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Evaluation of Onion Value Chain Actors in Kebbi State, Nigeria: A Case Study of Producers and Retailers

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Authors' contributions

This work was carried out in collaboration among all authors. Author YK designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author AAG managed the analyses of the study. Author UM managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Onion (*Allium cepa* L.) is one of the major cash crops grown mostly in northern Nigeria, nevertheless with perpetual scarcity at off season due to its perishability as actors lacked adequate storability thus, sells at low price to avoid spoilage at hand. The study seeks to evaluate onion value chain actors (producers and retailers) in Kebbi State, Nigeria. Purposive, simple random and convenience sampling procedures were used in selecting 210 onion producers and 40 retailers using structured questionnaire. The data collected was analyzed using SPSS software and marketing margin model. The result of the study revealed that the mean output of onion per hectare was 71.58 bags with an average price of ₦15597.05. The total gross marketing margin of 14.38% out of 19.12% constitutes the total marketing costs with net marketing margin of 4.77%. Producers' and retailers' marketing profit share was ₦9331.61 and ₦2324.33 per bag respectively. Production and marketing constraints identified were; high cost of inputs, pest and disease attack, poor storage

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facilities and poor pricing. In conclusion, redress of constraints may enhance marketing margin of the actors. The study recommends for government/nongovernmental sustainable financial, technical and educational interventions for the value chain improvement in the study area.

Keywords: Value chain; onion; producers; retailers.

1. INTRODUCTION

Globally, agriculture is believed to be a potential engine for poverty reduction and sustainable development. In the words of [1] "Most of the people in the world are poor, so if we knew the economics of being poor we would know much of the economics that really matters. Most of the world's poor people earn their living from agriculture, so if we knew the economics of agriculture we would know much of the economics of being poor"

These days almost half of the world population lives in urban areas, which is expected to continue to increase especially in Africa and Asia [2] this phenomenon has resulted in the increased demand for fresh fruits and vegetables. And vegetable production provides large quantities of produce from a very small area of farmland if the crops are given sufficient water, nutrients and pest and diseases management. Production and trading of vegetables create an opportunity for the poorest members of a population to enhance their livelihood, due to increase in incomes, improving standard of living and proving an incentive for rural inhabitants to stay in rural areas stemming down migration to urban cities in search of white collar jobs. Government and donor agencies increasingly use a value chain approach as part of their development and poverty reduction strategies and interventions. Developing Value chain is widely considered to be a suitable approach to inducing growth in rural areas, increasing marketed food surpluses and enhancing rural livelihood [3].

Onion (*Allium cepa* L.) is a vegetable crop which belongs to the family *Alliacee*. It is a biennial plant but usually grown as annual. Onion production under good management practices can yields up to 5kg per meters-square in 90 days from planting date [2]. Onion is also one of the most commonly consumed vegetable crops in the world with China being the number one producer, while Japan and India are the second highest producers of green onions and dry onions respectively. According to [4] statistical report on highest onion producing countries, Nigeria with 621,000 tons annual production ranked 24th in the world and 4th in Africa behind Egypt, Algeria and Morocco.

In Nigeria, onion is grown mostly in Kano, Kaduna, Jigawa, Sokoto, Plateau, Bauchi and Kebbi States. In 2012 alone, an estimate of about 240,000 tons of green onions and 1,350,000 tons of dry onions were produced in Nigeria. Onion as an important commercial crop, any technological improvement in its value chain may not only immediately contribute to the microeconomic advantage, particularly to a considerable number of smallholder onion producers in the country but could also enhances macroeconomic growth of the nation.

