

# Linking Smallholder Farmers to Markets Enhances Productivity Growth: A Case Study of Rice Farmers in Ghana

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## ABSTRACT

Smallholder farmers are the major players in agricultural production and food supply systems in Africa. However, poor access to market limits their productivity growth. This brings into focus the need to support smallholders to become less subsistence-based and more entrepreneurial by tailoring production to market forces.

Agriculture is one of Ghana's most important economic sector, employing almost half the population on a formal and informal basis and accounting for about 20% of GDP. The multiple challenges faced by smallholder farmers in Ghana pose major obstacles that prevent them from integrating into rapidly evolving national and international markets, which contributes to sluggish growth and lingering poverty in the rural sector. This is especially seen in the rice sector as it is estimated that about 66 percent of Ghana's domestic demand for rice is satisfied through importation from China, USA, Thailand and other nations whereas local production only satisfies about 34 percent of total demand. In the 2016 market year, it was discovered that 689,000 metric tons of milled rice was imported into the country to satisfy the increasing local demand of the commodity. This action has posed serious challenges to local smallholder rice production, making it uncompetitive in local markets.

This study assessed barriers to formal market participation by smallholder rice farmers, identified the factors that influence the decision of these farmers to participate in agricultural output markets, and recommends effective strategies to improve market access among smallholder rice farmers in Ghana. Purposive sampling technique was employed to select rice farmers in the Volta and Greater Accra regions. The study was conducted in Aveyime of North Tongu district, Weta and Afife of Ketu North district and Asutsuare of Shai-Osudoku district. The sample size is made up of randomly selected 400 smallholder rice farmers. Data were analyzed using descriptive and inferential statistics. The results revealed that farm-level, social and economic factors enhance smallholder farmers' productivity and market access.

**Keywords:** Market access, Productivity, Rice, Smallholder farmers.

## INTRODUCTION

In line with the agreed Strategic Framework for International Fund for Agricultural Development (IFAD) in Ghana, Ghana Agricultural Sector Investment Programme (GASIP) is built on four strategic axis: (i) linking smallholder farmers to agribusiness to enhance pro-poor growth; (ii) nationwide scaling up of a successful value chain investment approach; (iii) promoting and mainstreaming climate change resilience approaches in Ghana; and (iv) knowledge management, harmonization of intervention approaches and policy support. GASIP targets smallholder farmers and resource-poor rural people, in particular women, youth (15-24 years) and young adults (25-34 years). The overall goal of GASIP is to contribute to sustainable poverty reduction in rural Ghana (AgricInGhana Media, 2015). One of the value chains selected for support is rice production.

Ghana's rice sector has attracted the attention of stakeholders and policy makers largely due to the increase in consumption and the effect of its rising import bill on the economy. This study would be useful to these various commitments by the various actors by providing empirical evidence on the factors that influence market participation and the barriers to participation by smallholder rice farmers which is vital in informing priority setting in policies, geared towards transforming smallholder rice farmers especially in the area of responding to market incentives for improved farm incomes and subsequent reduction in poverty and enhanced food security.

As stated by CGIAR (2017), rice contributes to the United Nations sustainable development goals, with direct impact on goals 1, 2, 5, 6, 8, 12, 13 and 15. Rice contribution by 2030 include:

**1. No poverty-** About 18 million rice producers and consumers assisted out of poverty through high-yielding rice varieties with increased market value, leading to rice that is profitable to poor farmers and affordable to poor consumers.

**2. No hunger-** About 26 million people assisted out of hunger and 18 million people meeting zinc requirements through increased concentration of minerals and micronutrients in the rice grains.

**5. Gender equality-** Increased gender equity and empowerment in the rice sector, through increased women's access to and control over resources (seed, inputs, technologies, and technical knowledge).

**6. Clean water and sanitation-** About 15% increase in water-use efficiency in rice fields through water-saving management technologies and cropping systems

**8. Decent work and economic growth-** Enhanced participation of young people in vibrant and dynamic rice agri-businesses through entrepreneurial skills training of young farmers.

**12. Responsible consumption and production-** Enhanced resource-use efficiency and sustainability throughout the rice value chain through best rice management practices that combine reduced environmental footprint with economic profitability.

**13. Climate action-** About 36 million farms use climate-smart rice varieties and management practices; greenhouse gas emissions from rice fields reduced by 57 megatons CO<sub>2</sub> equivalent/year through climate-smart rice varieties with resilience to drought, flooding, and extreme temperatures.

**15. Life on land-** Globally conserved and shared rice genetic resources through safe storage and conservation of rice genetic resources in rice gene banks

Undoubtedly, rice has become a staple food that can be found in every household, giving the indication that it could be very lucrative when given the right attention. It is the second largest cereal consumed after maize in Ghana. Despite the huge potential, rice cultivation is said to be the least exploited in Ghana. It is disheartening to hear that Ghana spends over \$500 million annually importing foreign rice while there is a huge potential for rice production in the country (Anane, 2017).

Several Western African countries are dependent on imports of cereals and this dependence is increasing with the rapid urbanization of these countries. Because of volatile global markets, this dependence has become a real issue of national food security for these countries (Cadilhon *et al.*, 2012).

Just like in Nigeria or Senegal, rice consumption in Ghana has increased sharply (Cadilhon *et al.*, 2012). Domestic rice production in Ghana has been consistently less than its consumption needs. Demand for rice has outstripped supply due to the population increase and improved standards of living, as well as poor production and marketing arrangements on the supply side (Hardi, 2011).

