

The role of contract farming in the socio-economic development of maize cooperatives a case of farm to the market alliance project in Nyagatare District

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ABSTRACT

In considering contract farming as useful tool to accelerate rural development in general and grow maize in particular empirical results from the field is needed. The study entitled “The role of contract farming in the socio-economic development of maize cooperatives a case of farm to the market alliance project in Nyagatare District” was guided by the following objectives: to analyse the level of contract farming between maize cooperatives and farm to the market alliance project in Nyagatare District, to assess the level of socio-economic development of maize cooperative farmers contracting with in Nyagatare District, to find out the relationship between contract farming and socio-economic development of maize cooperative farmers. The population of the study is 1081 members /farmers of maize cooperative in Nyagatare District. The sample size of the study is 292 farmers’ beneficiaries of FtMA project in Nyagatare District. The study used stratified sampling technique and purposive sampling technique. Questionnaire, interview FGD and documentary review were used to collect data; the study used prospective approach, descriptive statistics and inferential statistics including multiple linear regression as method of data analysis. The findings revealed that training services have significance positive effect on socio-economic development of beneficiaries of FtMA project as indicated by $\beta_1= 0.309$, p-value=0.000<0.05. This shows that taking all other independent variables at zero, a unit increase in training services will lead to increase in socio-economic development of beneficiaries of FtMA project by 0.309 units. The findings revealed that agriculture production have significance positive effect on Socio-economic development of beneficiaries of FtMA project as indicated by $\beta_2=$

0.368, p-value=0.003<0.05. This shows that taking all other independent variables at zero, a unit increase in agriculture input services will lead to increase in socio-economic development of beneficiaries of FtMA project by 0.368 units. The findings revealed that access to financial services have significance positive effect on Socio-economic development of beneficiaries of FtMA project as indicated by $\beta_3= 0.137$, p-value=0.000<0.05, and the implication is that taking all other independent variable at zero, a unit increase in access to financial services will lead to increase in Socio-economic development of beneficiaries of FtMA project by 0.137 units. The findings revealed that markets linkages have significance positive effect on Socio-economic development of beneficiaries of FtMA project as indicated by $\beta_4= 0.313$, p-value=0.000<0.05. The implication is that taking all other independent variables at zero, a unit increase in markets linkages will lead to increase in socio-economic development of beneficiaries of FtMA project by 0.313 units. The findings revealed that in five years, the quantity of maize production was in average mean of 90.270. The quantity of maize sold to the FtMA buyers was in average mean of 83.5431tons. Quantity of maize production reserved for meals with a help with FtMA was in average of mean of 1.25739 tones. The income was in average mean of 63327.493 and saving in was in average mean of 835.4313 in five years. In conclusion, contract farming between FtMA project and maize cooperative members in Nyagatare District has contributed to socio-economic development of farmers by increasing income and savings in five years. Therefore, the researcher suggested that Farmer should attain trainings offered by FtMA project in order to increase their agriculture production and FtMA

project should plan of training of farmers about post harvest and production cost issues.

Key words: Contract, contract farming, socio-economic development, cooperatives, farmers.

I. INTRODUCTION

Contract farming (CF) is a major agrarian institution that has been widely applied in developed and developing countries at different times for improved coordination and performance of the agricultural market and for addressing different types of market failures in general (Eaton and Shepherd, 2019).

Farmers have long used formal contracts for procuring inputs and selling their output. The increased reliance on contract farming happens not only in the U.S., but also in the EU and elsewhere. The percentages of the total value of the U.S. agricultural products covered by marketing contracts and production contracts are 28%, 36% and 38% in 1991, 2004 and 2020 respectively (Macdonald and Korb, 2017).

Rwanda has two types of contract farming as such informal model and intermediary model, respectively, where smaller firms or traders enter into annual agreements, often on a verbal basis, with a limited number of farmers, frequently for fruit and vegetables that require minimal processing, and where firm sub-contacts interaction with farmers to an intermediary, such as farming committee, cooperatives of farmers or a trader. The first model is more popular for farmers surrounding the urban area. The second model is likely observed in seed production for example maize crops (RADA, 2017).

