

**RAW MATERIALS AVAILABILITY AND PRODUCTION OF SUGAR AT  
KAKIRA SUGAR WORKS**

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***A RESEARCH DISSERTATION SUBMITTED TO THE COLLEGE OF APPLIED  
ECONOMICS AND MANAGEMENT SCIENCE IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE AWARD OF BACHELORS IN  
BUSINESS ADMINISTRATION OF KAMPALA  
INTERNATIONAL  
UNIVERSITY***

***JUNE, 2013***

## DECLARATION

I, Ndawula Fred, declare that this research dissertation is my original work and has never been presented to any other institution of higher learning. I solemnly bear and stand to correct any inconsistencies.

Signatures.



Ndawula Fred.

Date ...07<sup>th</sup>/06/2013.....

## APPROVAL

This is to acknowledge that this Research Dissertation has been conducted by Ndawula Fred Reg. BBA/31219/102/DU under my supervision and it is now ready for submission to the academic board of Kampala international university for examination with my approval.

Signature.....

Mr. Ruteganda Michael (supervisor)

Date........

## **DEDICATION**

To my dad Mr. Ronald Mutebi and all lecturers of Kampala international university and all who seek for prosperity for success; this is dedicated to you.

## **ACKNOWLEDGEMENTS**

First and foremost I would like to extend my sincere appreciation to my supervisor Mr. Ruteganda Michael for his patience, guidance and precious time he spared supervising me until the completing of this report.

Also my gratitude goes to my parent mostly my dad, sisters brothers, friends, and my course mates for their ethical behaviors and encouragement in enabling me to complete this research.

I also thank my friends Nambuya Esther, Mugalula smurts, swaib, sam karekure, and kyasanku Siraji for their guidance, courage, and positive emotion, spiritual and financial support.

Am so grateful to my Dad for the inspiration, strength, vision, wisdom, and understanding that made me carryout the research successfully, am for indebted to HIM

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## **CHAPTER ONE.**

### **1.0 INTRODUCTION**

This chapter shows the background, problem statement, purpose, objective, research question, hypothesis, scope and significant of the study.

### **1.1 Background of the study**

Raw materials, these are materials that turn goods into finished products. Personally, these are materials or substances used in the primary production or manufacturing of a good. Raw materials are often natural and artificial resources such as oil, iron, wood and machinery respectively. Raw materials are often referred to as commodities which are bought and sold on commodities exchanges around the world.

Raw materials are sold in what is called the factor market. This is because raw materials are factors of production along with labor and capital. Both natural and artificial raw materials are so important to the production process of sugar say at Kakira sugar works that the success of a country's economy can be determined by the amount of natural resources the country has within its own borders. Sucrose, ethanol, water, and canes are used as raw materials for extraction and purification of sugar production and produced on a large scale by the Brazilian sugarcane industry.

Production can be defined as the creative of wealth which in turn adds to society's welfare. Therefore, production is the wide term that covers the changing of row materials into finished good. Production personally can be referred to as the out putting of good and services for personal use form finished goods or row materials and its success improves personal standards of living in the society say sugar as a researcher's point of interest. Before BC, sugarcane was harvested on the shores of the Bay of Bengal; it spread to the



surrounding territories of Malaysia, Indonesia, Indochina, and southern China. The Arabic people introduced "sugar" to the Western world by bringing both the reed and knowledge for its cultivation to Sicily and then Spain in the eighth and ninth centuries. Later, Venice importing finished sugar from Alexandria succeeded in establishing a monopoly over this new spice by the fifteenth century; at that point, it started buying raw sugar, and even sugarcane, and treating it in its own refineries. Venice's monopoly, however, was short-lived. In 1498, Portuguese navigator Vasco da Gama returned from India bringing the sweet flavoring to Portugal. Lisbon started to import and refine raw sugar, and in the sixteenth century, it became the European sugar capital. Therefore, Primary production, this is the first stage of production and it includes farming, forestry, mining and hunting at times known as extractive industries. Secondary production is the transformation of raw materials into finished goods generally, the output of primary production, are used in secondary production. Tertiary production, this Includes the process which increases the value or utility of the commodity. Tertiary production starts after producing the final product. The movement of goods to the final consumer involves different services which are refers to as tertiary production for instance Kakira sugar works Uganda its heritage goes back to 1906 right from India to Uganda, however apparently the production of sugar has been low because of shortage of raw materials basically because industries in low developed countries like Uganda relay on imported row materials which increase the cost of production hence low out put (sugar).

Sugarcane is the world's largest cash crop in 2013; it is cultivated on about 23.8 million hectares, in more than 90 countries, with a worldwide harvest of 1.69 billion tons. Brazil is the largest producer of sugar cane in the world. The next five major producers, in decreasing amounts of production, are India, China, Thailand, Pakistan and Mexico. However, Uganda is one of the sugars producing country in Africa and a researcher's most field of interest in Uganda's sugar producing industries is Kakira sugar Works Company.

