

The Assessment of Market Participation of Agricultural Product Practices in East & West Gojjam, and Awi Zones

TADESSE ASMARE GEBRIE (MBA)

Department of Management, College of Business and Economics,
Debre Markos University, Debre Markos- Ethiopia

Abstract

Agricultural Market participation means change from subsistence type of production to market oriented with the aim of profit maximization. Market participation is not only the selling of output but it also includes product choice and input use decisions for profit maximization principle. The objective of this study is to assess the practice of market participation of agricultural products in the three zones of Amahara region which is limited in the rural area small holder farmers. The descriptive research was applied and by review of previous empirical studies, research questionnaires were developed for small holder farmers as a means of data collection. To address the objective of the study, 359 questionnaires were prepared and distributed to actual respondents. The result of the study was analysis through descriptive methods (tabulation, frequency and percentage). Therefore, most of the respondents were belongs to under the age of 36-50 and 295 respondents were male participants, 334(93%) of respondents were married, 353(98.5%) of the respondents were orthodox followers, 208(57.9%) of the respondents were illiterate, 124(34.5%) of the respondents have 6-7 family members, 161(26.1%) of the respondents have 25-38 years farm experience, 170(47.4%) of the respondents have less than one Hectare of land and majority of the products which is produced in the study areas are teff and maize. Moreover, the Market participation practice in the study areas, 309(86.5%) of the respondents are participated or commercialized & the commercialized product were teff, & average income 8,000-15,000 birr. And also it is triangulated by cross tabulation the Market participation practices. Therefore, the conclusion of these finding suggest in order to make the farmers fully and effectively engaged on market participation, they have got education because they are illiterate and the farmers must be engaged on cash crop which generates cash in short period.

Keywords: Market participation, Market participation practices, Agricultural products, descriptive analysis, East& West, & Awi zone

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1. INTRODUCTION

Economic development itself provides the urge towards more sophisticated and more efficient marketing systems (Dixie, 1989), markets and improved market participation of agricultural product access plays an important role in improving rural incomes of smallholder farmers in sub-Saharan African countries. This has clear implications for agricultural production and the marketing systems that direct production and distribute the output to the points of its consumption.

Market participation means change from subsistence type of production to market oriented with the aim of profit maximization in order to participate the market (Goletti, 2005).

A marketing system or market participation backed by strong, adequate marketing structure is the core content of agricultural marketing. (Rosson, 1974), market infrastructure is important not only for the performance of various marketing functions and expansion of the size of the market but high investment and entrepreneurial skills that are required for creation and managing these infrastructures. The country's strategic plan should encourage private and cooperative investment in the market infrastructure development by undertaking appropriate legal and policy reforms and offering a package of incentives in order to facilitate market participation of agricultural products of small holder farmers.

(Govereh et al., 1999), define as agricultural market participation aims to bring about a shift from production for solely domestic consumption to production dominantly market-oriented. In line with the above definitions (Sokoni, 2007), market participation of agricultural product is "a process involving the transformation from production for household subsistence to production for the market." According to (Von Braun et al., 1994), market participation of subsistence agriculture takes many forms. Market participation can occur on the output side of production with increased marketed surplus, but it can also occur on the input side with increased use of purchased inputs. Market participation is not restricted to just cash crops but also they produce other products: agricultural market participation means change from subsistence type of production to market oriented with the aim of profit maximization (Goletti, 2005). Market participation is not only the selling of output but it also includes product choice and input use decisions that are based on profit maximization principle (Pingali and Rosegrant, 1995).

2. STATEMENT OF THE PROBLEM

Developing countries' government has promoted market oriented agricultural products through the development of network markets. Most of the Regional Governments & City Administrations have enacted legislations to provide for development of agricultural produce for marketing activities (AGTA, 2009), regulated markets have helped in mitigating the market problems for producer-sellers at the wholesale assembling level. Rural periodic markets in general, and tribal markets in particular, remained out of its development of market participation due to marketing problems (Dixie, 1989). As a result, restrictive and regulated markets, does not help direct and free marketing, organized retailing, and smooth raw material supplies to agro-processing, competitive trading, information exchange, adoption of innovative marketing systems and technologies.