Even though many studies identify positive effects of contract farming on the socio-economic development of farmers such who identified income and productivity gains from contract farming in Africa. It is also argued that contract farming can lead to risk-sharing between the producer and the agribusiness firm hence it can reduce price and income volatility (Key & Runsten, 2019).

Because of lack of access to agricultural inputs and agricultural credit, maize yields have remained low and mainly in cases there are no production contracts between the processing unit and producers MINAGRI (2020) and Michael (2020). Even though contracts are often seen as effective ways to improve and increase maize yields, such contracts have usually led to unsatisfactory results in terms of income to the farmer on one hand and stable supply to the processors (2017).

Ragasa, Lambrecht, and Kufoalor (2017) showed that CF in the Upper West region of Ghana contributed to technology adoption and productivity growth, but did not result in high profitability because production cost was too high relative to non-contract farmers in their maize contract farming. Based on the different scholars, findings and given the achievements and increased role of contracting farming on socio-economic development of maize farmers grouped in cooperative especially in Nyagatare District, there are still challenges in achievement that need to be investigated. Therefore, this study seeks to fill gap by investigating the role of contract farming on socio-economic development of maize farmers.

Research objectives

The study was guided by the following specific objectives:

- i. To analyse the types and the level of contract farming between maize cooperatives and farm to the market alliance project in Nyagatare District;
- ii. To assess the behavior and level of socio-economic development of maize cooperative farmers and their contracting within Nyagatare District;
- iii. To find out the relationship between contract farming and socio-economic development of maize cooperative farmers In Nyagatare District.

II. MATERIAL AND METHODS

2.1. Description of Nyagatare District

Nyagatare is the largest and second most populous District in Rwanda. Located in Eastern Province, Rwanda, Nyagatare occupies the Northeastern extremity of Rwanda. Its capital is Nyagatare City, the former capital of the now defunct Umutara Province. Nyagatare District borders Uganda in the North, Tanzania in the East, Gatsibo District of the (Eastern Province) in the South, and Gicumbi District of the Northern Province in the West. Nyagatare has an area of 1741 km², what makes it the largest district in Rwanda. With a population of 466,944 in 2014, Nyagatare is the second most populated District of Rwanda only after Gasabo District of Kigali City with 530,907 inhabitants. This is an 83% increase from 2019 when the population was only 255,104. This sharp rise in the population is due to the major movement of the population from other parts of the country in search of land. Nyagatare District is divided into 14 Sectors: Gatunda, Kiyombe, Karama, Karangazi, Katabagemu, Matimba, Mimuli, Mukama, Musheli, Nyagatare, Rukomo, Rwempasha, Rwimiyaga and Tabagwe (Nyagatare District report, 2019). Nyagatare

district has 23 maize cooperative contracted with FtMA Project

2.2. Data collection instruments

Questionnaire: The researcher used questionnaire to collect data regarding contract farming and on farmers' socio-economic development in Nyagatare District. The questionnaires will be self-administered and each respondent received the same set of questions in exactly the same way. The instrument contains questions that facilitated collection of data relative to objectives of the study. Regarding the study objectives (or variables), the study used 5-point like scale to measure on how the perception of farmers on activities provided by FtMA project and the level of farmers' socio-economic development. This ranged from strongly agree to strongly disagree (strongly agree, agree, not sure, disagree, and strongly disagree). The researcher initially contacted the respondents, ranging from an initial letter of introduction giving notice of the study and handing paper questionnaires to the respondents and also the study used telephone contact.

Focus Group Discussions (FGDs): Focus groups also created a process of sharing and comparing among the participants. In the study focus group discussion was made by with presidents of maize cooperative which the interview contains questions needed to fill the gaps that could not be filled by the questionnaires.

Interview guide: The researcher carried out a direct conversation with manager of FtMA project. The interview contains questions needed to fill the gaps that could not be filled by the questionnaires. Appointments for interview with manager was not be made in advance, but rather depend on the availability of ample time interviewees could get within their tight schedules at work.

