

Horticulture Projects and Economic Development at IABM Cooperative in Muhanga District Rwanda

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Abstract: Horticultural sector is an important sector in production of food and generation of income. This study investigated the role of horticulture projects and economic development at IABM cooperative in Muhanga District. The researcher used Planned Behavioral theory; Social Welfare theory and social choice theory for exploring more review in relation with horticulture projects. The study targeted beneficiaries of IABM with entire 1, 453 members, therefore, for this study 314 respondents are the population size. The primary data was obtained from the beneficiaries of the horticulture projects. The secondary data was obtained from project records and journals. The data collection instruments used comprised questionnaires and interview schedule. Collected quantitative data was analyzed using computer software Statistical Package for Social Sciences (SPSS) version 23.0 to enable mathematical computations. The taking after comes about were watched as $\beta=0.362$ which means change on environment factors causes increase of 0.362 (36.2%) of horticulture projects and economic development. The ratio of β test modal results into t value. From the table, t value is 6.735 which is greater than 1.96. Thus, t value is greater than 1.96, $\text{Sig}=0.000b$, since p value is less than 0.05, this confirms the first alternative hypothesis of this study which says that environment components have a noteworthy role on horticulture projects and economic development at IABM cooperative in Muhanga District. $\beta=0.271$ which means change on factors of skills of stakeholders causes increase of 0.271 (27.1%). The $t=4.893 > 1.96$. Therefore, the probability value has a significance role on horticulture projects and economic development since t value is greater than 1.96, $\text{Sig}=0.000b$, since p value (0.05) is less than 0.05. This allows a researcher to confirm the first alternative hypothesis of this research which says that factors of skills of stakeholders have a significant role on horticulture projects and economic development at IABM cooperative in Muhanga district. $\beta=0.474$ which means change on market factors causes increase of 0.474 (47.4%) of horticulture projects and economic development. The ratio of β test modal results into t value. $t=9.349 > 1.96$, $\text{Sig}=0.000b$, since p value (0.05) is less than 0.05 and this confirm the first alternative hypothesis of this research which says that market components have a noteworthy role on horticulture projects and economic development at IABM cooperative in Muhanga District. Based on the findings, the researcher recommends: Encouragement designs may be especially valuable in contexts of new products or markets. Government should encourage credit institutions to increase lending agencies nearer villages located far from the town centre; Encouraging vegetable farmers to subscribe and exercise their membership rights to a farmers' association.

Keywords: Horticulture, Financial Improvement, Economic Development, Horticulture Project

1. Introduction

Horticulture is described as those plants, which are consumed in relatively small quantities as a side dish with the staple food or horticulture is the agriculture of plants, mainly for food, materials, comfort, beauty for decoration and is the growing of flowers, natural products and vegetables, and of plants for ornament and fancy (Arteca, 2015). The term 'horticultural' can also be used to designate the tender edible shoots, leaves, fruits and roots of plants that are eaten whole or part raw or cooked as a supplement to starchy foods and meats (Williams et al, 2011). The authors further state that horticultural have been part of the human diet from time immemorial. They are important components of daily diets in many parts of the world and important sources of income, especially in urban and peri urban areas.

In 2010, China was the biggest horticulture producing nation with over half of the world's production (Sinha et al., 2010). The authors' further stated that India, the United States, Turkey, Iran and Egypt were the next largest producers. Horticultures are also central to most nutrition, food security

and poverty reduction programs around the world (James et al., 2010). However, in most of West African countries, the economic opportunities offered by horticultures are often undermined by production and trade constraints. to productivity for their welfare. Yet, in West Africa, horticultures of horticulture in West Africa (Levasseur et al., 2017). Horticulture products form an essential part of the food in most African countries. horticulture would also help solve food the problem and farmers' welfare, (Sharma et al., 2016).

In Sub - Saharan Africa the share of the entire budget distributed to cultivation consumption ranges from 3% to 13%, and the whole nourishment budget share ranges from 4.5% to 16%. The request and utilization for cultivation rises with expanding salary levels. Also, a more recent study by Tschirley et al., (2014) analyses the food consumption patterns of the increasing middle class in East and Southern Africa. They analysed empirical data about perishable products like fruits, vegetables and meat. As the middle class grows, the share of these perishable products in the food economy, and their absolute level of consumption, will grow.