Kebbi State is one of the largest onions producing state in Nigeria and is also home to some of the biggest onion traders as in Aliero, and Yauri Local Government areas located in north and southern parts of the state. However, production of onion is characterized by pest and disease attack and short shelf life after harvest whereas, producers and traders of onion lacked adequate storage facilities to preserve the product. This leads to hurried sells of almost all the produce at ridiculously low price just after harvest to curtail spoilage in their hands thus, perpetual experience of the commodity scarcity at off season yearly. There is, therefore, a need to evaluate onion value chain actors in Kebbi State and understand the onion value chain operational mechanism and various issues at grassroots level impeding its growth. The objectives of the study are to describe the socioeconomic characteristics of the sampled onion actors (producers and retailers) in the study area and to analyze costs and marketing margins between the producers and retailers with a view to ascertain constraints facing them. This may benefit the existing and potential onion value chain actors as well as policy makers, researchers and other stakeholders in the system. According to [5] the development and upgrading of the value chains is an important agenda for the government, companies, and other institutions. Entry into higher value markets

(also global markets) requires an understanding of the requirements and dynamic forces within the value chain. Thus, understanding of the available onion inputs supply systems, production and marketing systems is very important for enhancing well organized value chain development in the study area.

2. METHODOLOGY

2.1 Study Area

The study was conducted in Kebbi State, Nigeria situated between latitudes 10^0 8'N and 13^0 15'N and longitudes 3^0 30'E and 6^0 02' E. The State is adjoined by Sokoto and Zamfara States to the East, Niger State to the South, Benin Republic to the West and Niger Republic to the North. The State has an estimated population of about 3,238,628 for which males account for 1, 617, and 498 (49.9%), while females are 1, 621, and 130 (50%) [6]. The State is made up of 21 Local Government Areas with an area of about 37, 690 square kilometers out of which 36.46% is made up of farmland. Majority of the inhabitants of Kebbi State are peasant farmers who reside in rural areas. The Northern part of State is located in the semi-arid sudano-sahelian ecological zone and experiences serious moisture deficiency in greater part of the. However, the Southern portion of the State falls within Northern Guinea Savannah ecological zone. The highest rainfall is recorded in July and August, which ranges from 400 to 850 mm. This increases both in amount and intensity within the State from the north to the south. The annual temperature varies from 21^0C to 38^0C. The soil type found in the State ranges from heavy clay in the fadama areas to loamy, sandy loam and sandy soils in the upland area which supports cereal crops like millet, sorghum, rice; leguminous crops like cowpea Soya beans, root and tuber crops, vegetables such as onion, tomato etc .Other occupations in the area include fishing and livestock rearing.

2.2 Data Collection

Both primary data and secondary information were used for the study. The primary data was generated by the use of structured questionnaire, administered to the sampled respondents in the study area with the assistance of trained enumerators. Information on socioeconomic characteristic of the onion producers and retailers were collected. Input-output information on onion production and marketing was also collected such as quantities and costs of inputs used and labour as well as output obtained and its prices and volume transacted with cost and price implications. Secondary information includes journals, government reports, text books and unpublished materials were implored to achieve the desired objectives of the research work.

2.3 Sampling Procedure and Sample Size

The focus population of this research work was the sole onion producers and retailers in Kebbi State. In line with ecological characteristics, cultural practices/ level of technology and scale of production which are common to the 13 local government areas that are virtually all into onion production in the state. And in order to obtain a representative sample in achieving the stated objectives, multistage and simple random sampling procedures were adopted to select the sole onion producers from the study area. At stage I, seven local government areas were purposively selected based on their dominant involvement in sole and high onion production. At stage II, two dominant villages were purposively selected from each of the seven local government areas based on the large number of sole onion producers in the area making a total of 14 villages. In stage III, in each of the 14 villages, a list of onion farmers was compiled and simple random sampling method was employed in the selection of 15 respondents in each of the villages given a sample size of 210 onion producers used for the study. At Stage IV, data from onion retailers was collected from four notable vegetable/onion market spots where a reasonable number of onion traders exist. A convenience sampling procedure was adapted to select sample size of 10 retailers from each market making a sample size of 40 retailers. Substantially, the total respondents were 250 onion value chain actors as the entire sample size for the study.