Documentation review: In this study maize cooperatives in Nyagatare District were approached to consult the classified cooperative documents related to the cooperative maize production and other relevant information relating to FtMA annual reports.

2.3. Data analysis

Descriptive statistics: Descriptive statistics was used to describe the basic features of the data in the study. It involves the use of percentages, frequencies, mean and standard deviation. Descriptive statistics was used to describe the views of respondents on market linkages training services, improved agriculture production, financial services and saving mobilization and socio-

economic development of maize farmers in Nyagatare District.

Correlation analysis: Correlation analysis was developed to measure the strength and closeness of the relationship between each independent variable to dependent variable which is the relationship between FtMA project intervention and socio-economic development of maize farmers in Nyagatare District.

Multiple regression analysis: Based on other models that were used to test the impact of contract farming and socio-economic development of farmers in Nyagatare District, the present study adopted the following model: The multiple regression models was as laid below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where: Y = Socio-economic development of farmers

{ β_i ; $i=1,2,3,4$ } = The coefficients representing the various independent variables. B_0 = the Y intercept
{ X_i ; $i=1,2,3$ and 4} = Values of the various independent (covariates) variables.

e = the error term which is assumed to be normally distributed with mean zero and constant variance

X_1 = Training, X_2 = Improved agriculture production, X_3 = financial services and X_4 = Market linkages

Prospective approach: The researcher computed the trends of maize production and its effect on socio-economic development. The trends calculated was: quantity of maize production among members of cooperative, price of maize production sold among members of cooperative, quantity of maize production reserve for meals among members of cooperative, annually income from agriculture production among members of cooperative and annually savings from agriculture production among members of cooperative.

III. RESEARCH RESULTS

3.1. Descriptive results

3.1.1. Training provided by FtMA project

The study sought to assess the views of respondents on training provided by FtMA project. To achieve this, the respondents were asked to give their opinion on their level of agreement or disagreement with the statements in a Likert scale of 1-5 where; 1 = strongly disagree, 2 = disagree, 3 = Not Sure, 4 = Agree, 5 = strongly agree. The findings were presented in Table1.

Table 1: Training provided by FtMA project

	SD		D		N		A		SA		Mean	St. Dev
	fi	%	fi	%	fi	%	fi	%	fi	%		
FtMA provides training in doing business to their members	11	3.8	16	5.5	0	0.0	65	22.3	200	68.5	4.46	1.02
FtMA project provides technical training for maize growers to maize cooperatives	3	1.0	2	0.7	2	0.7	68	23.3	217	74.3	4.69	.63
FtMA project offers guidance and advice to their members in every meeting of cooperatives	11	3.8	2	0.7	8	2.7	54	18.5	217	74.3	4.59	.89
FtMA project providing training in improving agriculture production	15	5.1	15	5.1	8	2.7	86	29.5	168	57.5	4.29	1.09
FtMA project provides trainings on entrepreneurship skills	0	0.0	25	8.6	12	4.1	17	5.8	238	81.5	4.60	.92
Overall mean											4.52	0.91

Source: Primary data, 2022

The findings from the table 1 indicated that the overall view of respondents on training provided by FtMA project was high with mean score of 4.52 and the standard deviation of 0.91 which implies that the fact appear more and heterogeneity response.

3.2. Food security among beneficiaries of FtMA project

The research sought to assess the perception of respondents on food security among

beneficiaries of FtMA project. To achieve this, the respondents were asked to give their opinion on their level of agreement or disagreement with the statements in a Likert scale of 1-5 where; 1 = strongly disagree, 2= disagree, 3 = Not Sure, 4 = Agree, 5 = strongly agree. The findings were presented in Table1.