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The horticulture sector provides improved employment for many farm workers compared to other sectors. A Kenyan overview gives nitty gritty data on the earnings of a test of specialists within the cultivation segment and comparative information for a control gather of individuals not included (McCulloch and Ota, 2012). Data was collected from pack house specialists and non - pack house specialists living within the same private zones of Nairobi, specialists on ranches possessed by exporters, laborers on huge commercial ranches, smallholders locked in in cultivation generation. They indicate that fruit and vegetable producers are much better off than non - horticulture smallholders, with a mean income that is four times larger. Also workers on exporter - owned farms and independent commercial farms do better than non - horticulture smallholders. As a result, poverty rates are much lower among workers employed in the horticulture sector. Most of these specialists are paid a wage that's over the government - mandated least agrarian wage.

Women in particular have been able to capitalize on these new labor market opportunities, transporting and loading. Many farm labourers typically own little or no land of their own and tend to be poorer than most smallholders, especially those engaged in horticulture production. Consequently, their employment in the horticulture sector has a direct effect on poverty reduction. (Frank et al., 2015). Rwanda's Vision 2020 identifies six pillars that will contribute to the desired ultimate goal laid out in the national strategy. Beneficial and Showcase Arranged Agribusiness is one of the six columns. As an instrumental part of the strategy moving forward, the Government of Rwanda is very active in different sectors looking to stimulate market growth, agribusiness development, horticulture and increased productivity; (Youri et al., 2016).

2. Statement of the problem

The Rwandan economy is, and will stay for the predictable future, intensely subordinate on the agrarian segment utilizing because it does around 90 percent of the populace, giving 91 percent of the nourishment expended within the nation, contributing 36 percent of GDP and bookkeeping for 70 percent of income from sends out. However, the poor performance of the agricultural sector has been a major impediment to economic development and it now faces further challenges due to climate change as a consequence of global warming. It is unlikely to meet some of the targets for 2012 set by the EDPRS. In case the nation is to attain the Thousand years Improvement Objective of killing extraordinary destitution altogether moving forward the efficiency of the Cultivation division is fundamental. For the agricultural sector to make its full potential contribution to the economy a number of areas of Government policy and strategy are critical (Rwandan Farming Segment Situational Examination, 2009).

There's a require for the street arrange and meteorological administrations to be created, for more arrive to be inundated, for the education sector to undertake research and to provide training in agriculture and entrepreneurship, for greater support for business start - up and support for export drives; Further improvements in Horticulture production will

have to come from inputs as all land suitable for cultivation has already been brought into production; Currently there is little use of modern technology, and a low use of fertilizer, improved seeds and pesticides due to a combination of a shortage of supply, poor distribution networks, a lack of knowledge and skills, affordability and a lack of incentives; There's small inundated arrive and a powerless meteorological capacity making the segment defenseless to the climate related stuns; the quality of products are destitute, there's small commercialization or value - added generation with only two percent of small enterprises within the agro - processing segment. Typically due to a combination of a lack of trade aptitudes and enterprise, trouble in getting fund and a need of a transport foundation to induce products to the showcase (Rwandan Farming Segment Situational Examination, 2009).

The initial search and review of documents and data on Rwanda horticulture served to orient the advisory team to recent developments in the sector and to draw on the experiences of similar surveys in other countries. During this short phase the team was able to compile a listing of key constraints to horticultural growth identified in previous sector reports and studies. These constraints were condensed and categorized and served as the basis for several important themes in the questionnaire, such as "access to markets, " "competencies, " and "organizational management. " Rwanda's horticultural organizations have not yet embraced the production of low - volume, high - value specialty products such as herbs & spices, nuts, and flowers (fresh - cut and industrial). Together, all of these specialty crops amount to less than one percent of total horticulture production volume. There is a very small buyer group which is comprised of processors and other cooperatives. These are wholesale buyers but often work under contract with the producer groups. Juice processors, for example often buy passion fruit or pineapple from producer organizations on seasonal contracts (Baseline Report on the Rwanda Horticulture Organizations Survey, 2014).

