Profitability Analysis and Constraints to Pepper (*Capsicum Sp*) Marketing in Ijumu Local Government Area, Kogi State, Nigeria

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Abstract

The study analyzed the profitability and constraints to pepper marketing in Ijumu Local Government Area of Kogi State, Nigeria. A multi-stage random sampling technique was used to select 75 respondents from the list of registered pepper marketers in the study area. A structured questionnaire was used to collect the required information. Descriptive statistics, Net profit and mean score were used to analyze the data collected. Results showed that the mean age of pepper marketers was 34 years and majority, (60%) of the marketers were married, well experience in marketing with a mean household size of 12 persons. Also, Atarodo (Capsicum annum) was the most common varieties of pepper which are marketed fresh in the area. The return per naira invested on pepper marketing in the study area was N1.05 which is an indication of profitability of the business. The study further revealed high cost of transportation (mean score= 2.92), lack of storage facilities (mean score= 2.80) and lack of processing facilities (mean score= 2.72) as the major problems facing pepper marketing enterprise in the area. The study recommends government should provide good feeder roads network to ease transportation of perishable agricultural produce like pepper in the area, storage and processing facilities should be made adequate to enhance marketing.

Keywords: Profitability, Constraints, Marketing, Pepper

1. Introduction

Agricultural sector plays significant roles in developing countries. Increase in agricultural productivity is subject to its marketability so as to improve its contributions to national economy. According to Idah, Ajisegiri and Yisa, (2007), efficient market in addition to linking sellers and buyers in reacting to current situations in supply and demand also stimulates consumption of outputs which are essential elements of economic development.

Agricultural marketing articulates all processes that take place from when the farmer plans to meet specified demands and market prospects to when the producer finally gets it to the consumers. In a typical vegetable marketing, retailers were observed to sell pepper and tomato at the same time in addition to other vegetables such as cabbage, salad and onions (Aminu, 2009). Production and specialization are stimulated by marketing consequently resulting in an

improved productivity. Market systems complement the farm production effort toward the realization of its goals through the provision of utility of time, place, possession and form.

Pepper (Capsicum sp) is a genus of plant from the night shade family Solanacea. Some of these plants are used as spices, vegetable or drugs. There are commonly called chilli, red, green pepper or just pepper, originated in the America and are grown world wide (Brinker, 2009) in Dimelu (2010).

According to Bernster (2009) in Dimelu (2010), pepper is an important source of vitamins and minerals thus form essential component of human diet. Pepper is a rich source of vitamins A, B and C and a therapeutic agent for cancer. As a result of this, there had been increased trade activities surrounding this commodity. They are frequently used both chopped or raw in salads or cooked in stir fries or other mixed dishes. They can be preserved by drying or pickling. Dried pepper may be reconstituted whole

or processed into flakes or powder (Abel, 2009). Extracts can be made and incorporated into hot sauces.

In many households, pepper provides countless needs such as enhancing diets intake, storing of grains and mild drugs. Bosland and Votava (2000) reported that pepper is used for flavouring, adding taste in food, colouring cosmetics and imparting heat to medicine by manufacturing industries. It is also used as ornamental plant and the red powdered pepper is used for colouring flamingos in the zoo. Baluk and Daniel (2009) stressed that pepper is used as pepper spray and tear gas for weapons. He further reported that pepper fruits vary in sizes, shape, colour, flavour and pungency and the variation reflected in their nutritional composition.

The wide gap between rural and urban prices of any agricultural products weakens the farmer's morale thereby reducing productivity; and even in some cases leads to complete stoppage of production as pointed out by Emeka et al.,2014. Therefore, to increase food production there is need to develop a more efficient marketing system. Marketing plays a crucial role, by enhancing the provision of more and better food at low prices to increasing number of people (Ibrahim, 2002). The process of production is said to be incomplete until the consumption of the commodity is affected. Pepper marketing is therefore an integral aspect of pepper production because it is only when the pepper gets to the final consumers that production can be complete. Marketing of agricultural products such as pepper is said to involve everything that happens between the farm gate and the consumer such as buying, selling, processing, storing, transporting, advertising and promoting the goods (Sagoe et al., 2010 and Onyenweaku and Ezeh, 2012). Despite the importance of pepper, more research attention has been given to other vegetable like tomato.