Agriculture, especially farming, in Ghana has always been perceived as a part-time job and is still practiced in most parts at merely subsistence level, dominated by ageing peasants and is unable to attract the youth - a situation which, if left to default, could in the next 10 years have adverse effects on national development (Korboe, 2016). Thus, there is the need to really create an enabling environment and grow agriculture as a business.

Similar to other developing countries, the majority of the rural households in Ghana engage in smallholder agriculture characterized by low productivity, asymmetric information in prices and selling opportunities, and limited market access. Many of these households sell their commodities in markets that are less demanding but also less rewarding, such as village open-air markets. Others sell through intermediaries, due to the small scale of their production, the high transaction costs involved in reaching more distant markets, and their inability to comply with the stringent requirements relating to volume, quality, and timely delivery demanded by modern agricultural value chains.

Addressing and overcoming these market failures in order to link these smallholder farmers to markets to enhance productivity growth is the main objective of this report. The specific objectives are:

- To assess barriers to formal market participation by smallholder rice farmers.
- To identify factors that influence the decision of these farmers to participate in agricultural output markets.
- To recommend effective strategies to improve market access among smallholder rice farmers in Ghana.

Reliable market access is critical to helping unlock the potential of smallholder farmers (AGRA, 2016). Strengthening access to markets by removing the inefficiencies and enhancing connections to buyers generates employment and smallholder farmers are rewarded for their efforts. They are motivated to adopt new practices, increase their productivity and become more profitable than they ever would have imagined.

## METHODOLOGY

### Study Area

Purposive sampling technique was employed to select rice farmers at the Volta and Greater Accra regions for this study out of the ten regions of Ghana. The motivation for such choice is that these regions hold much potential in rice production.

The Volta region which was declared as the leading producer of rice in Ghana, in 2015 by the Statistics Research and Information Department of Ministry of Food and Agriculture is well known for landscape suitable for arable farming. With Ho designated as its capital, it is located west of the Republic of Togo and to the east of Lake Volta. Divided into 25 administrative districts, the region is multi-ethnic and multilingual. The study was conducted in Aveyime of the North Tongu district and Weta/Afife of Ketu North district.



Figure 1: Map of Ghana showing Volta Region



Figure 2: Map of the Volta Region

The Greater Accra Region is bordered on the north by the Eastern Region, on the east by the Volta Region, on the south by the Gulf of Guinea, and on the west by the Central Region. It is the smallest region of Ghana in total area, and is made up of 16 administrative districts. The region is also known for its vast natural resources and a very fertile agricultural land. The study was carried out in Asutsuare of Shai-Osudoku district. According to the District Analytical Report, soil around Asutsuare are placed under extensive rice and sugarcane cultivation, because they have poorly drained, pale-coloured, sandy silt and clayey soils and good for rice and sugarcane.



Figure 3: Map of Ghana showing Greater Accra Region

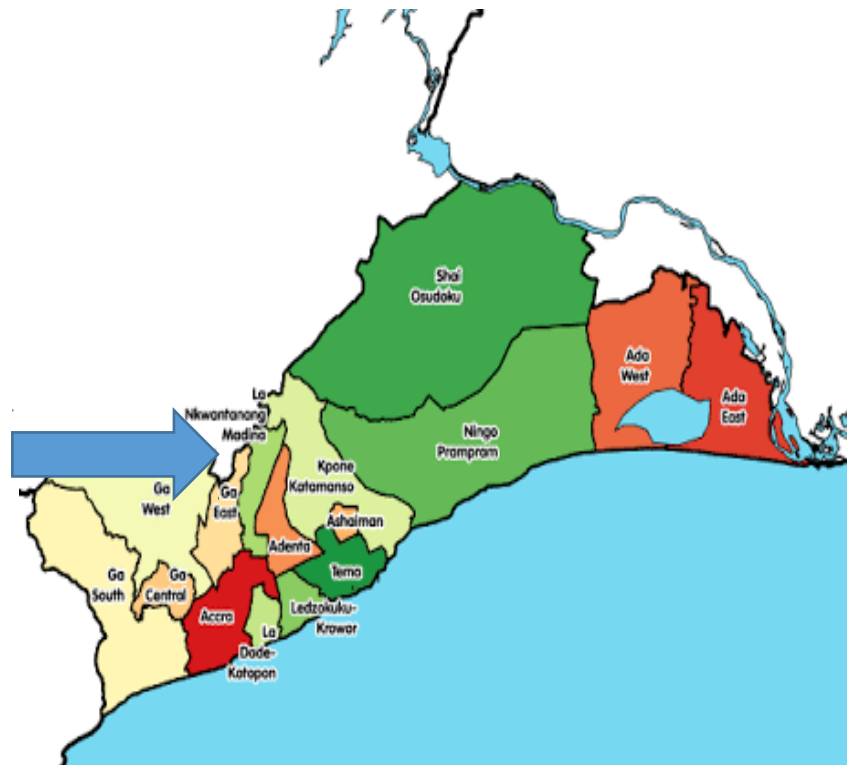


Figure 4: The Greater Accra Region

### Sampling and data collection

Both formal and informal approaches were used in collecting the data. First, participatory rapid appraisal techniques such as the focus group discussions were used to collect information about the communities as well as general information about the community with regard to rice production. This provided useful information for improving the formal data collection. Following this approach, the formal survey data was collected using semi-structured questionnaire through individual interviews. The questionnaire was developed in order to obtain appropriate information that can be utilized to achieve the research objectives. The information included variables affecting the marketing decisions of smallholder rice farmers, which were deduced from farmer demographics, farm characteristics, marketing aspects and institutional factors.