Transform Rwandan horticulture from primarily a subsistence sector, reduce poverty and malnutrition are considerate difficulties that hard - pressed the researcher to do an investigation on agricultural of horticulture if are large contributor on the economic development in Rwanda, where horticulture projects should be done as agriculture for market - oriented, enhance value creating sector, and to develop the sector as rapidly as possible to increase rural incomes and reduce poverty and malnutrition toward the problem of developing national economy and supporting the development of the export market.

Specific Objective:

To investigate the role of environment factors on horticulture projects and economic development at IABM cooperative in Muhanga District;

To examine the role of skills of stakeholders on horticulture projects and economic development at IABM cooperative in Muhanga District;

To establish the role of market factors on horticulture projects and economic development at IABM cooperative in Muhanga District.

3. Literature Review

Environment factors and rural economic development

By this, we are referring to rainfall, humidity, wind pressure and direction, temperature etc. These components must be favorable to the cultivating endeavor you select be it crops or creatures. Diverse sorts of crops do well beneath a certain run of climatic conditions, moreover certain creatures. It is, in this manner, important to consider the components that will advance your cultivating undertaking and dodge those that will not. Plant growth depends on three climatic factors: temperature range during the growing season, frost - free period, and moisture. You might think that you don't have much choice when it comes to selecting a local site based on climate but there can be a surprising range of microclimates over a small area or even within a garden. These are good spots for siting a garden, (Haley Institute, 2020).

A soil textural triangle is used to determine soil textural class from the percentages of sand, silt, and clay in the soil, (BERRY et al.2017). Your farming operations should not have a negative impact on the environment. Some farming activities, when exposed to human or animals can be harmful. This is usually the case when farms are site close to the urban area. On the other hand, the environment may also have a negative impact on your farm, reducing productivity. Some farms are forced to move or change operation and the urban development's catch up. It is therefore very important to consider this factor in the selection of your site for farming, (K. Afrane Okese, 2018).

Skills of stakeholders and rural economic development

The skills, education and training of the labor force have a direct effect on the horticulture projects in improving rural economic development, horticulture projects and may possibly lead to inefficient of production, (Nataliya, 2016). There's an set up history of community association within the plan, administration and support of ventures, especially in water system and in water supply and sanitation as key variables playing part on the cultivation ventures in progressing financial advancement, (Okese, 2018).

You may wish to process your own fruits and vegetables. nThis is how many of today's processors entered the business decades ago. If you are considering a processing operation, contact your state Department of Agriculture to learn more about food regulations pertaining to the processing, packaging, and labeling of your product. It will probably be impossible for you to process and market produce at costs as low as those incurred by larger processors. As a result, it may be very difficult to compete for sales with your processed fruits and vegetables through conventional retail outlets. Consider processing specialty items with strong local or regional demand where you will be able to charge a "premium" price, (James, et al.2005).

Based on the past investigate done by diverse analysts, it appears that levels and benchmarks of instruction or trainings have a critical impact on farmers' competent

efficiency. Without basic literacy and proficiency, it is difficult for farmers to develop from manual horticulture to new higher tech industries in the agribusiness sector.

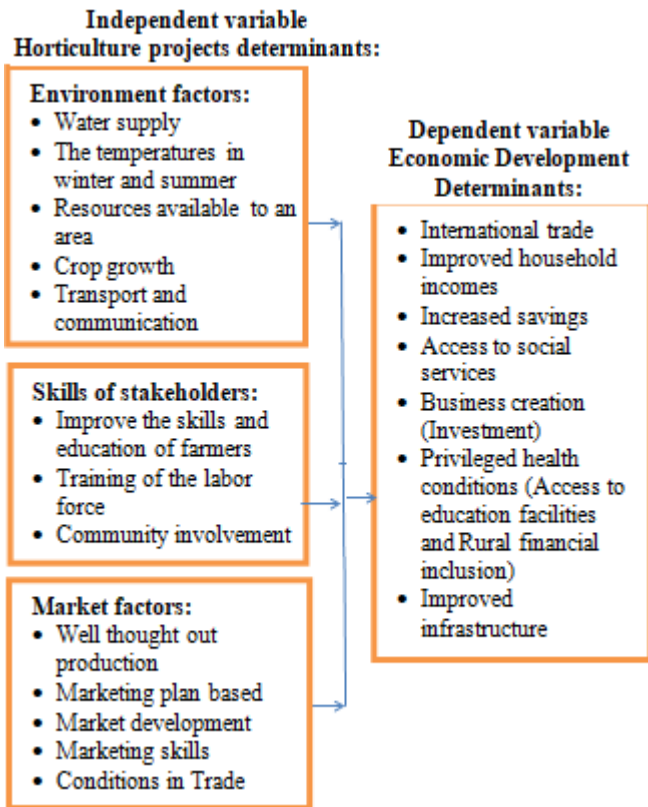
Market factors and rural economic development