Table 2: Food security among beneficiaries of FtMA project

	SD		D		N		A		SA		Mean	St. Dev
	fi	%	fi	%	fi	%	fi	%	fi	%		
I able to afford nutrition my family at least three meals per day	3	1.0	23	7.9	41	14.0	18	6.2	207	70.9	4.38	1.06
I am able to eat balanced diet with my family	6	2.1	37	12.7	12	4.1	56	19.2	181	62.0	4.26	1.13
Overall mean											4.32	1.09

Source: Primary data, 2022

About food security, the findings show that the overall view of respondents on food security was at very high mean 4.32 which implies that there is strong evidence of existing fact that

food security at very high extent and standard deviation of 1.09 which implies that there are heterogeneity responses

Table 3: Quantity of maize sold to the FtMA buyers

	Name of cooperative			
	Max in MT	Min in MT	Mean in MT	St. Dev
CAMARU	56.30	32.40	44.24	11.40
COAMSRU	100.20	10.50	43.18	42.10
COAMN	47.60	.00	22.94	19.37
CODMAR	70.00	33.00	49.60	14.50
KOTEBARU	145.90	54.70	92.38	36.95
RUDEMACO	166.90	13.20	99.52	70.65
KOHIKA	872.50	180.60	484.38	285.52
KOHUMUKA	125.00	62.80	100.56	23.28
ABASHINGASUKA	62.00	9.26	33.45	21.90
CODEMATA	308.10	2.80	87.98	124.51
KOABITADU	54.00	3.30	29.66	22.83
CODAR	73.50	1.20	18.04	31.08
COOPAMA	200.60	51.90	134.60	68.17
AMIZERO IWACU	41.60	9.00	26.66	14.21
TWUNGUBUMWE IWACU	107.90	10.90	50.14	39.39
CODEAMGA	13.80	4.00	9.68	4.76
CODPCUM	573.10	172.00	358.60	143.69
DUKUNDISUKA	13.80	1.10	7.40	5.05
CODEGRIFOGA	74.90	9.40	37.30	23.82
RAMBA GATUNDA	85.00	28.50	59.16	26.03
KOAIGA	126.60	12.70	63.72	42.84
ABADAHIGWA	54.30	7.90	33.12	20.82
GACUNDEZI				
BANDEBEREHO	49.60	15.90	35.18	13.40

Source: FtMA project report, 2022

With respect to quantity of maize sold to the FtMA buyers in five years, the findings in table 3 revealed that KOHIKA was ranked the first among 23 maize cooperatives contracted with FtMA project with the average mean of 484.38t and standard deviation of 285.52t with maximum of quantity of 872t and minimum of 180.60t. The second cooperative which has higher quantity of maize production is CODPCUM with average mean of 358.60t and standard deviation of 143.69 and maximum of 573t and minimum of 172t. The two last cooperative which have less maize production comparing with other cooperatives are CODEAMANGA with average mean of 9.68t and standard deviation of 4.76t with maximum of 13.80t and minimum of 4t in five years. The last is KUNDISUKA with the average mean of 7.40t and standard deviation of 5.05t and maximum of 13.80 t and minimum of 1.10 tons in five years

3.3. Multiple regression analysis

In addition, the researcher conducted a multiple regression analysis so as to test the effect

of contract farming such as training services, agriculture input production, access to financial services and markets linkages as independent variable and socio-economic development of beneficiaries of FtMA project. The researcher applied the statistical package for social sciences (SPSS V 23.0) to code, enter and compute the measurements of the multiple regressions for the study. Regression model is used here to describe how the mean of the dependent variable changes with changing conditions. The study performed model summary, ANOVA and multiple regression models to estimate the relationships between the study variables. Further, the study ran the procedure of obtaining the regression coefficients, and the results. In this study the unstandardized coefficients and standardized coefficients are given for the multiple regression equations.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712 ^a	.507	.500	.22625

a. Predictors: (Constant), Markets linkages, Access to financial services, agriculture input, Training services

The four independent variables (training services, agriculture input production, access to financial services and markets linkages) contribute to 0.507(50.7%) on socio-economic development of beneficiaries of FtMA project as represented by the adjusted R². Consequently, the other factors not

considered in this research contribute to 50% on socio-economic development of beneficiaries of FtMA project. The coefficient of correlation value of 0.712 indicates that there was a positive strong correlation between independent and dependent variables.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.086	4	3.772	73.96	.000 ^b
	Residual	14.692	287	.051		
	Total	29.778	291			

a. Dependent Variable: Socio-economic development of beneficiaries of FtMA project

b. Predictors: (Constant), Markets linkages, Access to financial services, agriculture input, Training services