2.4 Analytical Technique

Descriptive statistics such as frequency counts, percentages and mean scores were used to describe the socioeconomic characteristics of the respondents and to evaluate constraints to onion production and retailing. Costs and marketing margins was computed at the points of onion producers and retailers along the value chain and then compared with consumer price.

2.5 Model Specification

2.5.1 Marketing cost and profit model specification

Estimation of quantitative analysis i.e., to compute the value and profit share of the actors (producers and retailers) along the chain and profit per bag was achieved by using the following model specification as used by [7]

$$TC = PC + MC \quad (1)$$

$$VA = SP - PP \quad (2)$$

$$S\,VA = \frac{AVA}{TVAC} \quad (3)$$

$$AP = SP - (PP + MC) \quad (4)$$

$$PS = \frac{AP}{TPAC} \quad (5)$$

Where:

TC- Total Cost
PC- Production Cost
PP-Purchase Price
MC-Marketing Cost
VA-Value Added
SP-Selling Price
SVA-Share Value Added
AVA-Actor's Value Added
TVAC-Total Value Added Along the Chain
AP-Actor's Profit
PS-Profit Share
TPAC-Total Profit Along the Chain

2.5.2 Marketing margin model specification

Estimation of marketing margin refers to the difference between a producer and consumer prices of an equivalent quantity and quality of a commodity. In order words it is a price charged for proving a mix of marketing services such as assembling, transportation, handling, packaging, sorting, and storage.

Computing the total gross marketing margin (TGMM) is always related to the final price paid by the consumer and is expressed as a percentage [7]. According to [8] that the total marketing margin is supposed to capture the percentage of final weight average selling price taken by the marketing agents which does not include the percentage taken by the producer. Net Marketing Margin (NMM) is the percentage of the final price earned by the intermediaries as their net income after their marketing costs are deducted [9].

Thus, marketing margins for the onion actors (producers and retailers) was estimated by adopting the following formulas as used by [7]

$$TGMM = \frac{Retailing\ price - Farm\ gate\ price}{Retailing(Consumer)price} \times 100 \quad (6)$$

$$NMM = \frac{Grossmarketing\ margin - marketing\ costs}{Retailing\ price} \times 100 \quad (7)$$

Or

NNM=Total Gross Margin-Total Marketing Cost (Wilhemina and Johnson, 2004)

$$GMM_R = \frac{Retailing\ price - Brokers'price}{Retailing\ price} \times 100 \quad (8)$$

$$GMM_P = 100\% - TGMM \quad (9)$$

Where,

TGMM is total gross marketing margin
NMM is net marketing margin
TMC is total Marketing cost
GMM_r is total gross marketing margin received by retailers
GMM_p is the portion of the price paid by end consumer that belongs to the farmer as a producer which is (100%-TGMM)

3. RESULTS AND DISCUSSION

3.1 Socioeconomic Characteristics of the Respondents

A socioeconomic class is a group of people with similar characteristics and these characteristics can include social and economic status, level of education, current profession, and heritage. This section therefore, provides the following general socioeconomic characteristics of the respondents which include gender, age, marital status, family size, level of education, and years of farming experience and membership of cooperative/association.

Gender distribution of the onion producers and retailers was considered base on participation in

onion value chain activities in the study area and is presented in Table 1. The result showed that bulk of the population (99.5%) of the onion producers were male and few (0.5%) female. The dominance of male over female in onion production activities as observed in this study may be due to cultural and religious belief virtually embraced and practiced by the populace in the study area which discourages women from going out freely to engage in farming operations, hence limiting their participation in onion production. These findings tallied favourably with the results of [10] on Vegetable production in Borno State, Nigeria and reported that females were dominated by male folks and this may be due to tiresome labour in irrigation farming activities, ease of access to farmland and religious background in the study area. Similarly, majority of the retailers (82.5%) were males with few (17.5%) females participating in the value chain. Likewise, [11] in his research work on onion marketing in Oromia National Regional State, Ethiopia reported that male have dominated female in the marketing of onion in the study area. Generally, this implies that the limited participation of female in the production and marketing of economic crop like onion could be shortchanging to their individual economy and macroeconomics at large. Notwithstanding the limitation earlier stated, females may go into partnership with a trusted counterpart to participate in both production and trading of onion in the study area.