The fact that most horticulture crops are highly perishable; the need to develop markets for produce should be established prior to planting the crop. This indeed more critical for naturally delivered vegetables due to their constrained or specialty advertise status. For anything reason, one chooses to commercially deliver vegetables naturally, productivity is the driving drive that keeps him in trade. To realize productivity, a maker must have a well thought out generation and promoting arrange based on sound logical and commerce standards. Most startup vegetable operations by and large fall flat due to the need of advertise advancement or showcasing abilities, (Arumugam, 2018).

It was estimated that on average about 10–20% losses were observed in vegetable seeds from farm to wholesale due to poor drying, management and storage practices. The unfavorable environment immediately after harvesting and need to dry several times were ranked as first drying and storage problems, respectively. From the analysis, it was found that selection criteria for hybrid and open - pollinated were found significantly different among fresh vegetable growers. The reasons for choosing hybrids were due to their higher production, attractive fruits and more profit. The study reveals the mismatch between seed production and variety demanded by the fresh growers. Moreover, results on tendency of farmers to change preferred varieties and their willingness to pay additional price for high - quality vegetable seeds indicate the market potential for expansion of quality seed in the future (Krishna P. Timsina & Ganesh P. Shivakoti, 2018).

James et al., (2005). Said that fruits and vegetables are produced seasonally, but the market requires products throughout the year. For many decades, this problem of matching product availability with consumer demand was solved in two ways: Selling fresh products during harvest & shortly thereafter and Processing the rest to meet demand during the rest of the year. As technology improved and consumer incomes increased, it became possible to provide fresh produce year - round. American consumers now expect fresh tomatoes, strawberries, and sweet corn every month of the year. In addition, a strong demand remains for processed fruits and vegetables.

4. Conceptual Framework



Source: Researchers, 2023

Conceptual framework, according to educational researcher (Stratman & Roth, 2014), are organized from a set of wide thoughts and speculations that offer assistance an analyst to legitimately distinguish the issue they are looking at, outline their questions and discover appropriate writing. This study will adopt a conceptual framework to describe the relationship between the various factors enhancing horticulture project on the rural economic development in IABM cooperative in Muhanga District, Rwanda.

Based on the review of literature regarding the investigation of horticulture projects on economic development. Moreover, success in horticulture production whether it is organic or not is greatly depended on a well thought out plant. Key components that ought to be considered carefully amid the arranging organize of the cultivating operation are: environment components (for example the researcher evaluated how transport and communication facilitate the penetration of horticulture products through improved infrastructure those enabled investors and consumers to reach the market), abilities of partners, and advertise variables (where the analyst assessed the well thought out generation and conditions in exchange by considering the adequate of items to the nearby markets and universal markets, reasonableness of items) specified as free factors. In case the off - base choice is made with respect to anybody of these, the operation is destined for disappointment.

5. Research Methodology

Research design

Investigate plan is the arrange for carrying out the inquire about ponder (Kombo and Tromp, 2016). This consider utilized a case consider investigate plan. A case thinks about

investigate plan may be a think endeavor by the analyst to gather information from agriculturists of populace in arrange to decide the current status of that populace with regard to one or more factors. A case study research design was used because the populations that studied are too large to observe directly. A case considers inquire about plan was subsequently valuable since of the economy of taking a test of the populace to generalize comes about for the total populace by Examination into cultivation ventures on the financial improvement in Rwanda.

