

Source: Field Survey, 2022

CONCLUSION

Based on the findings, it was suggested that the enterprise is dominated by able-bodied men that have reasonable educational level and maintained a sustainable household size. Besides, they have adequate experience, thus a possible catalyst that makes them to be efficient in utilization of the credit advanced. Nevertheless, they augment their business with other livelihood activities as an avenue to enhance their livelihood.

However, the case of gender stereotype and discrimination inhibited active participation of women in milling enterprise. Besides, economies of scale due to small-scale operational level are found to be a potential threat to economies of size of the rice value chain in the long-run. Epileptic power supply is hampering the economic performance of the value chain especially the millers, as cost of fossil fuel has a toiled effect on the financial performance of the milling enterprise.

Therefore, in order to increase the well-being of the processors and prospects of the enterprise, there is need to close these gaps:

There is need for gender mainstreaming and gender budgeting to address the challenge of gender stereotype and discrimination in the study area. Also, cheaper and eco-friendly energy technologies should be introduced to the processors.

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