Pepper marketing has been faced with great challenges like poor storage facilities, low production, lack of market infrastructures and feeder roads, and lack of market information (Baluk and Daniel, 2009). They further stressed that, pepper marketers had little or no control over the demand and prices of the commodity because of the nature of the market; imbalanced distribution system and lack of organized market system. And as such, they need to find a way of reducing costs and risks thereby increasing their profitability. Also the marketing of pepper is surrounded by a myriad of problems, ranging from high exploitation by middlemen, high marketing costs, and instability of government policies in assisting marketers, inadequate and lack of good infrastructure to ease movement of products. This is thrust of the study.

2. Materials and methods

The study was carried out in Ijumu Local Government Area of Kogi state with its headquarters in Iyara town. Geographically, it is located between latitude 7o85'N and longitude 5o97'E in the Northern guinea savanna ecological zone of Nigeria. It has an area of 1,306km2 and a population of 119,929 people (NPC, 2006). The people in this area are predominantly small-scale farmers who are engaged in both crop and livestock production for substantial and commercial purposes.

A multi stage random sampling technique was used to select the respondents from the list of registered pepper farmers in the study area. In stage one, all the five markets were selected from each of the three districts in the Local Government Area. Stage two involved the random selection of fifteen pepper marketers from each of the five markets selected to give a total of 75 respondents for the study. Primary data were used and information for the study were collected using a well structured questionnaire.

Following Emeka et al., (2014), net profit was employed to estimate how profitable is pepper marketing, and this is stated as;

Net Profit (NP) = Total Revenue (TR) – Total Cost (TC)

Total Cost (TC) = (Total Fixed Cost + Total Variable Cost)

Also, mean score from a 3-point Likert type of scale was used to identify the major constraints faced by pepper marketers in the study area, and it is expressed as;

Where: $\overline{\times}$ = means response, $\sum$ = summation, F = number of respondents choosing a particular scale point, X = numerical value of the scale point and N = total number of respondents. The constraints were specified as: Very Serious (VS) = 3, Serious (S) = 2, Not Serious (NS) = 1.

Mean score of 2.0 and above was considered as a serious constraint while a mean score of less than 2 implied that the item associated with that mean score had no serious effect on pepper marketing in the area.

3. Results and discussion
3.1 Socioeconomic Characteristics of the Respondents

The distributions of respondents according to their socioeconomic characteristics are presented in Table 1. The socioeconomic characteristics covered include age, marital status, household size, level of education, major occupation and marketing experience.

The result in table 1 shows that majority (49.33%) of the marketers were 36 years and above

with a mean age of 34.07 years, indicating that they were young and active and as such increases their chance of adopting different marketing strategies that can yield more revenue and who could involve in marketing (Achimugu, 2010). Most (60%) of the respondents were married with a mean household size of 12 members which is an indication of large household which can serve as reservoir of labour required for marketing activities. The study further revealed that most of the marketers represented by 41.33% did not go to school while only 4% went to tertiary institutions. In a similar study in Yagba Area of Kogi State, Ibitoye (2010) found that most of the respondents were illiterate. Education is very important as its attainment enhances acquisition and utilization of market information and innovativeness (Nwaru, 2004; Effiong, 2005). Also, Ibitoye (2010) pointed out that educational level of a trader does not only raise his productivity but also increase his ability to understand and evaluate new techniques and processes for better marketing of his goods.

The major occupation of the respondents as revealed in the study is trading (64%) with a mean marketing experience of 10 years. Years spent in marketing pepper can increase marketers' skills and this could lead to higher return from the marketing of pepper. The high marketing experience is also an indication that pepper marketing in the area is profitable because it is believed that no one will remain in an unprofitable venture for a longer period. This finding agrees with Idrisa, (2012) who reported that experience depict a good signal for adoption since it helps to convince the trader of the importance of marketing innovation.

