

## Profitability of vegetable marketing in Ghana: The case of urban and semi-urban marketeers in the Upper West Region

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**ABSTRACT:** This study assessed the economics of vegetable marketing in urban and semi-urban markets in the Upper West Region of Ghana to identify differentials in profit margins as well as the constraints marketeers face. Mixed method research design was adopted for the study which involved a survey, focus group discussions, and personal observations. Multi-stage sampling and probability proportional to size sampling techniques were used to select the marketeers. One hundred and ninety-six (196) vegetable marketeers comprising 153 urban and 43 semi-urban marketeers were sampled. Gross margin analysis was used to estimate costs and returns while a profit function was used to estimate net profit of the respondents. The results showed that urban marketeers had higher gross margin and net profit per unit order compared to semi-urban marketeers. The urban vegetable market was more competitive but generally marketeers seemed to rely on increased sales volumes to create profits, with urban marketeers being more able to create higher profits. Sales volume therefore accounted largely for marketeers' profit margin. Lack of representation, weak support services, and lack of appropriate business skills were among the common problems facing the marketeers. Noncompliance to market regulations and business fluctuations were also identified as challenges to vegetable marketing in the study area. The study concluded that vegetable marketing is a profitable venture with prospects to enhance economic empowerment of vegetable marketeers in the study area.

**KEYWORDS:** Vegetable marketing, gross margin, net profit, urban, semi-urban, northern Ghana.

### 1 INTRODUCTION

According to a report by Agricultural Transformation Agency (ATA), there is universal recognition that vegetables are important foods and that vegetable production, marketing, and processing are significant contributors to household income [1]. The report also indicated that vegetables comprise a large portion of human diet and in most cases the only form of relish for the low-income group. Also, vegetables provide dietary fibre to improve digestion and health, thereby making them essential for properly balanced diets [1].

Seidu [2] reiterated that the importance of vegetables is related to their nutritional value as a major source of vitamins and minerals which are necessary in ensuring a balanced diet. For example, green/leafy vegetables including lettuce, spinach, broccoli, cabbage, and cauliflower are rich in calcium, iron, and phosphorus; sweet potato leaves and onions are also rich in phosphorus, while carrot provides vitamin A. Other vitamins supplied by vegetables include folic acid, ascorbic acid (vitamin C), thiamine (vitamin B1), riboflavin (vitamin B2), niacin and glycine. Also, about 33% of the body's vitamin A requirement can be obtained from vegetables while as supplementary foods, the young and tender shoots and leaves of beans are rich sources of protein and calories. Some green leaves also supply some amount of protein [2].

Allan [3] indicated that vegetables are sources of roughage which stimulate intestinal muscles and apart from keeping them in good working condition, prevent constipation through its laxative effect where it helps in the movement of the bowels. The fibre content of vegetables adds to the bulk of the food which prevents the consumer from feeling hungry. The author added

that in tropical West Africa, certain vegetables such as okra and vegetable jute (*Corchorus olitorius*) impart a glutinous consistency to the soup and thus facilitates swallowing and that aromatic vegetables such as the leaves of the fever plant (*Ocimum viridis*) and fruits of *Capsicum spp.* may improve the flavour of otherwise tasteless food and sharpen the appetite. According to Mohammed [4] some vegetables have medicinal value; for example, garlic has proved valuable to hypertensive patients and children suffering from convulsion. Vegetables neutralise extra acid substances produced during the digestion of food, particularly of protein and fat which are reported to produce extra acids in the body during their digestion [4]. Vegetables also provide carbohydrates; for example, root vegetables like sweet potato. Some legumes may supply carbohydrates in the form of sucrose. Vegetables such as sweet corn may supply fats and oils in very negligible amounts [5].

Ghana is a country with a great variety of agro-ecological zones that are favourable for horticultural crop production for different markets including the export market. In Ghana, smallholder farmers produce the majority of vegetables [6]. Smallholder vegetable farms are based on low input - low output production systems. As a result, average productivity levels are low in the small-scale farming sector [7].