The distribution of respondents according to their ages is presented in Table 1. The table reveals that majority (54.3%) of the onion producers were within the group age of 20-40 years. By implication more than half of the onion producers were 40 years and below indicating a good and strong active age participating in agricultural operations with the liveliness to handle bulky nature of agricultural produce like onion. This is in accordance with the findings of [12] who revealed that mean age of the onion producers was 38 years and by implication they are young and strong to meet the labour requirements of the farming operations. On the other hand, majority of the retailers (52.5%) were between the age bracket of 16 and 40 years. This is in line with the findings of [13] who asserted that most of the onion traders aged between 21 and 30 years old. The availability of these active young and middle age class in both onion production and marketing implies reduced rural-urban drift and potential replacement of the ageing onion producers and marketers. In addition, they possess the ability and efficiency to enhance agricultural production and trading for strong wealth creations in the study area.

Marriage is an important socioeconomic characteristic which gives a command of respect in any community, particularly in the rural setting of the study area which may be for reasons of religious obligations and cultural background. As indicated in Table 1, the highest percentage of the onion producers (96.7%) was married, while 3.3% were single. Marriage influences positive effect towards meeting up family demands as more effort is placed towards creating more wealth .This is similar with the report of [14] who observes that 99.17% of the onion producers were married and 0.83 of them were single. The table further reveals majority of the retailers (77.5%) were married, while 22.5% of them were single. It could further be observed in the table that the proportion of single in the retailers of onion is greater than that of the producers. This could be as a result of young unmarried girls who were out of school, and where girl child education was likely not persuaded but engaged in hawking of onion in some of the communities in this study area which falls within the northern part of Nigeria characterized with out of school syndrome.

The distribution of family size of the respondents is depicted in Table 1. The result revealed that majority of the onion producers (57.6%) had family size between 5 and 10 members with average size of 8.02 persons. The comparatively high number of the family size perhaps attributed to the prevalence of polygamous type of marriage commonly practiced by Muslims predominantly leaving in the study area. Family is the fundamental social group and in agricultural activities the implication is that there is availability of free family labour which could be timely provided for farm operations, efficiency in production, increased hectares of farmland put into production and more likely profit generation. This result is also in line with the findings of [14] who reported mean of family size of 10 individuals, which implies less hired labour employed by the head of the family as the mean household is adequate. However, 50% of the retailers had household size between 1 and 4 members, while other half had 5 and above household size. The relative small number of family size of the retailers as compared with the producers was due to the prevalence of young and unmarried onion retailers in the study area.

This implies a potential existence of upcoming onion traders in the study area.

The conventional education system in Nigeria is generally divided into four levels viz; primary school, junior secondary school, senior secondary school and tertiary institution (6-3-3-4 system). However, qur'anic education has a centre stage in the Muslim communities which is more prevalent and acceptable to rural dwellers in the study area. The result in Table 1, shows that high proportion of the onion producers (65.7%) had qur'anic level of education, while 3% lacked any kind of education whereas; only 32.6% of the respondents had acquired formal education with minimum of 6 years. The implication of low level of formal education could affect decision making ability and efficiency in onion production in the study area. This finding is line with the results of [15], that majority of the respondents interviewed had qur'anic education. Retailers also indicated high proportions (62.5%) with qur'anic level of education, primary (15%), secondary (12.5%) and Tertiary (10%) as also reported by [13] who recorded majority of the respondents interviewed having qur'anic education in the study area. This outcome reveals that both onion farmers' and marketers' level of formal education is low which either could be due to the emphasis given to the qur'anic education or non-accessibility to functional formal schools in the rural areas.