Further, the analysis of variance was used to examine whether the regression model was a good fit for the data. It also gives the F-test statistics; the linear regression's F-test has the null hypothesis that there is no linear relationship between the two variables. The F-critical (4, 287) was 2.42 while the F-calculated was 73.96 as shown in Table 5. This shows that F-calculated was greater than the F-critical and hence linear relationship between the contract farming and socio-economic development of beneficiaries of FtMA project. In addition, the p-value was 0.000,

which was less than the significance level (0.05). Therefore, the model can be considered to be a good fit for the data and hence it is appropriate in predicting the influence of the four independent variables (contract farming) on the dependent variable (socio-economic development of beneficiaries of FtMA project). The findings indicated that the variables: training services, agriculture input production, access to financial services and markets linkages are good predictors of socio-economic development of beneficiaries of FtMA project.

Table 6: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	1.162	.199		5.840	.000
	Training services	.309	.041	.406	7.459	.000
	Agriculture production	.368	.040	.037	.702	.003
	Access to financial services	.137	.030	.207	4.538	.000
	Markets linkages	.313	.030	.449	10.460	.000

a. Dependent Variable: Socio-economic development of beneficiaries of FtMA project

As per the SPSS generated table 4.13, the equation $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$ becomes:
 $Y = 1.162 + 0.309X_1 + 0.028X_2 + 0.137X_3 + 0.313X_4$
 Using the regression equation above and holding all FtMA activities constant (training services,

agriculture input production, access to financial services and markets linkages) socio-economic development of beneficiaries of FtMA project was 1.162.

The findings in table 6 revealed that training services have significance positive effect on socio-economic development of beneficiaries of FtMA project as indicated by $\beta_1= 0.309$, p-value=0.000<0.05, t= 7.459. This shows that taking all other independent variables at zero, a unit increase in training services will lead to increase in socio-economic development of beneficiaries of FtMA project by 0.309 units.

The findings revealed that agriculture production have significance positive effect on Socio-economic development of beneficiaries of FtMA project as indicated by $\beta_2= 0.368$, p-value=0.003<0.05, t= 0.702. This shows that taking all other independent variables at zero, a unit increase in agriculture input services will lead to increase in socio-economic development of beneficiaries of FtMA project by 0.368 units

The findings revealed that access to financial services have significance positive effect on Socio-economic development of beneficiaries of FtMA project as indicated by $\beta_3= 0.137$, p-value=0.000<0.05, t= 4.538. This shows that taking all other independent variables at zero, a unit increase in access to financial services will lead to increase in Socio-economic development of beneficiaries of FtMA project by 0.137 units.

The findings revealed that markets linkages have significance positive effect on Socio-economic development of beneficiaries of FtMA project as indicated by $\beta_4= 0.313$, p-value=0.000<0.05, t= 10.460. This shows that taking all other independent variables at zero, a unit increase in markets linkages will lead to increase in socio-economic development of beneficiaries of FtMA project by 0.313 units.

IV. DISCUSSION

Based on the Table 4.5, it is obvious that training as an activity of contract farming activities of FtMA project with maize farmers cooperative in Nyagatare District has impacted to socio-economic development of maize farmers in Nyagatare District with mean score of 4.52 and the standard deviation of 0.91 which implies that the fact appear more and heterogeneity response. This is due to the advices and training to the farmers on how to use adequately financial means especially saving and loans from financial institutions. The finding concur with the hypothesis verified where the third hypotheses of the study stated that there is no significant relationship between training and socio-economic development of farmers. The null hypothesis was rejected because regression results 0.309, p=0.000<0.05 which is less than 5% of level of significant, the findings disapproved the

hypothesis since training had a positive and significant relationship with the socio-economic development of farmers.