Table 1 also shows that majority (64.00%) of the sampled pepper marketers were into full time marketing. This was followed by 33.33% of the respondents, who combine farming activities with vegetable marketing and 2.67% of the respondents combine civil service with pepper marketing.

3.2 Channels of Pepper Marketing
Distribution of respondents based on the available channels of pepper marketing in the area is presented in Table 2.

Results in table 2 shows that majority (60%) of the respondents were wholesalers, 32% were retailers while the remaining 8% were bulk assemblers. In addition, findings from the study revealed that most (58.67%) of the marketers obtained their commodity from farm gates/producers directly, 30.67% obtained pepper from the wholesalers and the remaining 10.67% obtained pepper from the bulk assemblers. Atarodo (34.67%) constituted the most type of pepper sold in the area followed by bird pepper variety (29.33%) while red

pepper (17.33%) form the least type sold. The result further showed that these pepper types are sold fresh (69.33%) mostly and dried (25.33%). This finding is in agreement with Ali and Aslam (2003) who argued that these are two ways to sell agricultural produce in fresh market. Also, Takele, 2014, reported that the average bell pepper yield for fresh market is about 1800 cartons per acre per crop in California.

3.3 Cost and Return in Pepper Marketing
The average cost and return among pepper marketers in the area is presented in Table 3.

The costs and return analysis of pepper marketing is indicated in Table 3. The table revealed that the cost of acquisition (90.86%), cost of transportation (4.82%) and cost of sorting (4.24%) were the major variable costs incurred in pepper marketing. Based on the computation per 50kg bag, pepper marketing in the study area is profitable. The result revealed that the marketers made a profit of ₦45, 400 per purchase. The net ratio on pepper marketing in the study area was 0.95 which is an indication of profitability of the business while the return per naira invested was ₦1.05k. This implies that for every one naira invested on pepper marketing, ₦1.05 was realized. By implication, the venture was very viable, profitable and reliable to embark on, based on the criterion for selection of benefit cost ratio if greater than one (>1) as pointed out by Emeka *et al*, (2014). Also, Tsoho and Salau (2012) confirmed that vegetable marketing is highly profitable with an average profit of N0.97k realized on every Naira invested. This result is also in agreement with Takele (2014) who opined that fresh pepper marketing is profitable with a gross return of $11 per carton in the Oxnard plain, Ventura country.

3.4 Constraints Facing Pepper Marketing
The major constraints facing pepper marketing in the study area are presented in table 4.

Results in Table 4 revealed the major constraints in pepper marketing to include; high cost of transportation with a mean score of 2.92 as the most serious constraint, followed by lack of storage facilities with a mean score of 2.80, lack of processing facilities with a mean score of 2.72 and frequent price fluctuation with mean score of 2.19.

High cost of transportation could be attributed to inadequacy of vehicles to transport pepper products from the farm to major markets. Most of the feeder roads in the study area are not motorable especially during the rainy season resulting in high transport cost charged on pepper.

Table 1. Socioeconomic Characteristic of the Respondents

Socioeconomic Characteristic	Frequency	Percentage	Mean
Age (years)			
15 – 20	0	0.00	
21 – 25	5	6.67	
26 – 30	11	14.67	34.07
31 – 35	22	29.33	
36 and above	37	49.33	
Marital Status			
Single	9	12.00	
Married	45	60.00	
Divorced	8	10.67	
widow	13	17.33	
Household size (Number)			
1 - 5	4	4.00	
6 – 10	21	36.00	12.00
11 – 15	41	54.67	
16 - 20	9	5.33	
Level of Education (Years)			
No Formal Education	33	44.00	
Primary	19	25.33	
Secondary	20	26.67	
Tertiary	3	4.00	
Major Occupation			
Pepper marketing	48	64.00	
Farming	25	33.33	
Civil Service	2	2.67	
Marketing Experience (Years)			
1 - 4	11	14.66	
5 - 8	10	13.33	
9 - 12	35	46.67	9.81
13 - 16	19	25.33	