Generally, the rural smallholder farmers do not have appropriate marketing system to participate in the agricultural product market and their Market participation rate remains low (Jayne et al., 2005), According to (Jayne et al., 2005), only 2% of small holder farmers sold approximately 50% of their maize product in Zambia, Mozambique and Kenya. Similarly (Ellis, 2000), found that African farmers were able to sell in the market only a smaller share of their production. The study conducted by (Gebreslassie et al., 2015) indicated that the average crop Market participation index in Tigray regional State was about 19% of the total produce in the study area which shows the livelihood of the smallholder farm households is almost subsistence oriented that means their market participation was low. In the study area, people depend on agriculture, trade and public service for their livelihoods. According to CSA (2007) report, approximately 90% of the farmers are smallholders having farm size less than 2 hectare and they did not actively participated because they produce agricultural product for home purposes. They use traditional means of production and cultivation which not only increases the cost but also reduce market participation hence reduce profitability.

Moreover, the crop market participation index in Ethiopia for cereals was lower than that of pulses and vegetable and fruits production, this implying that in the dry land areas of Ethiopia, cereal production is more of subsistence nature than pulses and horticultural crops.

Different strategies have been made to enhance the productivity of farms to improve market participation though creating a linkage between farmers and market-based on advanced technology (ATA, 2015). This research study area is fertile for producing major agricultural products as compared to its near neighboring zones and is comfortable for irrigated agriculture. The major crops in the study area include; teff, wheat, maize, barley, bean and variety of vegetables (CSA, 2007). According to CSA (2007) report, approximately 90% of the farmers are smallholders having farm size less than 2 hectare. In rural areas, farmers are lacking sufficient means to overcome the costs of entering the market due to high transaction costs, Poor infrastructure, lack of access to market information and They have used traditional means of production and cultivation which not only increases the cost but also reduce Market participation hence reduce profitability. The involvement of small farmers into markets can contribute to higher productivity and income growth which, in turn, can enhance food security, poverty reduction efforts, and overall economic growth. Therefore, the main aim of this study is to assess the market participation of agricultural product practices in East & West Gojjam, and Awi Zones

3. Objective of the study

The objective of this study is to assess market participation of agricultural products practices of small holder farmers.

4. RESEARCH METHODOLOGY

Study Design: This study was used a cross sectional research design. Moreover, this research used descriptive statistics with an intention to assess the practice of market participation of small holder farmers on their agricultural products in east & west Gojjam, and awi zones. Both qualitative and quantitative types as well as primary and secondary data are used.

Sample Design, total population and Sample size Determination: In this research Cluster sampling technique was used to reduce the sampling bias and error in taking a sample. If the total area of interest happens to be a big one, a convenient way in which a sample can be taken is to divide the area into a number of smaller non-overlapping areas and then to randomly select a number of these smaller areas (usually called clusters), with the ultimate sample consisting of all (or samples of) units in these small areas or clusters (Kothari, 2004). In the study area there are around 1,265 kebelles. The sample size was calculated by the scientific formula given by

Yamane (1967) that is; $n = \frac{N}{1+N(e)^2}$ where, e-level of precision, n – sample size and N – target population. In this study, the target population was 1,265 kebelles, because of homogeneity the level of precision was assumed to be 20% and the sample kebelles were 25 by using the above formula, given by Yamane.