Respondent's experience refers to the period an individual onion producer or retailer spent in onion farming or marketing. Table 1, reveals that majority of onion producers (36.7%) had an experience of 21 years and above and the least proportion of the onion producers (30.5%) with 11-20 years of farming experience. The findings in the table mean that onion producers in the study area had enormous experience in onion production. Experience influences individual perception and understanding of better management practices that may bring about improved farm produce and productivity. This result is in consistence with [12] who posited that majority of the onion producers acquired more than 20 years experience in onion farming. The results in the table further depict that greater part (82.5%) of the retailers have 1-5 years of onion marketing experience, while 12.5% and 5% had 6-15, and above 15 years of retailing experience respectively. Retailers were more of upcoming due to the prevalence of young and middle ages in the marketing of onion as confirmed in the result. However, [16] asserted that the years of onion marketing experience of the traders interviewed reveals that 50% of the respondents had 11-20 years of marketing experience in onion trading, in which the report is in disagreement with the result of this research work. This is because young ages were more predominant in this report compared to those ages of their report.

The result in Table 1 shows that greater part (84.3%) of the onion producers were not members of any cooperative/association relating to onion farming while only 15.7% participated as members of cooperative/association.
Membership of a cooperative/association is an important widow through which its members could together pool their resources for effective management, ease of access to micro- credit facilities, input subsidy, and protection of common goal and better hub for generation of ideas/information. The effect of this result is that the non-participation of the majority of the producers does not enjoy the added advantages of cooperative membership for optimal profit. The outcome of this research work collaborates with the results of [10] who indicated that majority (65.9%) of the respondents were not members of any association/cooperatives. Thus, the level of participation and non-participation in cooperative could be attributed to the level of farmers' awareness of the benefits accrued to the cooperative members. On the contrary majority of the onion retailers (75%) belong to a cooperative society and only 25% were non-members. This is in agreement with the findings of [16] which show that Majority of onion traders (87.50%) were members of a cooperative/association in the study area. It implies from the results that onion traders were more informed and organized to form and register with cooperative compared with onion producers who do not frequently meet as the retailers.

3.2 Costs and Returns in Onion Transactions

Table 2, indicates the kinds of marketing cost involved in onion transaction by producers, and retailers as captured in the study area. The average transaction costs were computed per bag of onion as it passes from producers to retailers under consideration. The table depicted that the highest marketing cost incurred was by the retailers (₦465.67) and ₦429.51 was incurred by the onion producers. 14.35% out of the total gross marketing margin (TGMM) of

19.12% constitutes the total marketing charges giving a net marketing margin (NMM) of 4.77%. This suggests a fair level of profits reaped by the actors.

In terms of value addition per bag of onion, producers have taken the highest gross share of 77.77% (₦9761.12/bag) and retailers had gross share of 22.23 (₦2790) per bag. This finding is at variance with the report of [7] who identified that central retailers had highest value adding activities. The variation could be as result of the differences in the development in the onion value chain activities and length of the onion marketing channels obtainable in the study areas.

The difference between the total revenue from onion sells and the costs incurred in the onion