Sampling design

Examining could be a procedure of selecting little gather of cases drawn from and utilized to speak to the expansive gather or entire populace beneath examination. Multi - stage sampling was used to select the sample whereby in the first stage: the population was stratified into three groups; it means researcher was divided the population into characteristics of importance for the research. (Ranchers, recipients of the item from cultivation ventures and supervisors of the ventures) and after that random sampling will be utilized to urge a agent test estimate from each stratum.

Target population

The ponder focused on recipients of IABM ventures who have the same characteristics as the recipients. These ventures offer a part of potential for whole IABM's 1, 453 individuals.

Sample size determination

Sample size is the number of people or objects in the selected entire population of the study area. Yamane (1973) suggested that since the population number (number of targeted population) is known within the ponder range, the following can best give the specified test estimate for this consider.

$$n = N / (1 + N(e)^2) \dots \dots \dots (1)$$

Where n is the desired sample size, N is the population size and e is the allowable margin of error (level of precision) ranging from 0.05 to 0.1. Margin of error shows the percentage at which the opinion or behavior of the sample deviates from the total population. The littler the edge of mistake the more the test is agent to the populace at a given certainty interim. Therefore, for this study allowing the smallest possible margin of error (e= 0.05), the total sample size became:

$$\text{Therefore, } n = N / (1 + N(e)^2), n = 1,453 / (1 + 1,453(0.05)^2) = 1,453 / (1 + 1,453(0.0025)) = 1,453 / (1 + 3.6325) = 1,453 / 4.6325 = 313.65 \text{ respondents, roughly equals to } 314 \text{ respondents.}$$

Sampling technique

This ponder utilized stratified straightforward irregular procedure to choose the test measure. Stratified sampling was utilized to choose a test from ranchers, recipients of the item from horticulture projects and supervisors of the ventures of the entire populace. According to Oso and Onen (2005).

Data Collection Procedures

Both primary and secondary data was used. The primary data was obtained from the beneficiaries of the horticulture projects. The secondary data was obtained from project records and journals. The data collection instruments to be used was comprised by questionnaires and interview schedule.

Surveys were in shape of organized data, being managed with or without the nearness of the analyst, and frequently comparatively clear to analyze. On the other hand, unstructured survey was given a more prominent knowledge and understanding of the subject being considered. But it may be difficult to classify and quantify it, and must be carefully interpreted. The researcher used interview guide question to the extension officers in order to solicit information for more observation.

Reliability

Unwavering quality is to guarantee that the consistency of investigate estimation or the degree to which the surveys as a degree of an instrument, measures the same way each time it is utilized beneath the same condition with the same subjects (Orodho, 2015). Information unwavering quality guaranteed that there's accuracy with which information is collected. The test –retest method was utilized to test the unwavering quality of the inquire about rebellious. The test involved administering group of subjects with time interval of one week.

6. Data Analysis

This refers to the examination of the coded data and making inferences (Kombo and Tromp, 2016). In this study, data was analyzed using both coefficient correlation and descriptive statistical techniques. The objectives were analyzed descriptively; by way of using frequency tables and percentages. The collected data was also analyzed through description, interpretation and explanation. To interpret and analyze data, the qualitative analysis by grouping interviews responses according to the objective of research and the tables was used to allow the researcher to analyze quantitative data that was obtained from questionnaire results.

7. Summary of Objectives Finding

Regression Model was used to model the relationship between two or more explanatory variables and a response variable by fitting a linear equation to observed data. Every value of the independent variable (x) as it is financial fraud detection and safeguard measures are associated with a value of the dependent variable (y) named success of public institutions. R - squared is a goodness - of - fit measure for linear regression models. This statistic indicates the percentage of the variance in the dependent variable that the independent variables explain collectively. R - squared measures the strength of the relationship between your model and the dependent variable on a convenient 0 – 100% scale, (Amy, 2015).