Earlier research [8] indicated that much of vegetable production in Ghana was done by women, often intercropped with other crops and using most for home consumption while selling any surpluses in the nearby markets. However, more men got involved in vegetable production as access to market increased, especially in the irrigated areas. Lyon *et al* [8]. further noted that the number of male vegetable growers continued to increase as many young men started farming due to rising unemployment outside the agricultural sector, and profitability of vegetable production.

The gradual expansion of small-scale irrigation agriculture in different parts of Ghana has enabled smallholders to produce vegetables throughout the year. Through irrigation, farmers' per capita production as well as total area under vegetable crop production has been increasing [9]. The increase in per capita production has often enabled smallholders to have surpluses to sell [1].

Vegetable marketing is one of the fields that offers employment with less demanding academic qualification, and the starting capital (start-up costs) required to get engaged in marketing is probably lower than for most other agricultural commodities. According to Legesse *et al* [10]., vegetable marketing is among the main areas of intervention and strategic planning that aims to reduce hunger and poverty and improve livelihoods. The authors added that issues of growing poverty, hunger, lack of formal and informal employment opportunities, increased population growth, and increased urbanization could be addressed by appropriate institutional vegetable marketing.

Marketing of vegetables has become increasingly an important source of income for most people in Upper West region of Ghana who (especially women) cannot get employment in the formal sector. Earlier reports by GHIH/CSHS [11] indicated that vegetable marketing in Upper West region of Ghana was mostly dominated by women. Mohammed [4] reiterated this and emphasized that vegetable marketing is currently the biggest single employer of women in Upper West region of Ghana. The Upper West region is among the regions in Ghana with the highest level of unemployment with consequent higher poverty levels and concerns are emerging about malnutrition, especially among women and children in semi-urban and rural areas.

Increased production and improved marketing of vegetables can create more opportunities for self-employment and enhance human nutrition, thereby providing solution to the high unemployment situation in most rural and urban communities while addressing nutritional problems of the society. Unfortunately, the vegetable marketeer, who is the main player in this business, has only limited capacity to solve problems affecting his or her business in the absence of an enabling environment such as a strong competitive market system which is a necessity for social and economic welfare. Yeshitila [12] indicated that when a competitive market functions effectively, it serves the nation by stimulating the efficient provision of goods and services, and promotes business investment in research, new equipment, and other capital goods necessary for improvements in productivity and economic growth. This causes the market system to be beneficial to a broad spectrum of the society including workers, consumers, and other stakeholders in the business, and provides resources to support social programmes that improve the quality of life.

Given the above considerations, it was deemed necessary to carry out a comparative study of urban and semi-urban vegetable markets in Upper West region in northern Ghana in order to collect current information that will provide grounds upon which recommendations and improvements to marketing could be based. Semi-urban marketeers are those whose business activities are centred around the peri-urban areas. Typically, they handle smaller volumes of business and act as assemblers who buy their produce from producers in the hinterland. Urban marketeers, on the other hand, buy their vegetables most often from producers they have already established contact with, sometimes through middlemen, and may occasionally engage in assemblage when vegetables are not readily available.

Pumpkin leaf, onion bulb, okra fruit, and tomato fruit are a fair representation in vegetable marketing in the study area since technically, pumpkin leaf and onion bulb represent non-fruit vegetables as leafy and succulent and bulky vegetative

organs respectively; and okra and tomato fruits represent fruit vegetables as immature and mature fruit vegetables respectively. With respect to vegetable production, marketing, and consumption the sampled vegetables are cropped widely in most parts of the country and throughout the year due to their overwhelming consumer acceptability [8]; consumers normally buy these vegetables every day or any other day because they are extensively consumed by a majority of the Ghanaian populace – almost every day and in almost every household [13]. The popularity of these vegetables amongst consumers in the study area stems from their nutritional values and diversity in use.