Base on the Table 4.6, agriculture production activities provided by FtMA project to maize farmers have helped them to increase maize production. The overall view of respondents on improved agriculture production was high with mean score of 4.54 and the standard deviation of 0.87 which implies that the fact appear more and heterogeneity response. The results of the study indicate that the project can use various means to support the small scale dairy farmers and these range from the development of favorable policies, provision of inputs as well as the marketing and sale of the dairy products. As can be seen from these results, the government has been putting measures to ensure that small scale dairy farmers across the country are supported as a way of promoting economic activities in the rural areas with the aim of reducing poverty levels. As noted by Mabiso et al., (2012), the cost of key inputs such as pesticides, fertilizer, drugs and vaccines is high for resource-poor farmers. Most farmers therefore do not use them and thus the need for the agriculture project to come in and give various forms of support such as provision of improved seeds and fertilizer. More so, provision of technical assistance and advisory skills has also been a major task undertaken by FaTM mostly in the agricultural activities to ensure better harvest for consumption and income generation. FaTM supplied also inputs to the rural people in form of fertilizers and seeds to facilitate food security. The finding are in the line with the hypothesis verified where the second hypotheses of the study stated that there is no significant relationship between agriculture production and socio-economic development of farmers. The null hypothesis was rejected because regression results 0.368, p=0.000<0.05 which is less than 5% of level of significant, the findings disapproved the hypothesis since agriculture production had a positive and significant relationship with the socio-economic development of farmers.

The manager of FtMA revealed that in supporting farmers to increase different crop production as source of income. The findings are in the line with Nabahungu (2012) who stated that the good firm-farm relations has a significant role in improving crop productivity in use of motivation of farmers using incentives and farmers' field visit in order to increase the production; security of market and stability of income, those factors led to ensure their food security.

With reference to table 4.8 on financial services provided by FtMA, the findings from the respondents revealed that the overall views on financial services offered by FTMA project was at high extent with very high mean score of 4.48 and standard deviation of 0.95 which implies that there is strong evidence of existing of fact that financial services offered by FTMA project was at very high extent and heterogeneity responses. These findings are in the line with Nzomo and Muturi(2014), found that Agricultural credit has the capacity to enhance the income of farmers who utilize it by more than 100% and this clearly defines the role of credit in the farming sector. Credit not only helps to expand the economies of size but also helps to increase the productivity of farms from the available resources. All the three types of credit i.e. seasonal, development and agribusiness credit complement each other in addressing the value chain. i.e. production ,processing and marketing.

The manager and focus group reported that beneficiaries of FtMA project in Nyagatare District has got various credit/ loan schemes. The scheme provides the following services provides required amount of loan to the clients, provides loan to the clients within a short time, provides loan without collateral but members guarantee, provides the loan to the beneficiaries at low interest rate and provides loans to the clients with flexible repayment schedule depending on one's earnings and especially those loans are for agriculture production especially maize

The third hypotheses of the study stated that there is no significant relationship between financial services and socio-economic development of farmers. The null hypothesis was rejected because regression results 0.137, $p=0.000<0.05$ which is less than 5% of level of significant, the findings disapproved the hypothesis since financial services had a positive and significant relationship with the socio-economic development of farmers.

The finding in Table 4.9 on market linkages offered by FtMA project to maize cooperative,. Farmers accept the contract as it is because they don't have the capacity to reduce the price. However, all those cash crops were for export, where government had interest on them in term of foreign money, reason why farmers were pushed to cultivate them without any information about the market. The findings are in the line with According to Eaton and Shepherd (2018); Contract farming has significant benefits for both the farmers and firms. Inputs and production services are often supplied by the firms; this is usually done on credit through advances from the firms; contract farming often introduces new technology and also

enables farmers to learn new skills; farmers' price risk is often reduced as many contracts specify prices in advance and contract farming can open up new markets which would otherwise be unavailable to small farmers.

The fourth hypotheses of the study stated that there is no significant relationship between market linkages and socio-economic development of farmers. The null hypothesis was rejected because regression results 0.313, $p=0.000<0.05$ which is less than 5% of level of significant, the findings disapproved the hypothesis since market linkages had a positive and significant relationship with the socio-economic development of farmers.