According to Nikesh Madhvani the Director, Madhvani Group says, Kakira sugar works is the largest manufacturer of sugar in Uganda producing an estimated 165000 metric tones annually accounting for about 50% of the national output. Under the group's management, according to Madhvani, company complex was fully rehabilitated with financing USD 60millions from the World Bank, the African developing bank and Uganda developing bank. Basing on the information given out by the Director of Operations and Tourism Mr Mani Khan, says that the production of sugar at Kakira starts from the rudimentary way of boiling sugar using open pans, to batch pans, and becomes complete until the commodities reach a final consumer. However, the distribution of products can be direct or indirect. The Vithaldas Haridas and company under the management of Muljibhai Madhvani a twenty four old Indian born Ugandan businessman, entrepreneur, and industrialist purchased 800 acres of land in Kakira between Jinja and Iganga for the purpose of starting a sugar factory. Muljibhai later became a managing director of Vithaldas Harisas and company. That sugar complex later renamed Kakira sugar works opened in 1930. By adding the original parcel of land, Kakira were in excess of 9500 hectares of land as of April 20012. The sugar manufacturing complex at Kakira employs over 7500 people.

According to Farhan Nakhooda the Director (Projects), Madhvani Group says that Kakira Sugar is extracted from cane grown on lush plantations on the shores of Lake Victoria which is making the most percentage of sugar production and the first raw material of producing sugar all among the raw materials of sugar production in Uganda. This Company was formed in 1985 as a Joint Venture between the Madhvani Group and the Government of Uganda to take over the assets of Madhvani Sugar Works Ltd., which was the Group's flagship prior to 1972. Kakira Sugar Works has almost doubled output from 90,000 metric tones annually to 150,000 following an increase in procurement of cane from out growers. The number of out growers rose from 3,000 to over 6,000 farmers, which in turn increased the acreage under sugarcane

cultivation from 10,000ha to 17,500ha. The development was announced just recently when President Yoweri Museveni commissioned the factory extension and the company's private electricity plant. Managing director Mayur Madhvani said the sugar factory crushing capacity has moved to 6,000 tones of canes per day from 3,500, after a \$52m investment. Uganda consumes 240,000 tones of sugar per annum, Just 191,000 tones are produced, leaving a shortage of 49,000. Under the expansion program, Kakira will deliver 251,000 tones of sugar. However, the amount is inadequate to meet both the local demand and export to Sudan and other neighboring countries. Additional statistics also showed that Africa collectively produced 9.4 million tones of sugar but consumes 13.5 million tones. A surplus of 4.1 tones is imported into the continent for the America's who produce 51. 8 million tones but only consume 36.8 million tones. From comparing these statics, a researcher decided to carry out a study on raw material availability and production of sugar at Kakira sugar Works Company

## **1.2 Problems statement.**

There is evident of abundant raw materials because of wide range of farmers of sugarcane by out growers who rose from 3000 to 6000 farmers, but there has been a slow level of sugar production at kakira because of the interrupted power supply which slows the production of sugar at kakira sugar works.

There is raw material availability evidence at Kakira because of the large Nucleus Estate of over 10,000 ha under cane cultivation and providing 35% of the factory's cane requirements and More than 6,000 out-grower farmers cultivate the additional 19,000 ha and supply the rest hence increasing on sugar production in Uganda.

Although raw material availability is a fundamental issue for sugar production, the development section of the Agricultural Department is actively involved in conducting location specific, mill based, commercial trials in the fields to

develop sugarcane crop production technologies to improve cane and sugar yields both on the estate as well as in the Out grower farmers' fields that mostly focuses on land preparation, Integrated nutrient management, Ratoon cane management, Integrated pest and disease management, Pre-harvest cane maturity survey and others thus creating a greater positive impact on sugar production in Uganda at Kakira.

### **1.3 Purpose of the study**

The purpose of the study was to describe the relationship between raw materials and production of basic products say, sugar at Kakira sugar works

### **1.4 Objectives**

- i. To determine the profile of respondents in terms of; age, education marital status, marital status.
- ii. To determine the impact of raw materials availability and level of sugar production at Kakira sugar works.
- iii. To determine the relationship between the effect of raw material availability and level of production of sugar at Kakira sugar works.

### **1.5 Research question**

- i. What is the profile of Kakira sugar works at Jinja Uganda?
- ii. What is the impact raw material availability in the production of sugar at Kakira sugar works?
- iii. Is there a significant relationship between raw material availability and production of sugar at kakira industry?

## **1.6 Research hypothesis.**

There was no significant relationship between raw material availability and production of sugar at kakira Sugar works.

## **1.7 Scope of the study.**

### **1.7.1 Geographical study.**

The study was conducted in the main factories of the company which were located in the town of Kakira in Jinja district Eastern Uganda. The scope lies approximately 16 kilometers by road northern of Jinja the nearest town. Kakira is located approximately 100 kilometers by road east of Kampala the capital of Uganda. The company maintains a corporate office in Bugoloobi in Kampala district. Kakira has been chosen because is the largest sugar producer in Uganda.