Model summary of the impact of horticulture projects and economic development at IABM cooperative in Muhanga District

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Environment factors	.362 ^a	.131	.128	.56402
Skills of stakeholders	.271 ^a	.074	.071	.58232
Market factors	.474 ^a	.225	.222	.53262

Source: Primary data (2022)

Examining the model summary, two important values were based on to explain the relationship existing between Environment factors and horticulture projects on economic development. The R value printed out from the data was estimated to 0.362 or 36.2% indicating a positive relationship existing between the factors. The meaning behind this value shows that the binding point that links the Environment factors and horticulture projects on economic development is oriented in a positive sense. Therefore, we have concluded that the two variables are in a close relation from one another. Referring to the R² value, the total variation to which the two variables exist is shown to be 0.131 indicating the effects at which two variables exist and could be expressed as 13.1%. Finally, researcher concluded that Environment factors contribute to the horticulture projects and economic development at IABM cooperative as all variables are significant.

Evaluating the model summary, the researcher based on two important values to explain the relationship between factors of skills of stakeholders and horticulture projects on economic development. The R value printed out from the data is an estimate of 0.271 or 27.1%. It indicates a positive relationship that exists between these two factors. This figure means that there is binding point that links the factors of skill of stakeholders and horticulture projects on economic development is positive. Therefore, the researcher has concluded that the two variables are closely related. Referring to the R² value, the total variation to which the two variables exist is shown to be 0.74. This shows the effects at which these two variables exist and could be expressed as 7.4%. Finally, researcher concluded that factors of skills of stakeholders contribute to the horticulture projects and economic development at IABM cooperative because variables examined are significant.

Studying the model summary, two important values are used to explain the relationship existing between market factors and horticulture projects on economic development. The R value from the collected data is 0.474 or 47.4%. Hence, it shows a positive relationship that exists between these two factors. It means that this value shows the relationship that links the market factors and horticulture projects on economic development is positive. Therefore, the researcher has concluded that the two variables have a close relationship between them. On another side, R² value refers to the total variation to which the two variables exist. From the model summary, it is be 0.225 equivalent to 22.5%. Finally, researcher concluded that market factors contribute to the horticulture projects and economic development at IABM cooperative since all variables examined are significant.

ANOVA of the impact of horticulture projects and economic development at IABM cooperative in Muhanga District

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Environment factors	14.432	1	14.432	45.367	.000 ^b
Skills of stakeholders	8.117	1	8.117	23.938	.000 ^b
Market factors	24.795	1	24.795	87.401	.000 ^b

Source: Primary data (2022)

The Anova table explains the test for the Strength of environment factors on horticulture projects and economic development at IABM cooperative in Muhanga District. The regression model predicts that the changes happening on the independent variable affect how the dependent variable is going to behave and vice - versa. The relapse whole of squares portrays how well a relapse demonstrate speaks to the modeled information. The next relapse entirety of squares demonstrates that the show does not fit the information well, whereas a lower relapse whole of squares shows that the demonstrate does a great work fitting the information. 14.432 explained how the Environment factors is well representing the modeled data. Keep in mind that the independent variable should be strongly significant and predict the behavior changes for both of the variables. The test for regression was done and the sig. value indicated the results to be 0.000^b. We can notice that the p value for this case is still less than 0.05 which indicate how we are lucky in determining the relationship existing between the two variables study. As a way of confirming this, the regression model was statistically strong and significant and predicted the changes in the variables. Like Oregon State University (2020) reported, Natural components that influence plant development incorporate light, temperature, water, mugginess and nourishment. It's critical to get it how these variables influence plant development and improvement. With a fundamental understanding of these components, you'll be able to control plants to meet your needs, whether for expanded leaf, blossom or natural product generation. By recognizing the parts of these variables, you'll moreover be way better able to analyze plant issues caused by natural stretch. However, it has been proven that environment factors could be taken as positive only in bringing economic development.

The Anova table above describes the test for the strength of skills of stakeholders on horticulture projects and economic development at IABM cooperative in Muhanga District. The regression model predicts that the changes any change that occurs to independent variables is going to affect dependent variables and vice - versa. It is important to note that the independent variable should be strongly significant and predict the behavior changes for both of the variables. The regression sum of squares describes how well a regression model represents the modeled data. A better relapse whole of squares demonstrates that the show does not fit the information well, whereas a lower relapse whole of squares demonstrates that demonstrate does a great work fitting the information. 8.117 explained how the Skills of stakeholders is well representing the modeled data. The test for regression was done and the sig. value result is 0.000^b. We can notice that the p value for this case is still less than 0.05 which

shows the existing relationship between two variables studied. As a way of confirming this, the regression model was statistically strong and significant and predicted the changes in the variables. Literature indicates that factors of skills of stakeholders are very significant on horticulture projects and economic development. Their contribution is through their interventions in designing, monitoring and evaluating, capacity - building programs, and financial support (Barrientos, 2011). When the project is well designed and run with competent individuals, it is more likely to succeed. Again, a regular monitoring and evaluation is needed to ensure that the project is on a right track and there are no frauds and mistakes committed. Thus, all this contribute to development of horticulture and economy in general.