The questionnaire development consisted of three sections. Section A was the socio-demographic data; section B comprised of the barriers to formal market and section C considered factors that influence the decision of smallholder farmers to participate in agricultural output markets.

After the first draft of questionnaire was prepared, the pre-testing procedure was carried out. The aim of pre-testing activities was to evaluate whether the questionnaire was relevant and easily understood by the targeted respondents in terms of the word selection (Dane, 1990; Ruane, 2005), question sequencing, and format and layout issues (Ruane, 2005). Furthermore, pre-testing activity will also allow the researcher to assess the validity and reliability of questions (Ruane, 2005). After the pretest, the questionnaire was administered to 400 rice farmers who

were randomly selected.

Table 1: Study area and sample size

S/No	Region	District	Villages selected	Selected sample	Percent
1	Greater Accra	Shai-Osudoku	Asutsuare	225	56.3
2	Volta	North Tongu	Aveyime	103	25.8
		Ketu North	Weta/Afife	72	18
<b>Total</b>				400	100.0

#### Analytical Methods/Techniques

Data was analysed using the Statistical Package for Social Sciences (SPSS version 14.0).

Initially a cleaning process was performed to ensure its completeness and validity. This Process included checking for logical inconsistencies, outliers and missing values. After the cleaning process, data was then given variable names and more detailed codes. For analysis purposes, some continuous data were considerably transformed into categorical bases. The final data set for analysis consisted of 400 rice farmers. Data were analysed using descriptive and inferential statistics.

## RESULTS AND DISCUSSION

### Socio-economic characteristics of the rice farmers

#### Gender of the farmers

The result revealed that 74% of the rice farmers are male and only 26% are female. This is due to the fact that male farmers are well endowed with resources such as land than their female counterparts. According to Amponsah *et al.* (2018) rice production is male-dominated (80%).

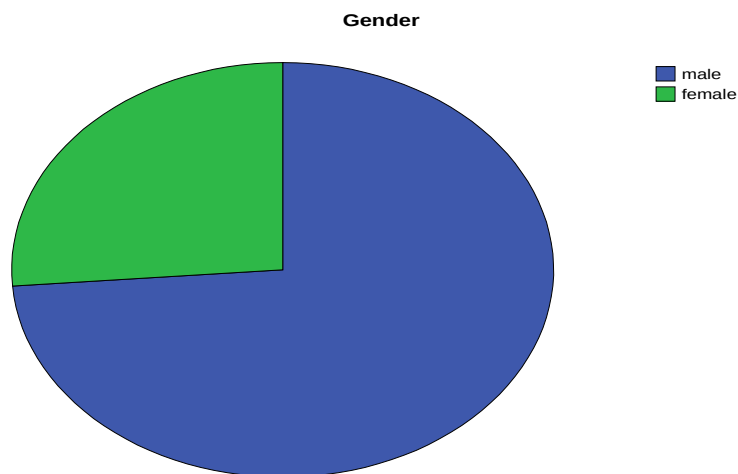


Figure 5: Gender of the sample size

The Female rice farmers were found to be less educated than the men which makes them more vulnerable and limits their access to markets. According to Appiah (2013), women's education has direct impact on sustainable agriculture uptake. A study conducted by a team from the School of Business, Economics and Law at the University of Gothenburg, Sweden, and the International Maize and Wheat Improvement Center proved that the successful implementation of sustainable agricultural practices(SAPs) in Sub-Saharan Africa is linked to improvements in women's education. The impact of women's education was relevant in both male-headed and female-headed households.

Table 2: Crosstabulation of Gender and Education

		Gender				Total	
		male		female		Count	% of Total
		Count	% of Total	Count	% of Total		
Education	primary	35	8.8%	22	5.5%	57	14.3%
	No formal education	48	12.0%	35	8.8%	83	20.8%
	middle school living certificate	4	1.0%	4	1.0%	8	2.0%
	no response	12	3.0%	2	.5%	14	3.5%
	junior high school	84	21.0%	27	6.8%	111	27.8%
	school						

senior high school	90	22.5%	15	3.8%	105	26.3%
professional health sciences diploma/certificates	1	.3%	0	.0%	1	.3%
higher national diploma	13	3.3%	0	.0%	13	3.3%
undergraduate education	2	.5%	0	.0%	2	.5%
masters	3	.8%	0	.0%	3	.8%
Total	295	73.8%	105	26.3%	400	100.0%

Table 3: Chi-Square Tests for gender and education

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.525(a)	10	.000
Likelihood Ratio	39.618	10	.000
N of Valid Cases	400		

In these results, the p-value = 0.000. At significance level of 0.05,  $p < 0.05$ . Therefore, there is a significant relationship between gender of the rice farmers and their education level.

#### Age of the farmers

Majority of the rice farmers fall into the age brackets 36-45(31%) and 46-55(28%). This indicates that youth participation in agriculture is minimal. Rice farmers within the ages of 18-25 were only 3% and those within the ages of 26-35 were 17% of the sample size.