The overall objective of the study was to compare vegetable marketing in urban and semi-urban areas in Upper West region in northern Ghana in order to evaluate the performance of vegetable marketeers and make recommendations about how the problems they face could be solved. Specifically, the study intended to investigate and compare the profit margins of vegetable marketeers for the urban and semi-urban areas in Upper West region in northern Ghana. Information on marketeer profit margins is hard to find; as such the findings of this research will help fill an important research gap, so that those willing to go into vegetable crop production and marketing as a business could be accurately advised on the basis of the findings. Second, the study is to identify the marketing problems being faced by the vegetable marketeers in order to come out with recommendations to the government, benevolent societies, and other stakeholders on ways that could improve and encourage vegetable marketing to enhance livelihoods and household income.

## **2 METHODOLOGY**

### **2.1 STUDY AREA**

The study was conducted in the Upper West Region (Latitude 9.8° - 11.0° North and Longitude 1.6° - 3.0° West) of Ghana. The region covers a geographical area of 18,476 square kilometers representing 12.7% of the total land area of Ghana. According to the 2010 Population and Housing Census in Ghana, Upper West Region has a population of 576,583 comprising 276,445 males (47.9%) and 300,138 females (52.1%). The region experiences rainfall from May to October via the South-Western Monsoon winds from the Atlantic Ocean, whilst it experiences harmattan from November to April via the North-East trade winds from the Sahara desert. The mean annual rainfall varies between 840 mm and 1400 mm. The major economic activity in the region is agriculture which is also the main source of livelihood of the people. Other key sectors of the economy in the region include transport, tourism, communication, and energy. Traders from all over Ghana and other neighbouring countries like Burkina Faso, trade in goods and services in the region. Most of the people are peasant farmers and the main staple crops grown include millet, sorghum, maize, rice, soybeans, bambara beans, cowpea, groundnut, and vegetables. About 86% of the population is engaged in agriculture with poverty still predominant as evidenced by an average household annual income of US\$65.00 and poverty head count index of 83.9 % [6].

### **2.2 DATA COLLECTION AND SAMPLING TECHNIQUE**

A survey was conducted on the comparative analysis of vegetable marketing in urban and semi-urban markets in the Upper West region of Ghana, with a focus on pumpkin leaf, onion bulb, okra fruit, and tomato fruit.

Primary data was collected using a questionnaire. The study also relied on secondary data from the Municipal Irrigation and Development Authority as well as the Municipal Agriculture Office, both in the regional capital, Wa. In addition, focus group discussions and personal observations were used. The diverse sources of information enabled the authors to critically analyse the marketing challenges and draw conclusions.

A multi-stage sampling procedure was followed in order to collect data that constitute a representative sample that reflects the business situation of the vegetable market chain of the specified commodities (tomato, onion, okra, and pumpkin). Wa Municipality and Wa West districts were selected purposefully to host four marketing centres (Wa central market, Fadama market, Wechiau market, and Dorimon market) which were also selected purposefully, following findings and recommendations of Inkoom and Nanguo [14] who indicated that purposeful sampling for the study area is the ideal for convenience. Next, 196 vegetable marketeers were randomly selected from these four marketing centres. Probability proportional to size (PPS) sampling procedure [15, 16] was used to determine the number of marketeers to sample from each market centre. The required sample size was determined using Slovin's sampling formula [16] with a 95% confidence level or 5% level of precision (error). Slovin's sampling formula is given as follows:

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

where  $n$  is the sample size,  $N$  is the population size, and  $e$  is the level of precision. Relying on a reconnaissance survey, focus group discussions, and assistance from agricultural extension agents, we identified a total of 769 vegetable marketeers in the study area, which formed our target population. Given the population size of 769 vegetable marketeers and 95% confidence level, an estimated sample size of 263 was obtained.

According to Glenn [15], when the target population is small, an adjustment to the sample size could be made using the finite population correction for proportions to reduce the sample size slightly. This is because a given sample size provides proportionately more information for a small population than for a large population. Following Glenn [15], the estimated sample size was accordingly adjusted using the following formula:

$$n = \frac{n_0}{\frac{n_0-1}{N}+1} \quad (2)$$

where  $n$  = adjusted sample size,  $N$  = population size (769) and  $n_0$  = sample size computed using Slovin's sampling formula (equation 1). This provided an adjusted sample size of 196 respondents. The adjusted sample size was distributed proportionally to the randomly selected market centres, as shown in Table 1.