Table 1. Distribution of respondents according to socioeconomic characteristics

Variables	**Producers(n=210)**		**Retailers(n=40)**	
Gender	Frequency	Percentage	Frequency	Percentage
Male	209	99.5	33	82.5
Female	1	0.5	7	17.5
Age (years)				
15-19	0	0	5	12.5
20-30	35	16.7	3	
31-40	79	37.6	13	32.5
41-50	63	30.0	15	37.5
51-60	28	13.3	3	7.5
>60	5	2.4	1	2.5
Min	24		16	
Max	65		62	
Mean	40.87		38.60	
Marital Status				
Married	203	96.7	31	77.5
Single	7	3.3	9	22.5
Family size				
1-4	46	21.9	20	50
5-10	121	57.6	15	37.5
11-20	43	20.5	5	12.5
Min	1		1	
Max	30		26	
Mean	8.02		5.95	
Educational level				
Qur'anic education	138	65.7	25	62.5
Primary education	24	11.4	6	15
Secondary education	29	13.8	5	12.5
Tertiary education	16	7.6	4	10
Illiterate (Not read and write)	3	1.4	0	0
Experience (Years)				
1-5	69	32.9	33	82.5
6-15	64	30.5	5	12.5
>15	77	36.7	2	5
Min	2		1	
Max	45		22	
Mean	18.24		9.55	
Membership of cooperation				
Member	33	15.7	30	75
Non-member	177	84.3	10	25

Source: Field Survey Data, 2020

production and marketing provide the trading profit of onion transaction. Production cost which involved all farm operations from land preparation to harvest were done by manual labour. The cost of unpaid family labour not directly incurred by the producers was imputed based on the premise that farmer/family labour employed in his farm, if not used may have to hire out for paid labour. Thereby, farmer/family labour was included at prevailing average wage rates in the study area. For reason of consistency the same wage was used based on age group (i.e. one man-day of family labour equals that of hired labour. As revealed in Table 3, producers and retailers marketing profit share per bag was 80.06% (₦9331.61) and 19.94% (₦2324.33) respectively. This implies that onion producers have made a good profit from onion sells in spite of imputing the unpaid labour. From business point of transaction the highest marketing profit was taken by onion producers. The profit made by both actors may continue to be a motivating factor for the expansion in production and retailing of onion as well as attracting the potential ones to go into production and retailing of the commodity in the study area.

Marketing margin represents the difference between price paid and received by a given market intermediary in the marketing of a commodity such as a wholesaler, retailer etc. it is the remuneration that the intermediaries receive for their services in moving the commodity in the market channels [8]. The result of marketing margin analysis in Table 4 showed a total gross marketing margin of 19.12% which indicates the fraction of the price paid by the final consumers that belongs to the middlemen and retailers, with producers' contribution margin of 80.88%. About 14.38% out of a total gross marketing margin of 19.12% constitutes the total marketing costs, giving a net marketing margin of 4.77%. These findings signify that onion producers were not exploited by the traders and the margins are reasonable base on the low total marketing cost incurred per bag of onion.

3.3 Production and Marketing Constraints

Agricultural production activities are mostly faced with a number of bottlenecks affiliated to production and marketing operations. Onion production is not an exception and the constraints are given in Table 5. The prioritized production problems confirmed by the respondents were; expensiveness of input (84.8%), inadequate knowledge about the inputs (50.5%), pest and disease attack (46.2%), poor quality of the inputs (27.6%) and inadequate storage facilities (25.7%). These findings imply the need for identified sustainable intervention by government support policies to easy access to inputs and extension services to offset the cumulative effect of these production problems. All of the onion producers interviewed exhibited lack of contact with extension agents and credit facilities as institutional means to aids production in the study area. Somehow, these problems are similar in other studies in Yobe and Sokoto States of Nigeria by [17, 12]. However, the variation in low ranking (18.1%) of inadequate credit facilities and lack of extension services may be attributed to long neglect of the onion producers by the government to the extent that the importance of these factors might have not been felt or experienced by the onion farmers. The findings of this study have further identified in order of priority the most glaring marketing problems as confirmed by the onion producers to include but not limited to; poor pricing (41.90%), pest and diseases (36.7%), poor storage (29.5%), trader activity (29%).