The sample kebelles from each zone was taken in proportion to the number of woredas in each zone. East Gojjam zone = $(20/50)*25 = 11$; West Gojjam zone = $(19/50)*25 = 9$ and Awi zone = $(11/50)*25 = 5$ kebelles. The sample kebelles should also be taken from a specified woreda. The 8 woredas were selected through lottery

methods. The researchers have taken 4 woredas (Gozamen, Dejen Zuria, Enemay and Hulet ejuansie in east gojjam) 3 woredas (yilmanadensa, Burie Zuria and Wenberma in West Gojjam) and 1 woredas (Ankesha Guagusa in Awi zone). On average in each kebele there are 5,000 small holder farmers. So, in 25 kebele's, there are around 125,000 small holder farmers. The number of small holder farmers to be contacted to be equal to:

$$n = \frac{N}{1+N(e)^2} n = \frac{125,000}{1+125,000(0.05)^2} ; n = \frac{125,000}{313.5} = 398.72 = 399$$

Data Collection Instruments: In order to gather the relevant data which can meet the desired objective of this research, structured questionnaires (Both close end and open end questions) were prepared and administered by the data enumerators on small holder farmers. The relevant data were analysis through descriptive methods (tabulation, frequencies and percentage)

5. RESULT AND DISCUSSION

Under this section, market participation of agricultural products of small holder farmers was discussed. Among the total sample size (399) determined for the above given formula, 359 samples were used for the discussion. The remaining 10% did not give a response.

5.1 Discussion on Demographic profile of the respondents

Table 1: Demographic Profile of Respondents (n=359)

Variables category	Category	Frequency	Percent
Age	20-35	92	26
	36-50	158	44
	51-65	81	22
	>65	28	8
Gender	Male	295	82.5%
	Female	64	17.5%
Marital status	Married	334	93%
	Single	22	6.2%
	Other	3	0.8%
Religion	Orthodox	353	98.3%
	Muslim	6	1.7%
	Protestant	0	0
Education	Illiterate	208	57.9%
	Primary school complete	93	25.9%
	Secondary school complete	18	5%
	Tertiary	1	0.3%
	Informal education	39	10.9%
Family size	<=4	123	34.3%
	5-5	69	19.2%
	6-7	124	34.5%
	>7	43	12%

Source: primary survey output, 2019

The demographic distribution of the respondents of small holder farmers in the study areas, 92(26%) respondents lies between the age of 20-35, 158(44%) respondents lies between the age of 26-50, 81(22%) respondents lies between the age of 51-65 and the remaining 28(8%) respondents were greater than 65 years. 295(82.5%) respondents were males and 64(17.5%) were females. 334(93%) respondents were married, 22(6.2%) respondents were single and others 3(.8%) were neither of the two. 355(98.3%) respondents were orthodox followers, 6(1.7%) respondents were Muslim followers. 208(57.9%) respondents were illiterates, 93(25.9%) respondents were completed primary education, 18(5%) respondents were completed secondary education, 1(0.3%) were completed tertiary education and the remaining 39(10.9%) were educated for informal education. 123(34.3%) respondents, they have less than 4 families, 69(19.2%) respondents, they have 5-5 families, 124(34.5%) were also have 6-7 families and the remaining 43(12%) respondents have greater than 7 families. from this most of the small holder framers were not educated

5.2 Farm Practices

The farm practices for this study incorporated farm experiences, farm size, types of products they have produced, numbers of quintals to produced and land owners by the small holder farmers for market participating.

Table 2: Farm practices

Variable	Categories	Frequency	Percents
Farm experience	<=15	90	25.1%
	15.01-25	90	25.1%
	25.01-38	96	26.7%
	>38	83	23.1%
Farm size	<=1	170	47.4%
	1.01-1.25	17	4.7%
	1.26-2	110	30.6%
	>2	62	17.3%
Types of products to produced	Teff	322	22.2%
	Maize	282	19.5%
	Wheat	201	13.9%
	Barely	151	10.4%
	Potato	151	10.4%
	Bean	123	8.5%
	Others	218	15.1%
Average quintals to produce	<=10	100	27.9
	11-17	86	24
	18-25	86	24
	>26	87	24.1