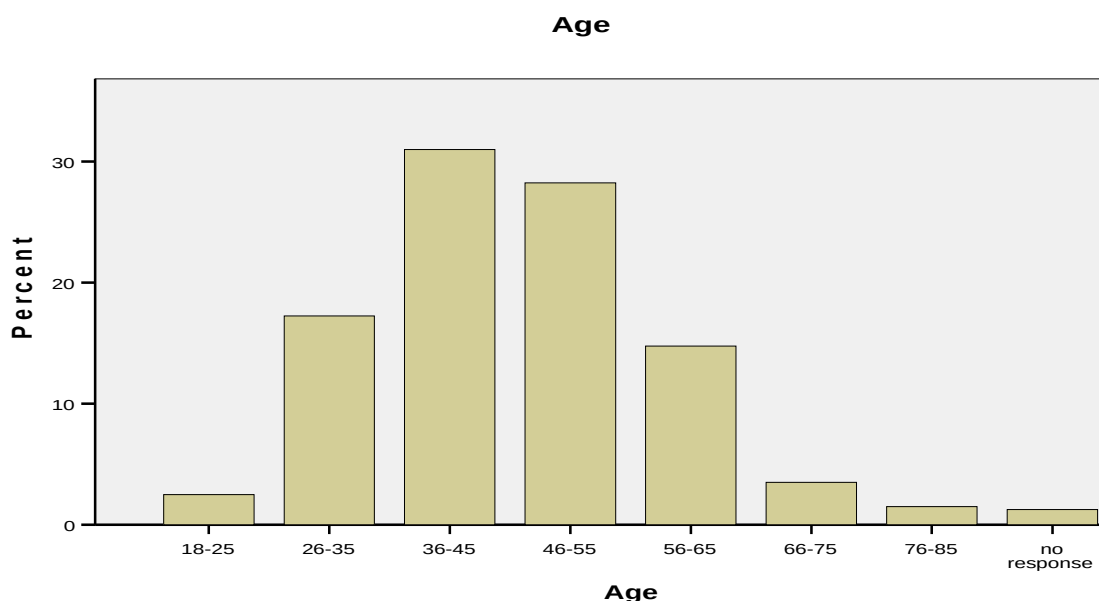


Figure 6: Age bracket of the sample size

Minchew (2016) emphasized that the future of farming may very well lie in scientific progress, economic interventions, and binding international agreements, but none of these approaches will succeed without buy – in from those who matter the most – the farmers themselves. To be specific, young farmers, who are the future of farming.

#### Marital status of the rice farmers

The result revealed that 78% percent of the rice farmers were married and only about 11% were never married. The rest were either separated, divorced or widowed.

Table 4: Marital status

Marital status	Frequency	Percent	Valid Percent	Cumulative Percent
never married	42	10.5	10.5	10.5
married	311	77.8	77.8	88.3
widowed	20	5.0	5.0	93.3
divorced/separated	19	4.8	4.8	98.0
no response	8	2.0	2.0	100.0
Total	400	100.0	100.0	

### Education level of the farmers

Increase in education level showed extent of agricultural commercialization. This is because the farmers who attain higher levels of education are able to accumulate knowledge and have better access to information.

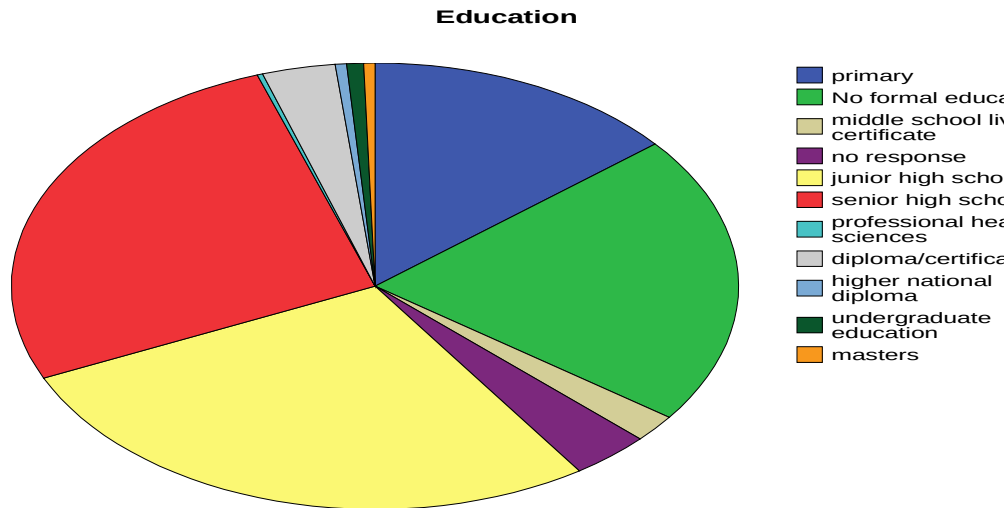


Figure 7: Education level of the farmers

### Barriers to formal market participation by smallholder rice farmers

#### 1. Preference for informal markets

The study showed that only 10 percent of the rice farmers are dedicated to taking their produce solely to the market because long distances, transport costs, hire of stores are some of the expenses most farmers are not willing to pay. As a result, most of the farmers sell their produce on the farm, farm gate, drying floor or at the mill where traders (individuals and companies) come to meet them and buy. The problem with this informal setting is the lack of standardized measurements, therefore the farmers end up accepting lower prices for their produce. Apori-Buabeng (2009) has shown that non-uniform weights and measures is one of the constraints to market participation identified by rice farmers. Due to lack of storage and market options, most smallholder farmers sell their produce at harvest, when prices are at their lowest. Immediately after harvest, prices begin to rise, representing a lost income opportunity for smallholder farmers.