Table 2. Variables in Channels of Pepper Marketing

Variable	Category	Frequency	Percentage
Means of selling pepper	At wholesale	45	60.00
	At retail	24	32.00
	Bulk assembling	6	8.00
Source of purchase	Farm gate/producers	44	58.67
	Wholesalers	23	30.67
	Assemblers	8	10.67
Type of pepper marketed	Bird pepper (*Capsicum frutescens*)	22	29.33
	Red pepper (Cayenne pepper)	13	17.33
	Tatase (*Capsicum annum*)	14	18.67
	Atarodo (*Capsicum annum*)	26	34.67
Form of selling pepper	Fresh	52	69.33
	Dried	19	25.33
	Grinded	4	5.33

Table 3. Result of Net Profit Analysis Showing Profitability of Pepper Marketing (50kg bag)

Cost items	Amount (₦)
Revenue	
Sales from pepper	889,650
Total Revenue (TR)	889,650
Variable Cost (VC)	
Cost of purchasing pepper	767,100 (90.86)
Transportation cost	40,700 (4.82)
Cost of sorting	35,800 (4.24)
Total Cost (TC)	844,250
Net Profit (TR-TVC)	45,400
Net Return (TR÷TC)	1.05
Net Ratio (TC÷TR)	0.95

Note: Figures in parenthesis shows the percentage of the total.

Table 4. Distribution of Respondents Based on Constraints in Pepper Marketing

Constraints	VS(3)	S(2)	NS(1)	Total	Total score	Mean score
Unorganized market	20	34	21	75	149	1.99[NS]
Frequent price fluctuation	24	41	10	75	164	2.19[S]
High cost of transportation	69	6	-	75	219	2.92[S]
Lack of storage facilities	62	11	2	75	210	2.80[S]
Lack of processing facilities	56	17	2	75	204	2.72[S]
Lack of marketing information	4	50	21	75	133	1.77[NS]

S = Serious, VS= Very Serious and NS = Not Serious constraint

Also, instability and high cost of Petroleum Motor Spirit (PMS) in the area could lead to increased cost of transporting pepper products. This finding concurs with Osuji (2010) who confirmed that the deplorable state of most Nigerian roads hinder food crop distribution. Poor storage facilities could be attributed to the perishable nature of pepper products. Adequate storage facilities are needed to reduce loss and physical damage of pepper products. Usman and Bakar (2013) confirmed storage as the most serious problem encountered in the marketing of tomato and other vegetables.

This finding is in agreement with Emeka *et al.*, (2014) who highlighted some constraints in marketing agricultural commodities to include; inadequate storage facilities, poor handling, price fluctuation, lack of credit facilities and poor packaging and processing.

4. Conclusion and recommendations

It is evident from the study that pepper marketing was a profitable and viable venture because of good return made. Pepper is marketed mostly in the fresh form and is purchased mostly at the farm gate. Indicatively, pepper markets in the Local Government Area were constrained with high cost of transportation, lack of storage facilities, lack of processing facilities and price fluctuation. Based on the above premise and other relevant issues raised in this study, it is therefore considered very necessary that the improvement of the marketing system of pepper studied deserves government attention in different areas. This should be by providing the necessary facilities required to enhance the efficiency of the system in the form of;

Government should provide good feeder roads to reduce the cost of transportation

Considering the lack of processing facilities, government should also provide adequate storage and processing facilities to enhance marketing of perishable goods like pepper in the area and increase better profit.

Agricultural marketing information system should be improved by the market stakeholders; farmers, buyers and sellers to help disseminate information regarding prices, demand and supply of pepper and other marketing bordering issues.

Establishment of marketing union by pepper marketers in the area to enhance market performance through group marketing practices.

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