Source: primary survey output, 2019

the farm practices of the small holder farmers in agricultural products to participate in the market their products practices are 90 (25.1%) respondents have 0-15 year farm experience, 90(25.1) respondents have 15.01-25 year farm experience, 96(26.7) respondents have 25.01-38 year farm experience and the remaining 83(23.1%) respondents have more than 38 year farm experience. on the other hand 170(47.4%) respondents have less than one hectare of land, 17(4.7%) respondents have 1.01-1.25 hectares of land to produce agricultural products for market participation ,110(30.6%) of respondents have 1.26-2 hectares of land and the remaining 62(17.3%) of respondents have greater than 2 hectares of land. therefore the majorities of the farmers have less than 1 hectare. More over 322(22.2%), respondents have produced teff, 282(19.5%) of respondents have produced maize, 201(13.9%) of respondents have produced wheat, 151(10.4%) of respondents produced barely, 151(10.4%) of respondents have produced potato, 123(8.5%) of respondents have produced bean and others 218(15.1%) of respondents have produced others agricultural products. whereas 100(27.9%) respondents have produced 0-10 quintals per year, 86(24%) respondents have produced 11-17 quintals per year, 86(24%) respondents have produced 18-26 quintals per year and the remaining 87(24.1%), of farmers are produced greater than 26 quintals per year. There for more of a small holder farmer, they have less than 1 hectare of land and they produced teff, and they have less than 10 quintals.

5.3 Market participation Practices of Small Holder Farmers

Market participation means the acts of involves of agricultural products in market commercializing grain needs special attention due to the fact that grain (example wheat, maize, teff etc for Ethiopia) is a staple crop in most sub-Sahara African countries. In this study, it includes types of products to be commercialized, average incomes, average distance to the market, off farm incomes and price of products were incorporated in Market participation practices

Table 3: Market participation practices

Variable	Category	Frequency	Percentage
Market participation status	Participants	309	86.5
	Non-participants	50	13.9
Types of products which is commercialized by the farmers	Teff	235	28.8
	Maize	128	15.7
	Wheat	130	15.9
	Barely	81	9.9
	Potato	70	8.6
	Bean	60	7.4
	Others	112	20.9
Average income	<=1501-4000	71	19.8
	4001-8000	70	19.5
	8001-15000	86	24
	>15000	57	15.9
Average distance	<=6	153	42.6
	6.01-12	105	29.2
	>12	101	28.1
Off farm income	0**	250	69.6
	159-1500	31	8.6
	1501-5000	28	7.8
	>5000	50	13.9

Source: primary survey output, 2019

From the above table, among the total numbers of respondents 309(86.5%) respondents were participated in market where as 50(13.9%) respondents were not participated in market. those who participated by the farmers as follows Teff were 235(28.8%), Maize 128(15.7%), Wheat 130(15.5%), Barely 81(9.9%), Potato 70(8.6%), Bean 60(7.4%) and others were 112(20.9%). On the other hand 71(19.8%) respondents annual average income were 1501-4000 birr, 70(19.5 %) respondents annual average income were 4001-8000 birr, 86(24%) respondents annual average income 8001- 1500 birr and the remaining 57(15.9%) respondents annual income were greater than 15,000 birr. Therefore, the half of the respondents, their annual average income is below 8000 annually. Moreover, average distance to the market, 153(42.6%) respondents travel to market less than 6 km (less than one hr), 105 (29.2%) respondents travel to the market between 6.01 to 12 km (1-2 hrs) and the remaining 101(28.1%), they travel to the market greater than 12 km (greater than 2 hrs). Finally the farm practices of the respondents, 250(69.5%) respondents they have 0(zero) off farm income, 31(8.6%) respondents have 159 to 1500 birr annually, 28(7.8%) of the respondents also generated 1,501 to 5,000 birr annually and the remaining 50 (13.9%) out of 359 respondents, they were generated greater than 5,000 birr annually, this implies that the majorities of small holder farmers, they could not have additional income, they simply engaged only agricultural products.