Table 5: Where produce is sold by the 400 rice farmers

S/No	Where produce is sold	Frequency	Percent	Valid Percent	Cumulative Percent
1	home(after harvest)	47	11.8	11.8	11.8
2	home, market	1	.3	.3	12.0
3	home, field	6	1.5	1.5	13.5
4	home, road side	1	.3	.3	13.8
5	home, drying floor	7	1.8	1.8	15.5
6	farm, market	1	.3	.3	15.8
7	store/warehouse, field	1	.3	.3	16.0
8	no response	36	9.0	9.0	25.0
9	farm(before harvest)	32	8.0	8.0	33.0
10	market	40	10.0	10.0	43.0
11	store/warehouse	33	8.3	8.3	51.3
12	field(on the farm or farm gate after harvest)	132	33.0	33.0	84.3
13	drying floor	52	13.0	13.0	97.3
14	home, farm(before harvest)	10	2.5	2.5	99.8
15	home, farm(before harvest), field	1	.3	.3	100.0
	Total	400	100.0	100.0	

## 2. Transaction costs

Table 8 reveals that challenges faced by the small holder rice farmers include; high transport costs, poor communication, high market dues, long distances to markets, low prices offered, lack of market information, poor storage facilities and labour costs. However, high transport costs, low prices offered and labour cost seem to take the lead. Farmers with larger household size hardly complained of labour cost. Martey *et al* (2014) have shown that household size represents the supply of family labour for production activities.

According to the study done by Musah (2013), unfavourable market prices was the most pressing constraint faced by farmers, but in this study it ranks second.

*Table 6: Farmers identify various challenges they face marketing their produce*

S/no	Challenges	Frequency	Percent	Valid Percent	Cumulative Percent
1	high transport costs	33	8.3	8.3	8.3
2	no challenge	1	.3	.3	8.5
3	high transport cost, poor storage facilities	1	.3	.3	8.8
4	transport cost, low prices offered	8	2.0	2.0	10.8
5	low prices offered, poor storage facility	7	1.8	1.8	12.5
6	poor communication, low prices offered	4	1.0	1.0	13.5
7	high transport costs, high market dues	2	.5	.5	14.0
8	low prices offered, labour cost	5	1.3	1.3	15.3
9	low prices offered, lack of market information	7	1.8	1.8	17.0
10	poor storage facilities, labour cost	1	.3	.3	17.3
11	poor communication(i.e. telephone network)	5	1.3	1.3	18.5
12	transport cost, labour cost	4	1.0	1.0	19.5
13	poor communication, labour cost	1	.3	.3	19.8
14	three or more of these challenges	61	15.3	15.3	35.0
15	no response	70	17.5	17.5	52.5
16	high market dues	9	2.3	2.3	54.8
17	long distances to the markets	7	1.8	1.8	56.5
18	low prices offered	116	29.0	29.0	85.5
19	lack of market information	9	2.3	2.3	87.8
20	poor storage facilities	2	.5	.5	88.3
21	labour cost	44	11.0	11.0	99.3
22	lack of machines	3	.8	.8	100.0
	Total	400	100.0	100.0	

### 3. Farm size

Majority of the rice farmers own less than one hectare of land. In most cases, the larger the farm size, the higher the productivity. This is why the government stepped in and rented out additional lands to some rice farmers in order to enhance productivity growth.