### **1.7.2 Content scope.**

The study was conducted with a view of how to use the limited resources to improve the production of sugar in Uganda.

### **1.7.3 Time scope.**

The research took place between the month February and June of 2013

## **1.8 Significance of the study.**

The study was significant to the number of parties as follows;

- i. Finding of the study helped the government to understand on how the rise of taxes on the production of sugar increases prices.

- ii. The study helped the community to understand how the charges from the government reduce the quantity of sugar production.
- iii. The study helped the company to understand how increases of prices reduce the purchasing power.
- iv. The study helped the community how the reduction of raw materials reduce the production of sugar in quality.

## **CHAPTER TWO**

### **2.0 LITETRATURE REVIEW.**

#### **Introduction.**

This chapter presents the theoretical review, the conceptual framework or model and the view of related literature.

#### **2.1 Conceptual frame work or model.**

According to James Evans, he clearly stated how raw materials influence the production of basic products in several companies like Kakira sugar works.

**Independent variables**

**dependent variables**

**Raw materials availability**

**production of sugar at Kakira**

**Nature raw materials**

Sugar cane

Water

Sucrose

Ethanol

**artificial raw materials**

Machinery(computer,  
tractors)

steel tanks availability

artificial fertilizers

**services**

expertise

internet work

Increase of sugar product at  
kakira

Increase the sugar stability  
and content

Increases on the sugar  
sweetness and standards

Makes sugar crystals 90%  
sugar crystals

Advance in the production  
speed like weavers

Increase the space for sugar  
storage

Increase on the soil fertility

To speed up the production  
process

Faster accessibility of  
information for the latest  
technology to speed up  
production in just n time



The conceptual frame work above shows six different concepts were one affects the other, for instance natural resources results to the advance of primary production in Kakira sugar work.

**Raw materials** can be explained as substance or material used in the manufacturing or primary production of goods. Generally, raw materials are natural resources like oil, wood, and iron. Raw materials are often altered for use in various processes prior to being used in the manufacturing process. Raw materials are also referred to as commodities, which are purchased and sold on commodities exchanges throughout the world.

As stated by Investopedia, raw materials are sold in what is known as the factor market. This is due to the reason of raw materials being factors of production in addition to labor and capital. Raw materials play an important role in the production process to a great extent as the success of the economy of a country is determined by the amount of natural resources held by a country within its borders. A country holding ample amount of natural resources does not require importing of as many raw materials.

### **Sourcing and Processing of raw materials**

After the raw materials have been selected, it becomes important to select the right processing technology for the same. Besides, it is also important to decide upon the source of raw materials. All these requirements can be met either through domestic sources or can also be imported related to regulatory requirements of the Governments.

Moreover, it is also important to do a careful analysis about the cost and benefit before proceeding with the process of placing orders to mitigating the production cost thus increasing the profit margins.

However, there are certain points which require consideration while selecting the processing technology. These include:

- I. The level of complex machines or skilled workers required during the process.
- II. The quantity of power or water required.
- III. Check whether any process or product patent is required in order to utilize the opted processing technology.
- IV. Check whether any special environmental or pollution regulation is required to be followed.
- V. The aptness of the technology to the existing environment and conditions.

In addition to these considerations, it is also important to carry out proper planning as non-availability of the requisite raw materials might result in holding production, and idle machinery and manpower. Besides, ordering too much in advance can result in locking up the working capital.

According to Kotler, P., Armstrong, G., Brown, L., and Adam, S. (2006) **production** is the act of creating output, a good or service which has value and contributes to the utility of individuals. The act may or may not include factors of production other than labor. Any effort directed toward the realization of a desired product or service is a "productive" effort and the performance of such act is production. The relation between the amount of inputs used in production and the resulting amount of output is called the production function.

The processes and methods used to transform tangible inputs (raw materials, semi-finished goods, subassemblies) and intangible inputs (ideas, information, knowledge) into goods or services. Resources are used in this process to create an output that is suitable for use or has exchange value.

## **2.2 Theoretical review.**

The study was based on the transformation theory, proposed by Douglas Irwin and KOSKELA (1994) the transformation theory which is based on input process and out (I p o) is the dominant of production theory in use to day. It breaks down every process into individual tastes performed by specialist. It is consistent with scientific management and traditional cost accounting reduction. It sets to optimize the entries of production phase by optimizing each individual task translates task assuming that minimum through put and customer value.

Currently according to my study, the input and the output process is low in order to dominate production of sugar in Kakira which has led to the increase of sugar prices. Transformation theory of production also asserts on scientific management in order to reduce the cost of production of sugar thus reducing the prices of sugar.

### **2.3 Review of related literature.**

Natural resources availability like sugar canes and production of sugar at Kakira sugar works.