**Table 1. Distribution of samples in the study areas**

Type of market	Market centre	Population size	Adjusted Sample size	Percent
Urban	Wa	482	123	63
	Fadama	118	30	15
	Total	600	153	78
Semi-urban	Wechiau	117	30	15
	Dorimon	52	13	7
	Total	169	43	22

Gross margin analysis was used to estimate costs and returns of vegetable marketeers. In addition, net profit was estimated for the sampled farmers. Vegetable marketeers' average gross margin and average net profit were analysed using the following equations:

$$\text{Average gross margin (GM)} = \sum_{i=1}^N \left[ \frac{TS_i - TOC_i}{N} \right] \quad (4)$$

$$\text{Average net profit } (\pi) = \sum_{i=1}^N \left[ \frac{TS_i - TOC_i - TOE_i}{N} \right] \quad (5)$$

Where  $TS$  is total sales,  $TOC$  is total order cost,  $TOE$  is total operating expenses, and  $N$  is the total number of marketeers in the group.

### 3 RESULTS AND DISCUSSION

#### 3.1 SOCIOECONOMIC CHARACTERISTICS OF RESPONDENTS

Table 2 shows the characteristics of vegetable marketeers in the study area. The sex distribution shows that 88.4 % of semi-urban marketeers and 100 % of urban marketeers were females, implying higher female participation in vegetable marketing. The result is reiterated by findings by Inkoom and Nanguo [14] which showed that the marketing of vegetables is dominated by women. More married people were actively involved in vegetable marketing in both semi-urban (81.39 %) and urban (73.85 %) areas. The middle-aged (between 31 and 50 years) dominated the business in both markets while majority of the marketeers were illiterate. According to Lyon *et al* [8], the major restriction for both farmers and traders in the uptake of post-harvest and marketing innovations is inadequate education and access to credit. There was a higher proportion of younger people up to 30 years who are active in vegetable marketing in the semi-urban area as compared to the urban area.

Table 2. Characteristics of marketeers in the study sample

Variable	Semi-Urban Marketeers		Urban Marketeers	
	Frequency	Percent	Frequency	Percent
No. of Respondents	43	22	153	78
<i>Sex of respondents</i>				
Male	5	11.63	0	0
Female	38	88.37	153	100
<i>Marital status</i>				
Married	35	81.39	113	73.85
Single	6	13.95	21	13.73
Divorced	1	2.33	3	1.96
Widowed	1	2.33	16	10.46
<i>Age of respondents</i>				
Up to 30 years	13	30	30	19.61
31-50 years	28	65.12	105	68.62
More than 50 years	2	4.65	18	11.77
<i>Education of respondents</i>				
Illiterate	28	65.12	89	58.17
Primary school	5	11.63	19	12.42
Junior high school	1	2.32	12	7.84
Middle school	3	6.98	0	0
Senior high school	4	9.3	9	5.88
Nurses training college	0	0	2	1.31
Arabic education	2	4.65	22	14.38

NB: The researchers classified the respondents into age groups. A young person was defined as someone aged 30 years or less; middle-aged, between 31 and 50 years; and an elderly person, more than 50 years old.

### 3.2 VEGETABLE CHARACTERISTICS AND MARKETEE PREFERENCES

Marketeers usually look for certain characteristics of the produce which make it marketable. The four vegetables investigated have different characteristics in terms of shelf life, profit margins, among others. Marketeers were made to indicated their preferences for the vegetable produce they traded in.

Tomato fruit and fresh okra were most preferred by both marketeer groups because of high consumer preference and the profit associated with the vegetable type. According to the marketeers, tomato fruits stayed in shelf for four (4) days for cultivar “Laurano” and less than four days for all the other cultivars; whereas fresh okra stayed in shelf for thirty-six hours. Onion bulb was the next most preferred vegetable by urban marketeers and the third preferred produce by semi-urban marketeers due to higher consumer demand and longer shelf life respectively. According to the semi-urban marketeers, onion bulbs do not sell on time but can be in shelf for as long as two weeks. Pumpkin leaf was ranked fourth in preference by both marketeer groups due to poor consumer demand and short shelf life. According to the marketeers, pumpkin leaf stayed in shelf for less than a day. Pumpkin leaf could be highly perishable because of the peculiar characteristic of high surface area to volume ratio of leafy vegetables.