Table 2. Average marketing charges at various levels of the value chain

Item cost (₦/bag)	Producer	Retailer
Transportation	369.03	113.67
Parking materials	35.39	204.24
Load/unload	1.7	74.47
Storage/rent cost	-	29.67
Tax/commission	23.39	43.63
Telephone cost	-	12.85
Total cost	429.51	465.67
Total as % of retail price	2.29	2.48
GMM (%)	80.88	14.88
NMM (%)	78.59	12.40

Source: Research survey result, 2020

Table 3. Value and profit share of onion actors in the value chain

Indicators	Chain Actors		
	Producer	Retailer	Total
Volume of sale (bag)	71.58	411.23	
Production cost (₦/bag)	5835.93	-	
Purchase price (₦/bag)	-	15962.5	
Marketing cost (₦/bag)	429.51	465.67	
Total cost (₦/bag)	6265.44	16428.17	
Selling price (₦/bag)	15597.05	18752.5	
Value added (₦/bag)	9761.12	2790	12551.12
Share of value added (%)	77.77	22.23	100
Profit (₦/bag)	9331.61	2324.33	11655.94
Profit share (%)	80.06	19.94	100

Source: Research survey result, 2020

Table 4. Gross marketing margin analysis

Actors' Levels	Selling price (₦/bag)	Gross Marketing Margin
Average farm-gate price	15167.54	
Average Broker price	15962.5	
Average Retailer price	18752.5	
TGMM		19.12
GMMr		14.88
GMMp		80.88

Source: Research survey result, 2020

Table 5. Producers' constraints to onion production and marketing

Constraints	Frequency (n = 210)	Percentage*	Rank
Production constraints			
Expensive/high cost of inputs	178	84.80	1
Inadequate knowledge of inputs	106	50.50	2
Pest and diseases attack	97	46.20	3
Poor quality of inputs	58	27.60	4
Inadequate storage facilities	54	25.70	5
Shortage of land	50	23.80	6
Non-availability of labour	46	21.90	7
Shortage of input (i.e. fertilizer, seed)	46	21.90	7
Inadequate water supply	45	21.40	8
Inadequate credit facilities	38	18.10	9
Lack of extension services	38	18.10	9
Marketing constraints			
Poor pricing	88	41.90	1
Pest/Diseases	77	36.70	2
Poor storage	62	29.50	3
Traders' activities	61	29.00	4
Transportation cost	60	28.60	5
Perishability	54	25.70	6
Lack of government assistance	54	25.70	6
Bad roads	44	21.00	7

Source: Field survey data, 2020
**Multiple responses were consider*

Table 6. Retailers' constraints to onion marketing

Problem	Frequency	Percentage	Rank
Lack of credit facilities	14	34.10	1
Supply shortage	12	29.30	2
Shortage of information	11	26.80	3
Price setting	11	26.80	3
Bad infrastructural facilities	10	24.00	4
Absence of govt support	9	22.00	5
Poor storage facilities	8	19.5	6
Product quality	7	17.10	7

Source: Field Survey data, 2020
**Multiple responses were consider*

The constraints facing onion traders as perceived by the retailers are presented in Table 6. The result shows that most (34.1%) of the traders census lack of credit as their priority constraint which was followed by shortage in supply (29.3%), shortage of information/price setting (26.8%), bad market infrastructure (24%), lack of government support (19.5%). These findings are in line with those of [18] and [11]. This result suggests the inadequacies posed as attested by the onion traders if not attentive may weaken the efficiency of the value chain in terms of volume of onion to be absorbed by the retailers as the last link between the producers and the consumers. Thus, the resultant effects may be poor onion price and increased post-harvest losses.

4. CONCLUSION AND RECOMMENDATION

Flowing from the findings of this research it was concluded that investment in onion business is profitable, capable of reducing poverty and rural-urban migration by holding young ages at farms. It is recommended that Kebbi State Ministry of Agriculture and Natural Resources should encourage adult education among the actors via extension service to enhance efficiency in production and business knowledge and, for better price and good quality of onion producers should be encourage to enhance staggered planting to address supply gap at off-season as well as join cooperative for self-help.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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