Koskela(1914) conducted a study on impact of raw materials availability on the advance of production of sugar. He asserted that nature materials are the significant and primary resources for the production process. In larger sector in developing countries, for instance firms for basic products like sugar are more common in Africa than Japan.

Artificial raw materials and production of basic products like sugar.

Roger (1980) conducted a study how artificial raw materials give a strong impact on the production of basic products. Said production must be advanced by Appling a force of artificial minerals and machinery (tractors), because this

increases soil fertility for the proper growth of the product for instance in Canadian prairies and forests.

Services and production of basic of products like sugar.

Hawthorn, (1962) conducted a study on this concept and he asserted that as the complexities of this business increase, so does the nature of a specialized expertise. Services such as computer services, networking services can be used to analyze the latest technology to speed up the production process in just in time (J.I.T) for consumer consumption.

## **CHAPTER THREE.**

### **METHODOLOGY.**

#### **3.0 Introduction.**

This chapter presents the plan and tools that was used in the study, research population, research design, sample size, sampling strategies, research instrument, validity and reliability, data gathering procedures, data analysis and limitation of the study.

#### **3.1 Design.**

The researcher used a descriptive method to analyze raw material availability and production of sugar at Kakira sugar works

#### **3.2 Population.**

The main factories of the company are located in the town of Kakira in Jinja district; eastern Uganda Kakira is located approximately 100km by road east of Kampala capital city of Uganda. Kakira sugar works is owned by mujhibhai madhavani an Indian born in Uganda. Kakira sugar works is the highest manufacturer of sugar in Uganda. The sugar manufacturing complied at Kakira, employees are 7500 according to the company website producing an estimated 165000 metric tone, annual output in 2012. Uganda. However, the company is categorized under profession and non-professional service based on production of basic products.

### 3.3 Sample size.

As a researcher, I used a scientific way to come up with a sample size used in my study .As a researcher, however, a sample size was determined using sloven's formula to come up with the appropriate sample size that was used in the study. Sloven's formula states that, given a population, the minimum sample size is given by:

$$n = \frac{N}{1 + N(S^2)}$$
$$n = \frac{7500}{1 + 7500(0.05^2)}$$
$$n = \frac{7500}{1 + 7500(0.0025)}$$
$$n = \frac{7500}{1 + 18.75}$$

$$n=379$$

### 3.4 Sampling strategies.

I conducted my study using the following methods of sampling in order to cube my strategy;

**Cluster sampling,** cluster sampling is used in a situation when it is not possible to obtain the sample frame because of large and scattered population like at Kakira sugar works.

### **3.5 Research instrument.**

A researcher needed to develop instrument in order to collect the necessary information by using qualitative and quantitative analysis. However, research has several instrument like questionnaire, interview schedules, observation and standardize task, the researcher used questionnaire to conduct the study

### **3.6 Validity and reliability.**

The study employed the content validity index (C.V.I) and a crown back's alpha coefficient to test for the validity of the tool.

By the use of questionnaire, the study was reliable in a way that accurate information was given by mean of testing. Reliability which refers to the test consistency among different administrations. The reliability f the study was determined by the tests taken to groups of different occasion , for instance the profile of the respondent was totally reliable as in the age, years date of birth were similar with the actual birth certificate. Questionnaires

According to the research, the researcher used this instrument to obtain the to the appropriateness of the study.

### **3.7 Data gathering procedures.**

The researcher prepared a proposal with details and steps that were to be followed; the researcher obtained the introduction letter from Kampala international university from college of economics and management science. To access the research area before designing the research instrument, the researcher was to embark on data collection process. However, the researcher made the required copies of the questionnaire and select research assistants to assist the distribution, administration and collection of the questionnaire. After all questionnaires are back, the researcher was to organize the work by

summarizing all responses and compute statics such as, mode, median, mean and the frequency and percentage distribution. After computing, the researcher management under the college of economic and management science in Kampala international university. Interview guide was also used by asking or interviewing respondents directly and get answers.

### **3.8 Data analysis.**

Data was analyzed using descriptive statistics; qualitative data was analyzed using master streets. Quantitative data was analyzed from table, char and graphs by relating the dependents and independent variable in order to get the answers for research questions, data analysis, edit, and supply was to be done by researcher.

### **3.9 Limitations of the study.**

The validity of this study was affected by the following limitations;

- I. Inadequate funds to be used for research purposes like transport and accommodation.
- II. Failure to retrieve for the maximum number of questionnaires.
- III. Irresponsibility of the company that is meant to publish the data of my study.
- IV. The limitation of method used which may be inconvenience for the study.
- V. Always old and out dated data is received from respondents.
- VI. Confidentiality, some of the information was very confidential in that it was not to be linked out side the company and this was to be overcome by



promising the company's manager that the data was to be used only for educational purpose.