From the marketeers’ point of view, among the factors that determine the choice of vegetable trade are shelf life, consumer preferences, the marketing costs, and the profits associated with the vegetables. Abu [17] reiterated that for receivers and market distributors, appearance quality is most important, while they are also keenly interested in firmness and long storage life. Statistics indicate that about 5-40 % of fruit and vegetables produced in Ghana are lost during various stages of the marketing process, with losses occurring at every level from harvesting to retail and sale [2]. Depending on the variety, the lack of hard texture makes vegetables deteriorate within 1 – 4 days after harvest with a resultant huge economic loss which is a constraint to marketing for the marketeers [5]. Shelf life is influenced by cultivar, production conditions, packaging, transportation, and nature of storage. Abu [17] conducted a survey in some Ghanaian markets and farms on the trend of fruit and vegetable packaging and observed that Ghana had not made progress in research on packaging of fruits and vegetables, and that the techniques that had been in existence for decades were still in use.

### 3.3 ESTIMATION OF GROSS MARGINS

A comparison of the gross margins for the different vegetables was made based on their order prices in both urban and semi-urban markets as shown in Table 3. The order price refers to the price of vegetable produce packaged in a unit at the farm gate or where ever the marketer initially purchased the produce.

*Table 3. Gross margin analysis for vegetable marketing*

Type of market	Vegetable type	Average order price per unit † (Ghc)	Average total sales per unit (Ghc)	Gross margin per unit (Ghc)	Average selling time per unit (Days)
Semi-urban	Tomato	650	1000	350	3
	Onion	300	600	300	14
	Okra	250	500	250	2
	Pumpkin leaf	100	300	200	1
Urban	Tomato	600	800	200	1
	Onion	300	550	250	7
	Okra	450	600	150	1
	Pumpkin leaf	250	600	350	1

† A unit refers to the ordinary standard measure used for orders by the local marketers. Tomato is packaged in 45 kg equivalent standard wooden boxes. Onion is packaged in 38 kg standard sacks. Okra is packaged in 18.75 kg standard sacks. Pumpkin leaf is packaged in 24 kg standard sacks. Ghc 1.00 is equivalent to US\$ 0.19.

Except for tomato whose order price of Ghc 650 in the semi-urban area was higher than that in the urban area (by Ghc 50), and onion which had the same order price in the two markets, semi-urban order prices were relatively lower for the remaining vegetables. With the exception of pumpkin leaves, the gross margin of vegetables was relatively higher in the semi-urban areas. This could mean that urban marketers were operating in a more competitive market environment than semi-urban marketers or that the supply and availability of substitutes could have an effect on returns. The average selling time reflects the demand associated with the vegetables from a consumer's point of view. Ranking the vegetables according to the number of days it took to sell a unit indicated that tomato, okra, and pumpkin leaves were sold faster than onion in both markets. The average selling time increased as one moved from an urban area to a semi-urban area, as did the gross margin. This suggests that the average selling time and level of gross margin should be the basis upon which marketers could strategize to increase their turnover.

### 3.4 VOLUME OF BUSINESS HANDLED BY MARKETTERS AND PROFIT ANALYSIS

In an attempt to evaluate the performance of the marketers, the authors examined the volume of business marketers handled per week and the associated benefits. The results are presented in Table 4. The volume of business here refers to the quantity or volume of produce sold. The results indicate that the majority of urban marketers handled relatively larger volumes of business with attendant higher total value. This most probably translated to the comparatively higher average gross margins and higher average net profits gained by the urban marketers. Majority (47%) of semi-urban marketers handled business volumes between Ghc 1,000 and Ghc 2,000, whereas majority (85%) of urban marketers operated business volumes above Ghc 2,000. The difference in average net profit between semi-urban and urban marketers become huge when business volume exceeds Ghc 2,000, while at smaller business volumes, the difference is marginal. At the same time, average net profit in both markets is at the highest when business volume exceeds Ghc 2,000. Generally, marketers seem to rely on increased sales volumes to create profits, with urban marketers more able to create higher profits. Sales volume, therefore accounts largely for marketers' profit margin.