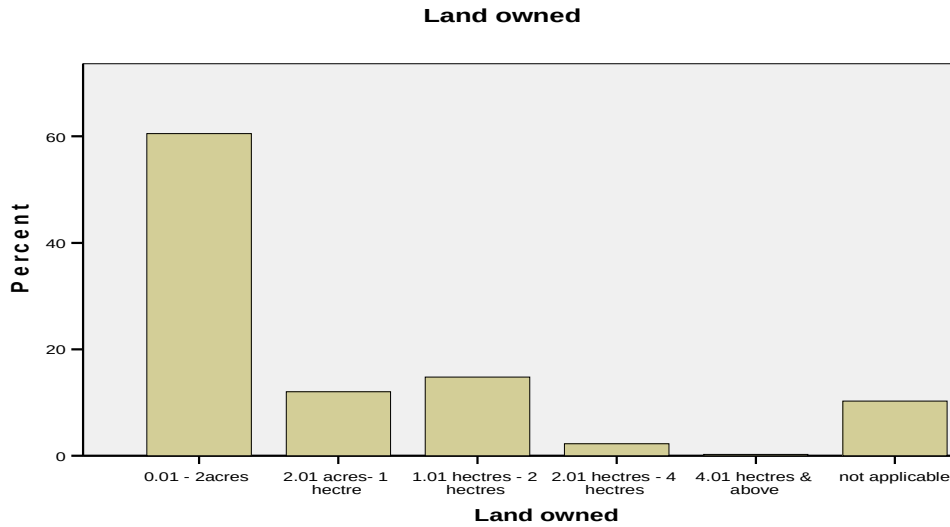


Figure 8: Bar chart showing size of farm land owned by the farmers

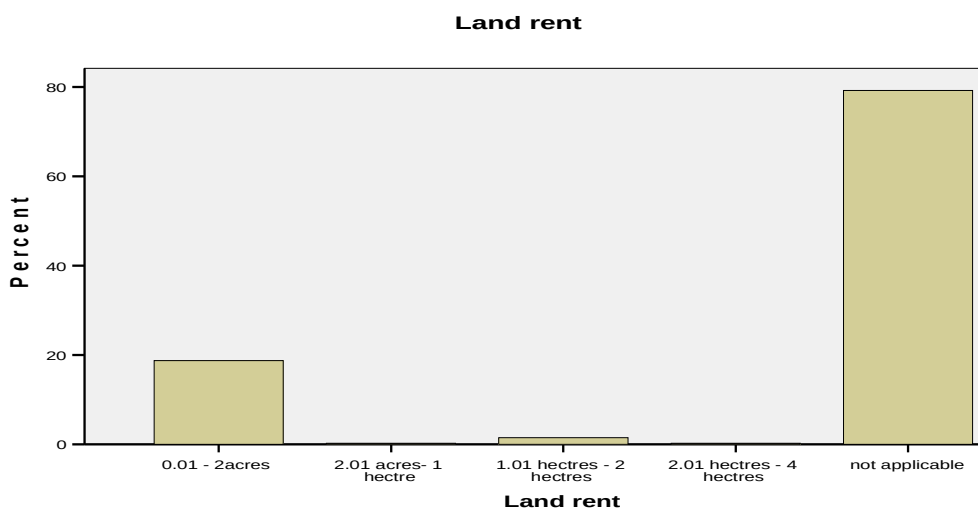


Figure 9: Land rented to the rice farmers by government

#### 4. Unorganised seed industry

Many of the smallholder rice farmers who dominate the local rice industry lack access to good quality seeds. Farmers related during a focused group discussion how this problem hinders participation in marketing linkages. Failure to plant high quality rice seeds does not only result in poor yields but also affects the quality of rice produced, thus resulting in red rice, rice with different shapes, which is difficult to mill and cook well, therefore, avoided by consumers.

#### 5. High post-harvest losses

A constraint noted was lack of access to mechanization by the farmers resulting in post-harvest losses. Other reported causes of post-harvest loss include: rice paddy getting moldy during drying, rice shattering at harvesting and spilling of rice grain on the farm floor. The implication is that rice farmers lose huge amount of produce resulting in low productivity, thus uncompetitive for the contract markets.

### Factors influencing the decision of smallholder rice farmers to participate in agricultural output markets.

#### 1. Distance to market and Produce price

The study revealed that informal markets are more accessible than formal markets and that distance and produce price were the major determinants of market channel choice.

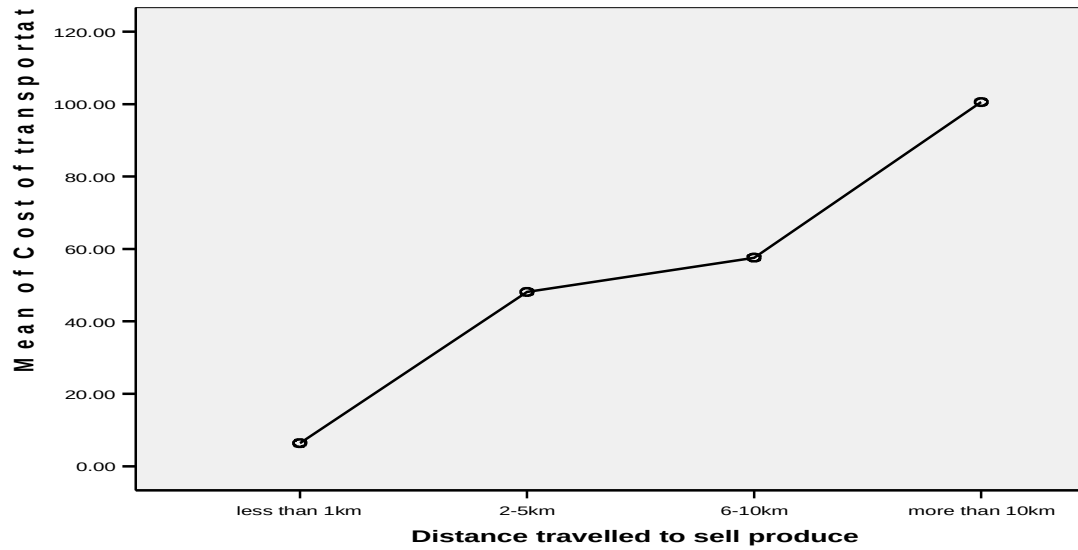


Figure 1: Graph showing average cost of transportation in Cedi versus distance travelled to sell produce

Because of the cost of transportation to high value markets, most farmers would rather sell their produce on the farm or the local markets.



Figure 10: Distance travelled to sell rice produce

## 2. Exploitation by buyers

Farmers who think they are exploited by traders in the informal markets are more compelled to access the formal market. Exploitation indicated by farmers include low prices offered, obscurity in measurement, refusal of traders to use standard measurement and limited buyers. As a result of few buyers, there is no room for competition, therefore farmers accept price offered by the traders.

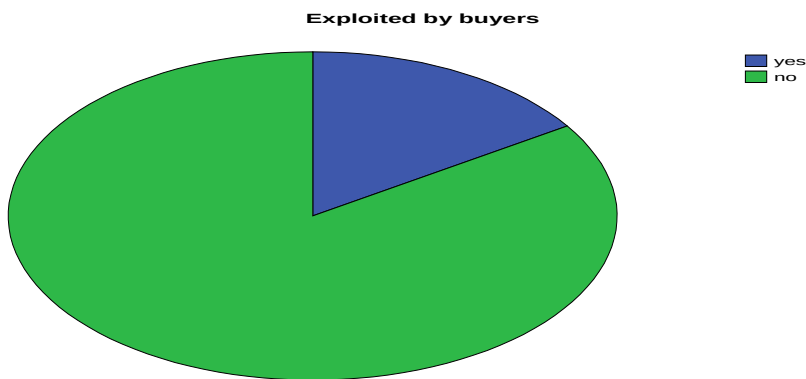


Figure 11: Proportion of farmers who complained they are being exploited by buyers



### 3. Share of rice produce sold and household size

Another factor influencing market access is the share of rice produce sold which also reflects the size of farm, household size and farm level. Those who sell nearly all the rice harvested are more likely to participate in agricultural output markets. Those who sold about half of the produce did so because the other half was consumed by family. The farmers who sold less than half of their produce, did so as a result of consumption by a larger family size and they are more likely to sell the remaining produce at home, to friends and neighbors. Omiti *et al* (2009) have shown that extent of agricultural commercialization is related to proportion of produce sold.