## CHAPTER FOUR.

### ANALYSIS, PRESENTATION AND INTERPRETATION OF DATA.

#### 4.0 Introduction.

This chapter deals with analysis of the data as given in the questionnaire and the interview guide. The research findings were based on the sample size comprising of customer and employees of kakira Sugar Company in Jinja Uganda the respondents were the managers and employees plus the clients or customers of kakira sugar works. The summary for each factor is presented by the use of the table to give a clear picture of the score of responses that were gathered as shown below.

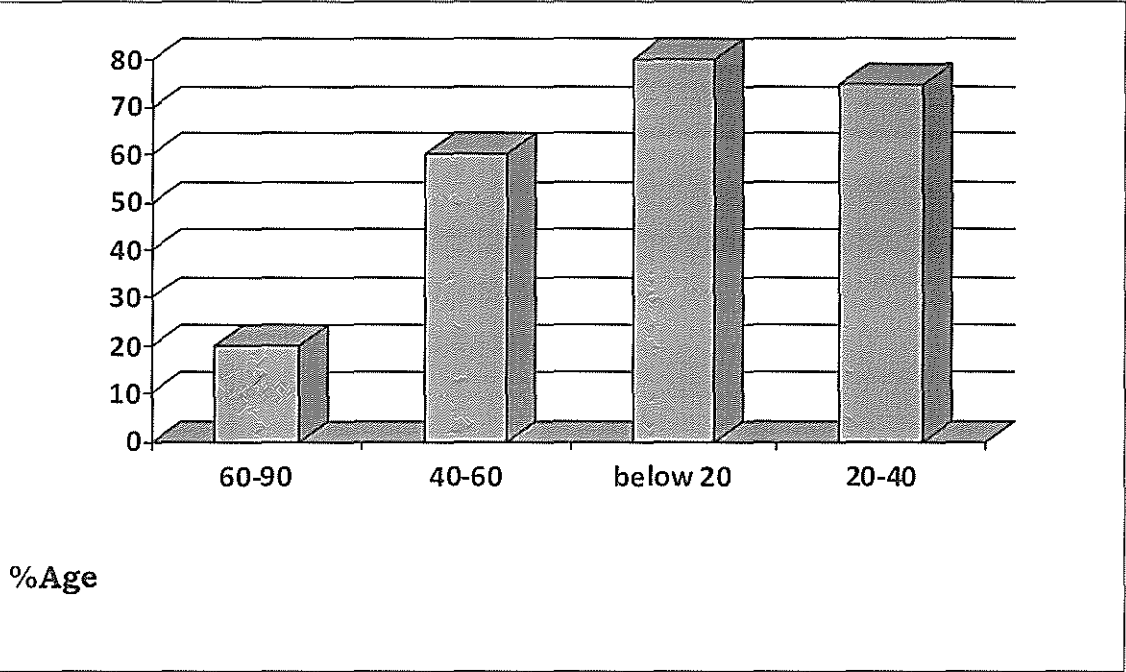
#### 4.1 age of the respondents.

The respondents of the held study on age that responds to sugar consumption in Uganda for the last 10 years has doubled to 240,000 tones per annum and this showed that female and tanagers are more responding to sugar consumption than male. The results are illustrated in the table below.

**Table 1: Age of respondents.**

Age	frequency	%age
Below 20	110	29
20-40	95	26
40-60	89	23
60-90	85	22
Total	379	100

**Figure 1: Age of respondents.**



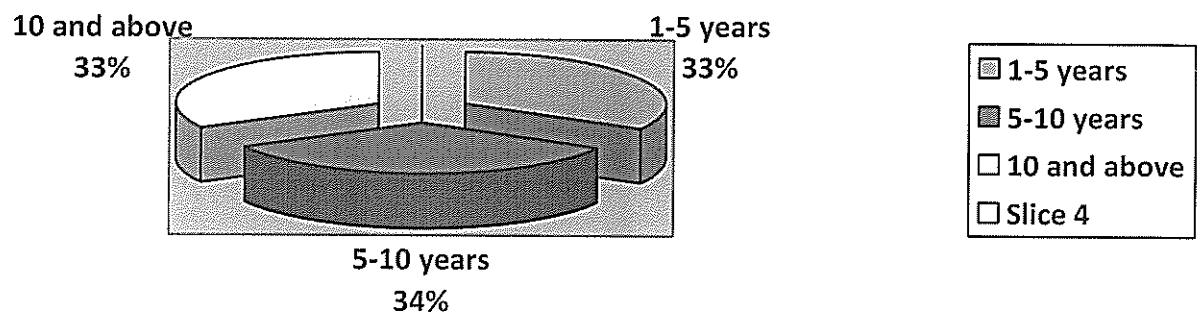
Source primary data

#### 4.2 Respondents work experience

The results of the field study on years of works experience shows that 33% of the respondents ranged between 1-5years, 34% of the respondents had 5-10 years while 33% had 10years and above. This signifies that information was collected from managers, employees and customers with long term experience that were represented by 79% of the sample.