Table 4. Volume of business handled in a week

Type of market	Volume of business (GH¢)	Number of marketeers	Total value (GH¢)	Average gross margin (GH¢)	Average net profit (GH¢)
Semi-urban	Less than 1,000	9	7,485	840	670
	1,000 – 2,000	20	31,429	1,976	1,751.7
	Above 2,000	14	47,852	3,697	3,330.2
Urban	Less than 1,000	8	6,907	890	708.3
	1,000 – 2,000	15	25,175	2,860	1,752.9
	Above 2,000	130	671,412	7,825	7,490.3

### 3.5 DISTRIBUTION OF MARKETING COSTS

Understanding the cost structure of a business is helpful in identifying strategies to reduce costs and maximize profits. The study therefore examined the distribution of marketeers marketing costs, considering the volume of business handled per week (Table 5). The average distribution of the marketing costs associated with the volume of business handled in a week indicated that transportation costs contributed the highest proportion to total marketing costs in semi-urban areas. This applied to all levels of the volume of business handled. This is so because most marketeers in semi-urban areas travel extensively and act more as assemblers/aggregators searching for supplies from distant places compared to urban marketeers. Poor feeder roads also lead to an increase in transportation costs in rural areas.

Table 5. Distribution of marketing costs

Type of market	Volume of business (GH¢)	Transport cost (GH¢)	Packaging cost (GH¢)	Market levy (GH¢)	Additional handling or storage costs (GH¢)
Semi-urban	Less than 1,000	66.47	10.59	22.94	-
	1,000 – 2,000	68.50	15.08	16.42	-
	Above 2,000	73.61	11.63	14.76	-
Urban	Less than 1,000	27.10	46.50	13.09	13.31
	1,000 – 2,000	36.92	49.45	9.54	4.09
	Above 2,000	34.64	58.40	4.69	2.27

Packaging costs are more significant in urban areas than in semi-urban areas, reflecting a high degree of improved services for customers in urban areas. This is so because customers in urban areas are very conscious of the quality of packaging since attractive packaging may reflect quality of the contained items. Marketeers in semi-urban areas spend less on packaging material because consumers are not very conscious about the quality of packaging services since they do not encounter containment for longer hours. This is coupled with the fact that as assemblers/aggregators, semi-urban marketeers may have to provide containment just for a short while in anticipation of urban marketer visits.

Urban marketeers paid lower market levy at the destination market, and encountered additional expenses in the form of other costs. These other costs reflected an additional cost of handling in urban areas, particularly where there was the need for prolonged resident storage which called for the provision of appropriate storage facilities to forestall the perishability of the produce.

### 3.6 RELATED MARKETEEER CONCERNS

The study also investigated some related marketer concerns that affect the business of vegetable marketing. The marketer concerns included business organization, level of investment, future intentions of the marketeers, and the acquisition and availability of vegetables. The majority of marketeers operated as individuals (single proprietors) probably due to the small amount of capital investment required to venture into the business, resulting in less need to mobilize huge initial capital through formation of groups. The few marketeers who operated in groups were family-related who came together to raise capital to expand the scope of the business as well as introduce other family members to the business.

The authors were unable to quantify and convert into monetary value, the assets reported by the marketeers. However, observations indicated that urban marketeers had bigger investments than semi-urban marketeers. This was supported by the type of items (assets) urban marketeers owned, which included self-built houses. Most marketeers had no intention of continuing with the business if they are able to acquire adequate capital to start other higher-paying businesses. This implied that some marketeers used this business as a stepping stone to enable them venture into more lucrative businesses.