### 4. Climate change and infestation of pests

Some of the poor harvests were due to attack of pests such as birds and rats and in some cases low production was caused by flood incidence as a result of climate change. Amedi (2014) investigated the agronomic constraints among rice farmers in Ghana under the Millennium Development Authority, MiDA in the Hohoe Municipality and he identified five topmost constraints faced by farmers, which are: poor climatic conditions, high incidence of pests, poor yield, high cost of inputs and poor milling equipment. This applies to this study as during a focused group discussion in Aveyime, some farmers revealed that they didn't harvest or had very poor harvest in the previous farming season as a result of flood incidence and pests attack, especially rats.

### 5. Farmer Based Organisation membership

Rice farmers found to be members of farmer based organizations had more access to market information and better pricing. Most contract farmers also belong to these farmer based organisations. Denkyiral *et al* (2016) have shown that 85.9% rice farmers who had access to credit were members of farmer based organization. Also Maspaitella (2015) revealed that education level of farmers, cultivated area, and farmers' membership of the farmer groups were some of the key determinants that had significant and positive effects on the farmers' decision about market channel participation.

Figure 19 shows that most farmers identified the source of their market information as coming from other farmers. This highlights the importance of collective action in linking smallholder farmers to markets.

## Source of market information

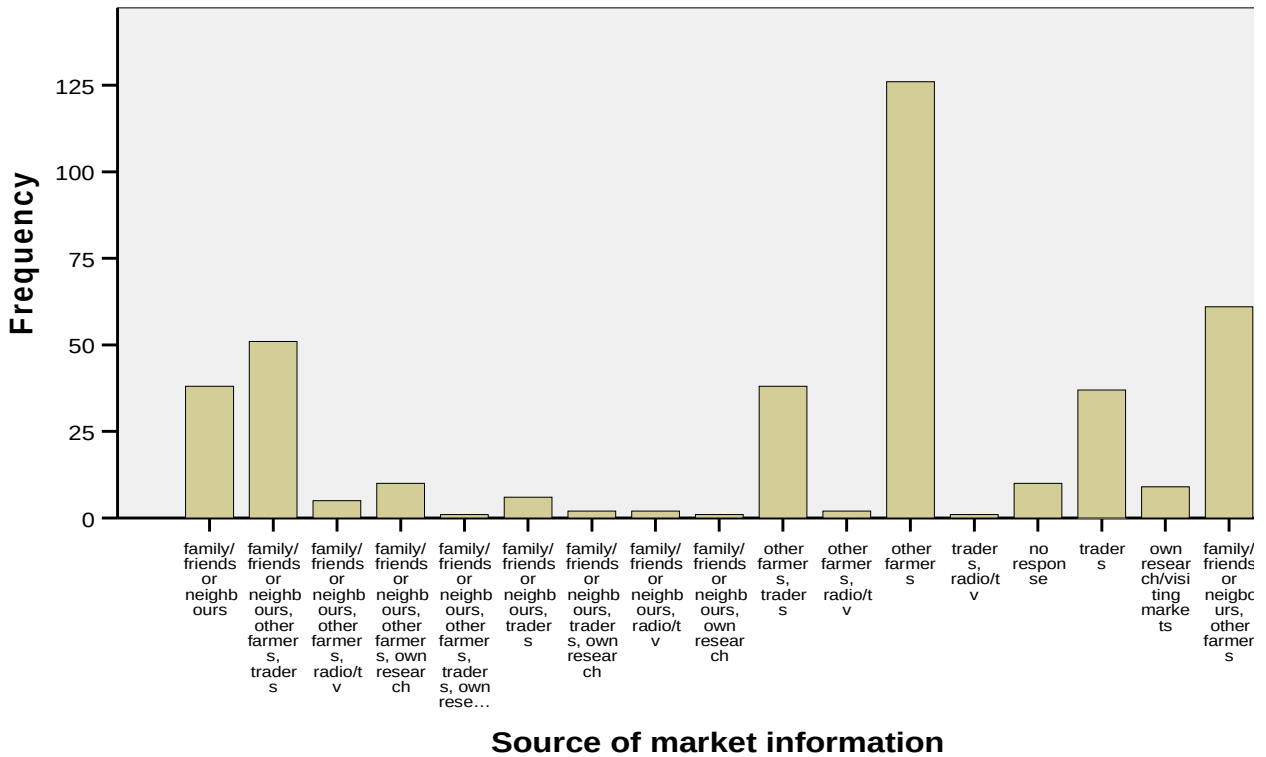
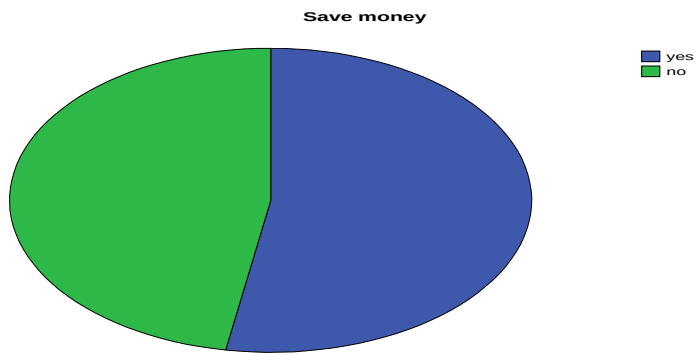