Years	Number of respondents	% age
1 to 5	126	33
5 -10	128	34
10and above	125	33
Total	379	100

**Figure 2: Respondents work experience.**



Source primary data

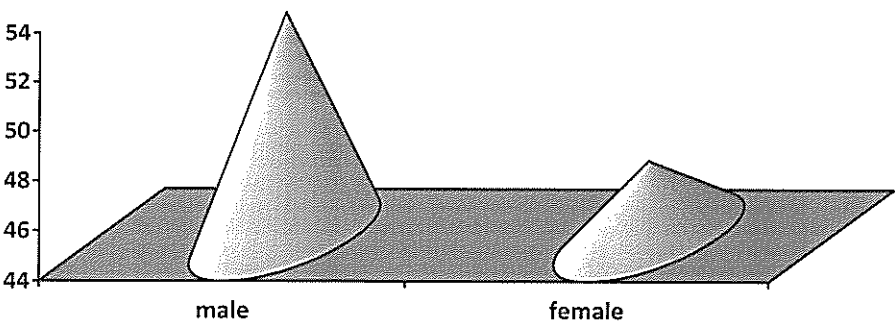
**4.3 Clients or customers.**

People who responded were 379. The researcher said that this helped him to get adequate and sufficient data that was used in analyzing and presenting the information as shown below

**Table 3: Client or customers.**

Gender	frequency	Percentage
Male	200	53
Female	179	47
Total	379	100

**Figure 3: Client or customers**



**Frequency**

Source primary data

From the table above, the research realized that the male respondents were more involved in the sugar business than the female in the Uganda’s economy.

**4.4 Level of education.**

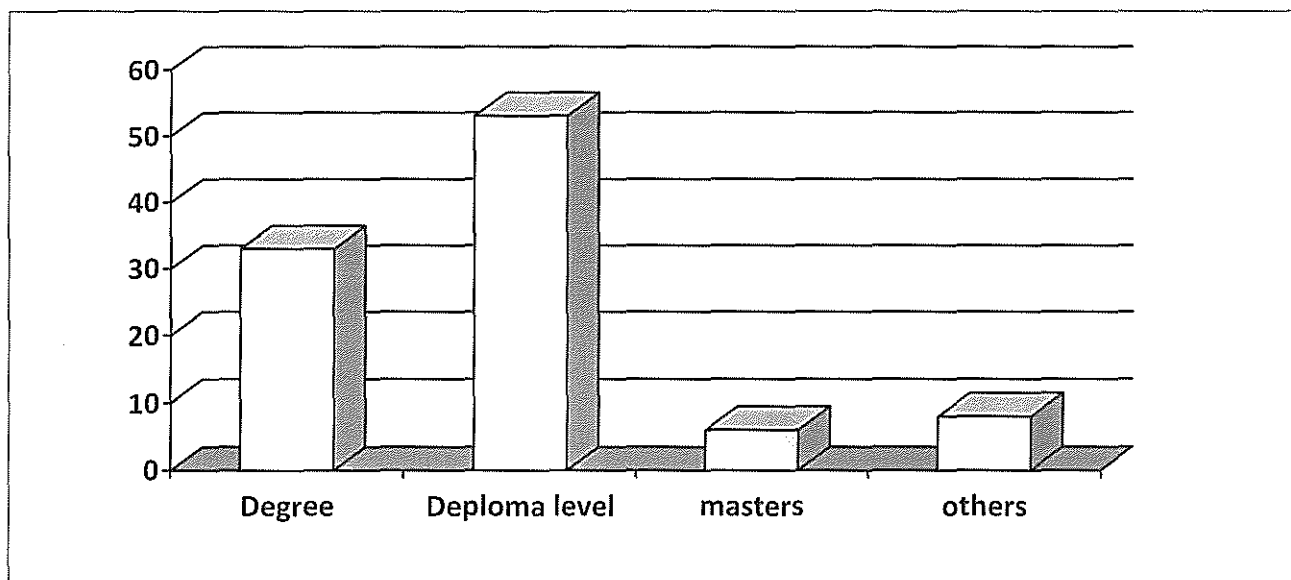
**Table 4: Level of education.**

Level f education	Frequency	Percentage
Degree	127	33
Diploma level	200	53
Masters	22	6
Others	30	8
Total	379	100

It was noted that most of the respondents had diplomas, following by degrees, others like certificates and then masters which were few as indicated above.

This indicates that the employees of Kakira sugar works are on larger extent educated.