In the semi-urban area of Wechiau and Dorimon markets in the Wa West district, 85% of the marketeers indicated that they often travelled out to purchase vegetables from nearby farms, and sometimes from more distant places when supply was scarce, particularly in the rainy season. There was no organized wholesale market for vegetables where marketeers could easily obtain supplies. Most large-scale vegetable producers preferred selling their produce to urban marketeers than to semi-urban marketeers. The producers claimed that selling to urban marketeers reduced the risk of not selling all the produce since they are large-scale producers. Out of the total number of marketeers interviewed, 91% obtained their supplies from Wa and Fadama markets – the area's largest sales points. Marketeers acknowledged that supply of vegetables from these markets was comparatively steadier except during the rainy season when producers are more inclined to the production of staple crops such as yam, maize, millet, and guinea-corn, resulting in erratic supply of fresh vegetables. The marketing channels of vegetables including the means of transporting the vegetables become more and more localized (defining the application of head-loads, donkey-cartloads, and packaging in rugs) as one transitions from an urban to a rural area.

### **3.7 THE NATURE OF THE PROBLEMS IN VEGETABLE MARKETING**

The main areas defining the nature of the problems in the business of vegetable marketing included lack of appropriate business skills, representation, and adequate support services, as well as unethical business practices and business fluctuations. Direct observation and personal communications with the marketeers in both urban and semi-urban areas revealed that they lacked appropriate business skills to perform efficiently. Limited education of the marketeers may be a factor contributing to the low business skills of the marketeers. Also, the marketeers did not belong to associations or organizations through which their grievances could be addressed. The marketeers who acknowledged the presence of representation cited the district assemblies as major institutions through which they are represented. Observation and communications with the assemblies revealed that the assemblies had very limited understanding of the business of vegetable marketing and were mostly interested in the market levy paid by the marketeers.

Lack of rule of law and unethical business practices were of much more concern in the urban area than in the peri-urban area. In the urban area of Wa and Fadama markets in the Wa Municipal, 76% of the marketeers indicated that they suffered injustice and harassment in the hands of street vendors popularly known as "way-side-marketeers". According to the respondents the assembly was not aware of the presence of the "way-side-marketeers" and that they always encountered them at the Wa central market whenever they got there to order vegetables. Respondents were compelled by the behaviour of the so call "way-side-marketeers" to buy vegetables that were not what they preferred and still paid more than the actual order price. Marketeers in the other markets of Wa municipal complained about unfair competition from street vendors who also usually sold vegetables outside the market premises.

The marketeers in both urban and semi-urban areas operated under very challenging conditions. The infrastructure at their disposal was, in most cases, dilapidated. The buildings under which they conducted business, for example, were often congested and rarely maintained by the local government authorities (assemblies). Toilet facilities were rarely available in the markets, and where they existed, they were in a dilapidated state. Also, water was rarely available at the markets, thus compelling marketeers to operate under unhygienic conditions. Whereas urban marketeers had access to transport facilities, semi-urban marketeers often faced transportation difficulties. It was common for rural marketeers to travel to production centres, even on foot, looking for vegetables. The flow of information in the business was also poor. Usually the marketeers were not well informed about the sources of supply and the prevailing prices. Business fluctuations occurred and were evidenced by the comparatively high perishable nature of the vegetables.

Vegetable researchers have too often neglected this aspect (marketing) and have confined themselves to the agronomic aspects of vegetable production.

## **4 CONCLUSION**

The study investigated vegetable marketing in urban and semi-urban areas of the Upper West region of Ghana to identify differentials in profit margins as well as the constraints marketeers face. This was accomplished using a mixed method approach that involved questionnaire administration, focus group discussions and personal observations. Marketeer profit margins and marketing constraints were analysed. The results indicated that both the average gross margin and average net

profits per unit order were higher for marketeers in urban areas than they were for marketeers in semi-urban areas. The urban vegetable market was more competitive but generally, marketeers seemed to rely on increased sales volumes to create profits with urban marketeers more able to create higher profits. Sales volume therefore accounted largely for marketeers' profit margin.

Lack of appropriate business skills, representation, and adequate support services, as well as unethical business practices and business fluctuations were among the common problems faced by marketeers. The women who dominated the vegetable business undertook it to supplement the income of their households and contribute to household food security.

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