5.4 Cross Tabulation of the market participation and related variables

Table 4: Market Participation*Education cross tabulation

		Education					Total
		Illiterate	Primary school completed	Secondary school complete	Tertiary	Informal education	
Market participation	Not participated	34	13	2	0	1	50
	Participated	174	80	16	1	38	309
Total		208	93	18	1	39	359

Source: primary survey output, 2019

Table 4 indicated that market participation vs. educational cross tabs. Among those market participants 174(56.3%) were illiterate, 80(26%) have completed primary school, 16(5.2%), have completed secondary education, 1(0.32%) has completed tertiary education and the remaining 38(12%) have completed informal education. The majority of the market participants 34(68%) were illiterates. Thus illiterate's small holder farmers were more participatory on Market participation.

Table 5: Market participation * Family Size cross tabulation

		Family Size				Total
		<= 4.00	5.00 - 5.00	6.00 - 7.00	8.00+	
Market participation	not participated	18	12	13	7	50
	Participated	105	57	111	36	309
Total		123	69	124	43	359

Source: primary survey output, 2019

Table 5 indicated that, the total numbers of market participants for selling of the agricultural products 105(34%) respondents have 4 families, 57(18%) respondents have 5-5 families, 111(36%) respondents have 6-7 families and the remaining 36 (12%) respondents have greater than 8 families in the household. Therefore, those who have less than four and 6-7 families, they are more participated for market to commercialized their products.

Table 6: Market participation * Farm experience cross tabulation

		Farm experience				Total
		<= 15.00	15.01 - 25.00	25.01 - 38.00	38.01+	
Market participation	not participated	14	10	14	12	50
	Participated	76	80	82	71	309
Total		90	90	96	83	359

Source: primary survey output, 2019

Table 6 indicated that market participation vs. farm experience, those who participants for commercializing of their products with farm experience; they have a similar percentage in different year of farm experience.

Table 7: Market participation * Farm Size cross tabulation

		Farm size				Total
		<= 1.00	1.01 - 1.25	1.26 - 2.00	2.01+	
Market participation	not participated	36	3	9	2	50
	Participated	134	14	101	60	309
Total		170	17	110	62	359

Source: primary survey output, 2019

Table 7, has indicated that 134 (43.3%) respondents who participated in the market, they have less than one hectare land for producing agricultural products and 101(35.6%) respondents who participated, they have less than 1.26-2 hectares, 14(4.6%), they have 1.01-1.25 hectares of farm lands and 60(19.4%), they have greater than 2.01 hectares of farm lands to produce agricultural products. Therefore, the crosstab indicated that, farmers who have less than one hectare, they are more participated on market participation.

Table 8: Market participation * Land owner cross tabulation

		Landowner			Total
		Owned	Rented	Both	
Market participation	Not participated	28	5	17	50
	Participated	164	21	124	309
Total		192	26	141	359

Source: primary survey output, 2019

the above table 8 has shown the relationship between market participation and land owners, thus 164(53%) respondents, who participated for commercialization, they had their own farm lands and 124(40%) respondents who participants in the market, they are used both owned and rented land to produce agricultural products to commercialized, 21 (7%) respondents who participated in the market, they did not have their own farm lands i.e. They are used by renting. Therefore, Those farmers who have their own land, they are participated for marketing.

5.5 Descriptive statistics analysis for factors affecting market participation

The following factors are the major determinants that increase or decrease market participation practices of small holder farmers and it shows that the respondents of small holder's farmers related to factors.

Table 9: Descriptive Statistics for Factors affecting market participation

s/no	Variables	Category	Response	Frequency	Percentage
11	Training	Do you get training about Market participation?	Yes	185	51.5
			No	174	48.5
22	Off- farm income	Do you have off-farm income?	Yes	106	29.5
			No	253	70.5
33	Access to Credit	Do you have access to credit services?	Yes	199	55.4
			No	160	44.6
44	Access to Extension services	Do you get extension services?	Yes	334	93
			No	25	7
55	Access to market information	Do you have access to market information?	Yes	167	46.5
			No	192	53.5
6 66	Access to transport	Do you have access to transport to the market?	Yes	173	48.2
			No	186	51.8
77	Access to irrigation	Do you use irrigation to increase your productivity?	Yes	119	33.1
			No	240	66.9
88	Access to private transport	Do you have your own means of transportation?	Yes	31	8.6
			No	328	91.5
99	Price volatility	Do you face price fluctuation problems?	Yes	344	95.8
			No	15	4.2
110	Media ownership(radio and TV)	Do you have your own media (Radio and TV.)?	Yes	160	44.6
			No	199	55.4
111	Mobile	Do you have your own mobile phone	Yes	225	62.7
			No	134	37.3