The Anova table explains the test for the strength of market factors on horticulture projects and economic development at IABM cooperative in Muhanga District. The regression model indicates that the changes that takes place on the independent variable affect how the dependent variable is going to behave and vice - versa. Note that the independent variable should be strongly significant and predict the behavior changes for both of the variables. The regression sum of squares describes how well a regression model represents the modeled data. The next relapse whole of squares demonstrates that the demonstrate does not fit the information well, whereas a lower relapse entirety of squares shows that the demonstrate does a great work fitting the information. 24.795 explained how the Market factors is well representing the modeled data. The test for regression was done and the sig. value is 0.000^b. Since the p value in this scenario is less than 0.5, it strongly shows that there is an existing relationship between two variables of the study. As a way of confirming this, the regression model was statistically strong and significant and predicted the changes in the variables. Market factors play a great role in impacting horticulture and economic development. Famers involved in horticulture are encouraged to do it when they get enough market in a regular time. Otherwise, their products perish and only they experience the loss. Infrastructures like markets and roads are so meaningful to horticulture and economic development since they favor easy access to customers without the damage of harvest products (Matsane, 2014).

8. Conclusions

By testing the null hypothesis predicting the effect of objective, the researcher would like only to confirm or reject null hypothesis by showing the effect of independent variables by predicting dependent variables. The P values only mean that the researcher has the opportunity of accepting the null hypotheses, and don't mean that the researcher has the option in accepting the 'study hypotheses. Even $P < 0.05$ was supporting the researcher's arguments. P values which is lower indicated the existence of effect that is more significant, and the lower P values was indicating its significance. $P > 0.05$ only means "no evidence of difference". It doesn't mean "evidence of no difference". No evidence of "difference" does not mean "no difference" among various variables.

Testing hypothesis by Coefficient of the impact of horticulture projects

Model	Unstandardized Coefficients		Unstandardized Coefficients	T	Sig.
	B	Std. Error			
	Beta				
Environment factors (VAR00001)	.379	.056	.362	6.735	.000
Skills of stakeholders (VAR00002)	.278	.057	.271	4.893	.000
Market factors (VAR00003)	.353	.038	.474	9.349	.000

Source: Primary data (2022)

The role of environment factors on horticulture projects and economic development at IABM cooperative.

$$Y = \alpha + \beta_1 X_1 + \epsilon$$

$\beta = .362$ which means change on environment factors causes increase of 0.362 (36.2%) of horticulture projects and economic development. The ratio of β test modal results into t value. From the table, t value is 6.735 which is greater than 1.96. Thus, the probability value has significance on horticulture projects and economic development since t value is greater than 1.96, $\text{Sig} = .000b$, since p value is less than 0.05, this confirms the first alternative hypothesis of this study which says that environment factors have a significant role on horticulture projects and economic development at IABM cooperative in Muhanga District.

β : - Regression coefficient

H: - Horticulture projects and economic development

E: - Environment factors

$\text{Sig} = .000b$, $t = 6.735 > 1.96$

$\beta \neq 0$: Reject H_0 if β_1 is $\geq \alpha$

Reject the Null hypothesis

The p - values for the coefficients indicate that the relationships are statistically significant. There is connection between the changes in the environment factors and Horticulture projects and economic development. In other words, there are enough pieces of evidence to conclude that there is an effect at the population level. The researcher concluded to reject null hypothesis which says that environment factors have no significant role on horticulture projects and economic development at IABM cooperative in Muhanga District. On another side, the research has confirmed that the alternative one which says that environment factors have a significant role on horticulture projects and economic development at IABM cooperative in Muhanga District.