The findings from the interview guide by project manager reported that beneficiaries of FTMA project in Nyagatare District had accessibility of market information include; product prices at national level, quality requirements, the best places and time to sell their products and information about their competitors and potential customers through activities of FtMA project.

The findings from the interview guide by project manager reported that to ensure market participation by small holder farmers it requires that they gain access to reliable and high quality farmer support services such as production inputs, on farm infrastructure, training and extension services. With regard to the question about marketing, the project manager indicated that they adopt multiple medium for such an advertisement. This mainly included staff's interaction with the community mainly through field visits, FM radio and sometimes face to face meeting.

At the other hand, it is difficult to maintain a good relation between them because cooperatives and farmers also may have opposite interest when farmers perceive crop prices as too low. The respondents stated "FtMA project has more advantages than other contract where regularity of agricultural product supplies to the firm is ensured, since contracts specify quality attributes and since most also allow control of farming technology processes, firms are in a better position to meet consumer requirements and mandatory quality and safety standards and access to land is facilitated; input costs per unit are reduced and access to agricultural credit and eventual financial incentives and subsidies is facilitated". The findings revealed that socio-economic development of farmers has been improved by FtMA project contract farming in terms of education facilities, health care, food security and income generating activities and increase saving. FtMA project with its initiative of

contracting with maize cooperative has improved the quantity of maize production, the best price of maize different from those who are not contracting with the project. This helped them to increase saving and solve their socio-economic problems as stated by focus group and manager of FtMA reported that income from farming was directly affected by inadequate post-harvest handling processes, including processing to extend the length of stable shelf life, especially of perishable food commodities such as crops, vegetables and fruits, as well as of livestock products. The findings in table 4... revealed that among 23 maize cooperatives in Nyagatare District, KOHIKA and CODPCUM cooperatives are the best maize growers and provide enough yield in five years whereas KUNDISUKA, CODEAMGA, COAM AND CODAR need to be focused on by both their members and project in particular in order to increase the product. In word, in five years, the quantity of maize production was in average mean of 90.270. The quantity of maize sold to the FtMA buyers was in average mean of 83.5431tons. Quantity of maize production reserved for meals with a help with FtMA was in average of mean of 1.25739 tones. The income was in average mean of 63327.493 and saving in was in average mean of 835.4313 in five years.

V. CONCLUSION

Since agriculture plays an important role in improving household income and livelihoods of the rural population, it is clear that improving the efficiency of agricultural marketing systems is important. Contractual arrangements are one of the options in this regard. In considering contract farming as useful tool to accelerate rural development in general and grow maize in particular empirical result from the field revealed that there is positive effect on activities of FtMA project via contract farming towards socio-economic development of maize farmers in Nyagatare District

The study concluded that training services from FtMA project has contributed to socio-economic development of farmers; this implies that that taking all other independent variables at zero, a unit increase in training services will lead to increase in socio-economic development of beneficiaries of FtMA project by 0.309 units

Agriculture input (production) is the main contributor to socio-economic development of beneficiaries of FtMA project in Nyagatare District compared to their intervention where an increase of one unit in agriculture production contribute to 0.368 unit in socio-economic development of

beneficiaries of FtMA project. This implies that beneficiaries financially improved after joining FtMA. Members of maize cooperative contracting with FtMA project managed to obtain loan, trainings and saving improved their economic status in terms of increase of household income, savings through FtMA activities maize farmers in Nyagatare District.

The study concludes that marketing information has a significant influence on socioeconomic development of beneficiaries of FtMA project in Nyagatare District. This influence was significant and hence changing marketing information would lead to any significant change in socio-economic development of beneficiaries of FtMA project in Nyagatare District

The study concludes that financial services have a significant influence on socio-economic development of farmers/beneficiaries of FtMA project in Nyagatare District. The implication is that changing financial services would lead to any significant change in socio-economic development of beneficiaries of FtMA project in Nyagatare District.

The study concludes that contract farming had a positive effect on income an saving among members of maize cooperative in Nyagatare District. This leads to the rejection of null hypotheses. It is therefore concluded that contract farming has a positive effect on socio-economic development of maize farmers where they increased income and saving in their households.

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