**Figure 4: Level of education**



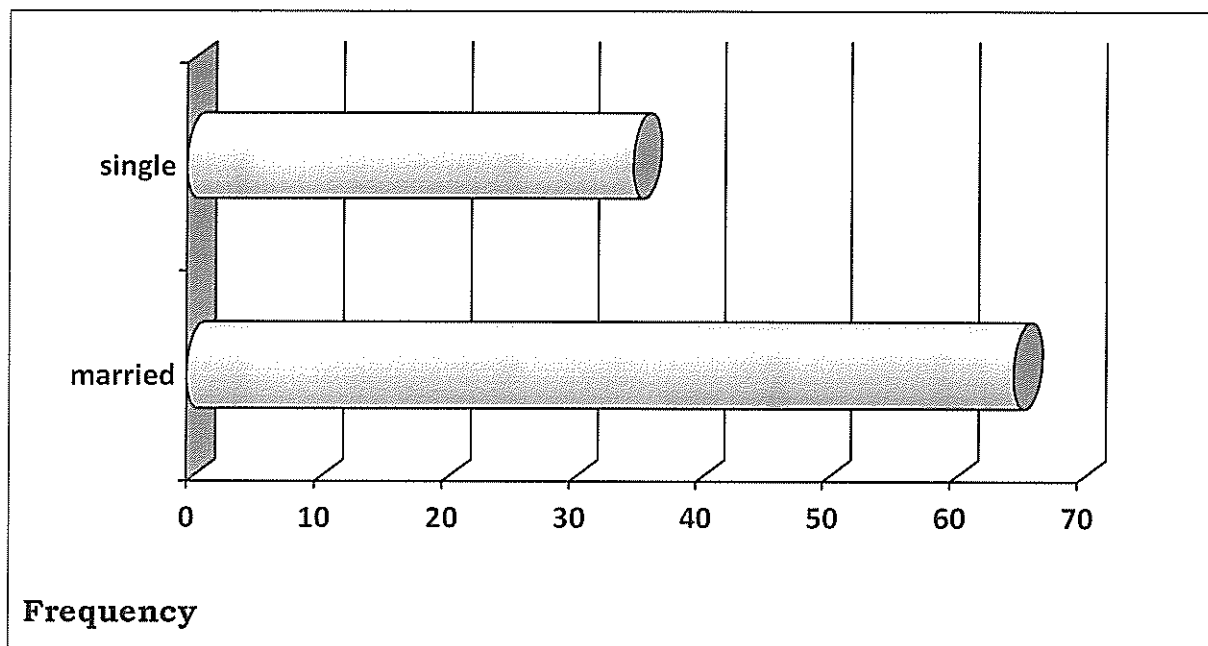
Source primary data

#### 4.5 Marital statuses.

**Table 5: Marital status.**

Marital status	frequency	Percentage
married	250	65
single	129	35
Total	379	100

**Figure 5: Showing the marital status.**



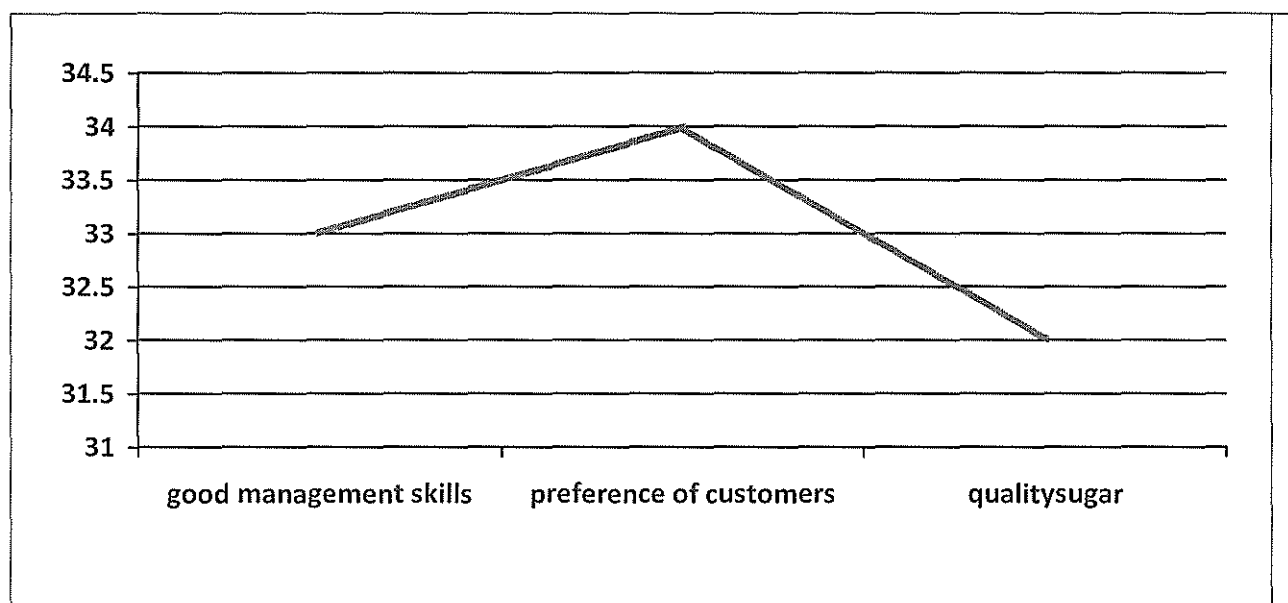
**Source primary data**

#### 4.6 The availability of raw materials at Kakira Company caused to the success of sugar production at kakira.

**Table 6: The availability of raw materials at Kakira caused to the success of sugar production at kakira sugar works**

causes	Frequency	Percentage
Good management skills	127	33
Preference of customers	128	34
Quality sugar	124	32
Total	379	100