Source: primary survey output, 2019

The above table 9 has shown that descriptive statistics for factors affecting market participation, therefore, among a given respondents 185(51.5%) were replied, they have got training where as 174(48.5%) were replied that, they did not got training, 106(29. %) of respondents, they have off farm/additional income but 253(70.5%) of the respondents , they did not have off farm income or additional income, 199(55.4%) of the respondents, they can got access to credit for practicing Market participation where as 160(44.6%) of the respondents , they could not got access to credit,334(93%) out of 359 respondents they have an access to use extension services in order to increase productivities for enhancing productivities where as 25(7%) were, they did not got access to use extension services, 167(46.5%) respondents, they were replied there is accessibility of market information where as 192(53.5%) respondents, there were replied that, there is no accessibility of market information, 173(48.2%) of respondents replied that there is accessibility of transportation where as 186(51.8%) of respondents replied that there is no accessibility of transport,119(33.1%) of the respondents were replied that there is an access to irrigation for increasing productivities to lead Market participation where as 240(66.9%) of respondents were replied that there is no accessibility of irrigation,31(8.6%) of respondents were replied that, they have their own transport where as 328(91.5%) of respondents were replied that, they did not have their own transport, 344(95.8%) of respondents were replied that, they faced a problem of price fluctuation where as 15(4.2%) of respondents were not faced a problem s of price fluctuation, 225(62.7) of respondents were replied, they have their own media like mobile for communication to create market chain with retailers for market participation where as 134(37.3%) of the respondents, they did not have their own medias. Therefore, the above factors which affect market participations s well as productivities of small holder farmers in the study areas.

6. CONCLUSION AND RECOMMENDATION

The purpose of this study is to assess market participation of agricultural products practices in East and West Gojjam, and Awi Zones, by addressing 359 questionnaires for respondents to market participants of agricultural products practices i.e. to determine whether to participate or not for market participation agricultural products.

Therefore, based on the above finding, the researcher was concluded the following point. 158/44% respondents were belongs to under the age of 36-50, 295(82.5%) respondents were male participants, 334(93%) of respondents were married, 353(98.5%) of respondents were orthodox followers, 208(57.9%) of respondents were illiterate, 124(34.5%) of the respondents have 6-7 family members, 161(26.1%) of the respondents have 25-38 years farm experience, 170(47.4%) of respondents have less than one Hectare of land and majority of the products which is produced in the study areas were Teff and maize, 309(86.5%) of the respondents were participated or commercialized their product and the products which commercialized was teff, the average income earned which is generated 8,000-15,000 birr.

The majorities of the farmers were commercialized teff and maize in the study areas, therefore, farmers and governments, doing together to shift Market participation of teff and maize to other agricultural products. And they were not educated as well as they have less than one hectare of land. Moreover, Majority of farmers who participated in commercialization were males, thus kebele agricultural experts providing training specially those did not educated to increase the practices of market participation of females and addressing awareness to produce more cash crop products in addition to teff and maize for enhancing the market participation to commercialize their products in order to increase the living standards of small holder farmers.

The findings of this study have important practical implications for small holder farmers as well as for the government's in the market participation practices. Therefore, in order to make the farmers fully and effectively engaged on market participation, the framers must be engaged on cash crop which generates cash in short period.

It is suggested that the identified problems were addressed through collaborative and deliberate action of both farmers and the government to bring sustainable solution to enhance Market participation practices of small holder farmer's in the study areas.

In addition, different workshops and trips should be organized for small holder farmers to share experience about market participation practices of agricultural products with other place.

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