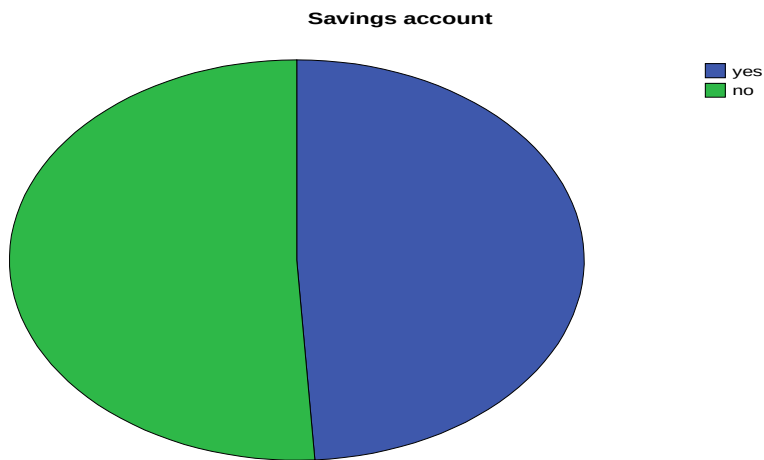
Figure 12: Various sources of market information identified by the rice farmers

### 6. Financial literacy

Generally, the rice farmers in this study have no culture of saving money. This is an important factor that could influence participation in high value markets. Agriprofocus (2011) stated that when farmers make good decisions on money matters they are more likely to succeed in their agricultural businesses. Besides, many organisations that provide loans to farmers will want to see that the farmer has the capacity to save before trusting him/her with their money.



*Figure 13: Proportion of the rice farmers who save money*



*Figure 14: Proportion of rice farmers having a savings account with a financial institution*

#### 7. Inputs support to farmers by off-takers/marketers

Farmer based organisations or individual farmers who receive credit support from off-takers or contract buyers respond to output markets as indicated by some of the farmers in the study. There is some bonding between them, tying their total output to the contract buyer.

#### Conclusion

Growing demand for agricultural products from Africa for food, feed, industry and fuel has become the foremost issue confronting the continent's agricultural sector today. This is

premised on continued population and income growth, combined with urbanization, which is putting pressure on current food supplies. Therefore, Ghana must invest in its rice sector which holds so much potential.

This report has been able to identify and assess constraints as well as identify factors that influence participation of smallholder rice farmers in agricultural output markets. With the use of semi-structured questionnaire, focused group discussions and key informant interviews, the rice farmers revealed issues surrounding poor market performance.

Local rice must reach quality standards that are close to those of imported rice. So as to reach those standards, improvements in rice processing are needed, but also improvements in production and harvesting operations.

Markets provide the opportunity to generate income, contributing to a reduction in poverty. Sustainable access to markets is required to guarantee smallholder rice farmers an increase in productivity, income and to lift them out of poverty.

### Recommendations

The results of this study have identified several challenges faced by smallholder rice farmers and factors that influence the decision of these farmers to participate in agricultural output markets. This section recommends effective strategies to improve market access among small holder rice farmers in Ghana.

- ❖ The Ghanaian government can adopt a scheme whereby it would buy the farm produce directly from the farmers and sell it to the open market to create ready market for rice farmers and ensure better pricing (Anane, 2017).
- ❖ Post-harvest losses can be avoided when government provides adequate machinery.
- ❖ The district assemblies need to come up with their own policies to link the school feeding programme to the rice business to ensure that caterers within rice farming localities purchase locally produced rice (Anane, 2017).
- ❖ Advertisement and public sensitization of the nutritional and economic benefits of patronizing local rice should be done zealously. Promotion activities are also needed to push products onto new markets.
- ❖ Farmers must make sure paddy produced must be devoid of stones and other foreign materials to enhance quality and attract buyers.
- ❖ More agribusiness firms should go into contracts with these rice farmers to ensure continuous and stable source of income for the smallholders.
- ❖ Construction of good roads by the government to enhance market access and productivity.
- ❖ Projects targeting women should focus on increasing women's participation in trainings and skill development. Opportunities should be created that would help women as well as men in market-led agricultural activities by, for example, bringing them into relevant discussions; attending to their concerns, needs and ambitions; and ensuring that those ready to enter markets have the links and tools they need to do so (ILRI, 2011).

- ❖ The youth should be encouraged to come together to form cooperative farming groups. The government can provide loans to young farmers coupled with training and monitoring to guide the farmers in utilizing the funds efficiently (Amengor, 2016).
- ❖ Farmers organizations should be created and strengthened where it is nonexistent to gain the critical bulk, better prices and achieve uniformity of price for rice produce.
- ❖ Climate-smart rice varieties should be developed with resilience to drought, flooding and extreme temperatures. Other traits such as weed tolerance, good milling, parboiling qualities and high yields are also preferred traits. The government should employ extension workers who would ensure even distribution of developed rice seeds to farmers, especially to the most vulnerable of them all.
- ❖ The agricultural census to take place in Ghana is one of the best things to happen to the agricultural sector according to Mr. Ebenezer Appiah, the manager of the Weta Irrigation Scheme. He said there would be accurate data which will put an end to the issue of 'ghost farmers'. "This is a problem, especially in fertilizer distribution", he added. He went ahead to say that indigenous development is what the agricultural sector needs.

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