The role of factors of skills of stakeholders on horticulture projects and economic development at IABM cooperative.

$$Y = \alpha + \beta_1 X_1 + \epsilon$$

$\beta = .271$ which means change on factors of skills of stakeholders causes increase of 0.271 (27.1%) of horticulture projects and economic development. The ratio of β test modal results into t value. From the table above, $t = 4.893 > 1.96$. Therefore, the probability value has a significance role on horticulture projects and economic development since t value is greater than 1.96, $\text{Sig} = .000b$, since p value (0.05) is less than 0.05. This allows a researcher to confirm the first alternative hypothesis of this

research which says that factors of skills of stakeholders have a significant role on horticulture projects and economic development at IABM cooperative in Muhanga district.

β : - Regression coefficient

H: - Horticulture projects and economic development

S: - Skills of stakeholders factors

$\text{Sig} = .000b$, $t = 4.893 > 1.96$

$\beta \neq 0$: Reject H_0 if β_1 is $\geq \alpha$

Reject the Null hypothesis

The p - values for the coefficients indicates that the relationships are statistically significant. there is a strong relationship between the changes in factors of skills of stakeholders and horticulture projects and economic development. In other words, this is tangible evidence to conclude that there is an effect at the population level. The researcher has concluded to reject null hypothesis which says factors of skills of stakeholders have no significant role on horticulture projects and economic development at IABM cooperative in Muhanga District. Instead, the researcher has confirmed the alternative one saying which says that factors of skills of stakeholders have a significant role on horticulture projects and economic development at IABM cooperative in Muhanga District.

The role market factors on horticulture projects and economic development at IABM cooperative.

$$Y = \alpha + \beta_1 X_1 + \epsilon$$

$\beta = .474$ which means change on market factors causes increase of 0.474 (47.4%) of horticulture projects and economic development. The ratio of β test modal results into t value. $t = 9.349 > 1.96$. Hence, the probability value has significance on horticulture projects and economic development since t value is greater than 1.96, $\text{Sig} = .000b$, since p value (0.05) is less than 0.05 and this confirm the first alternative hypothesis of this research which says that market factors have a significant role on horticulture projects and economic development at IABM cooperative in Muhanga District.

β : - Regression coefficient

H: - Horticulture projects and economic development

M: - Market factors

$\text{Sig} = .000b$, $t = 9.349 > 1.96$

$\beta \neq 0$: Reject H_0 if β_1 is $\geq \alpha$

Reject the Null hypothesis

The p - values for the coefficients indicate that the relationships are statistically significant. there is association between the changes in the market factors and Horticulture projects and economic development. In other words, there is sufficient evidence to conclude that there is an effect at the population level. The researcher concluded by rejecting null hypothesis saying that market factors has no significant role on horticulture projects and economic development at IABM cooperative in Muhanga District; and confirm the alternative one saying that market factors have a significant role on horticulture projects and economic development at IABM cooperative in Muhanga District. '

9. Recommendations

Encouragement designs may be especially valuable in contexts of new products or markets. Providing additional

incentives, such as below market prices, can induce farmers who would otherwise not participate for lack of understanding or familiarity to participate. Viewed this way, under certain circumstances an encouragement design could be viewed as a public policy to get nascent markets off the ground. To conclude, the experience suggests that, while there are a unique set of challenges in designing impact evaluations around private sector interventions, collaboration with the private sector can be both feasible and productive. This is particularly encouraging given that the types of financial market innovations most likely to benefit until - now excluded segments are likely to be driven by these actors. An increasingly rich set of innovative and rigorous collaborations across academia, the public sector and the private sector is anticipated as a means of pushing poverty alleviation policies forward in the future.

To bolster the extension program dealing with efficient use of credit demand for young female farmers; Government should encourage credit institutions to increase lending agencies nearer villages located far from the town centre; Encouraging vegetable farmers to subscribe and exercise their membership rights to a farmers' association.

Given the grassroots emphasis of a market improvement programme the monitoring system should aim to provide tools that can be used by the key actors at all the implementation levels. It should inform management of the progress in implementing the physical targets of the programme. Standardized reporting on a small number of key indicators will allow more meaningful impact assessments to be made and this information can be used to modify the programme to match changing and evolving circumstances.

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