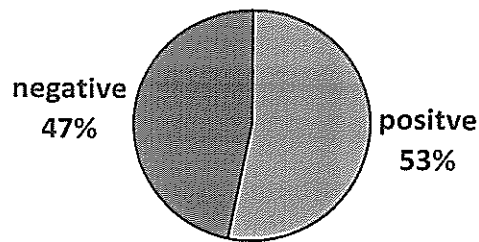
**Figure 6: shows the cause of raw material availability and production of sugar at kakira sugar works with its frequency.**



Source primary data

It was noted that most significant causes of sugar production are customer preference and good management skills followed by quality product that's sugar (Kakira) which gives a good competitive advantage over other sugar producing companies.





Percentage

#### 4.7 The attitude of employees towards the management of Kakira sugar production in Jinja Uganda.

**Table 7: Shows the attitude of employees towards the management of kakira sugar production at kakira sugar producing company Jinja Uganda**

Attitude	Frequency	Percentage
Positive	200	53
Negative	179	47
Total	379	100

**Figure 7: showing the attitude of employees' towards the management of Kakira sugar production at Jinja Uganda**

Source primary data

The above illustration shows, the side of the employees that had different attitude towards the management of Kakira sugar works.

#### 4.8 Relationship between raw materials availability and production of sugar in kakira sugar Works

Respondents were asked a question about objective 3 which was to the significant relationship between raw materials availability and production of sugar in kakira sugar Works and the responses are shown in table 8.

The third objective in this study was to establish whether there is a significant relationship between product branding and organization promotion in Century Bottling Company. On this, the researcher stated a null hypothesis that there is no significant relationship between product branding and organization promotion in Century Bottling Company. To achieve this last objective and to test this null hypothesis, the researcher correlated the aspects of product branding and those on organization promotion using the Pearson's Linear Correlation Coefficient, as indicated in table 3.

**Table 8:** Pearson's Linear Correlation Coefficient results for Raw materials availability and production of sugar

Variable correlated	R-value	Sig.	Interpretation	Decision on Ho
Raw materials availability Vs Production of sugar	-.357	.000	significant relationship	Rejected

**Source:** primary data, 2013

The results in Table 8 indicate that Raw materials availability and production of sugar are significantly correlated ( $r = -0.357$ ). the sig. value indicate that there is positive and significant correlation (sig. = 0.000 < 0.05) leading to a conclusion that Raw materials availability significantly improves production of sugar at 5% level of significance. Basing on these results, the stated null hypothesis of "there is no significant relationship between Raw materials availability and production of sugar" is rejected, and thus the findings showed a negative relationship between Raw materials availability and production of sugar. These results lead to a conclusion that an improvement in the Raw

material Availability is likely to improve production of sugar in Kakira sugar works.

To get the final picture on how raw material availability affects production of sugar, the aspects of Production index were regressed against Raw material availability, results of which are indicated in table 9 below; and the remaining aspect were not significant however the overall general picture showed a positive and significant effect.

**Table 1: Regression Model for organization promotion and product branding**

Variables regressed	Adjusted R <sup>2</sup>	F	Sig.	Interpretation	Decision on Ho
Production of sugar Vs Raw material availability	.120	22.290	.000	significant effect	Rejected
Coefficients	Beta	T	Sig.		
(Constant)	—	31.798	.000	significant effect	Rejected

**Source:** primary data

The Linear regression results in Table 9 above indicate that Raw material availability significantly affects Production of sugar ( $F=22.290$ , sig.  $=0.000$ ). The results indicate that the constructs of Raw material availability included in the regression model contribute over 12% towards variations in all the aspects of Production of sugar in Kakira Sugar works (Adjusted  $R^2 = 0.120$ ). The coefficients section of this table indicates the level to which Production of sugar affect production of sugar and this is indicated by Beta values. This implies that for production of sugar to improve and flourish, the management in Kakira sugar works should come up emphasis raw material availability, should be hardly thought of if they want to boost production of sugar in Kakira sugar works.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATION.**

#### **5.0 Introduction.**

This chapter involves the limitation of study, conclusions, recommendations and areas for future research

#### **5.1 summaries of findings**

According to results got from Kakira Sugar Company employees and customers, show that there is raw material availability. This shows that 50% of sugar produced in Uganda comes from Kakira sugar works.

It was that all customers who get the product directly to the company in the huge amounts get a huge discount of a third ( $1/3$ ) for each and every ton that is bought from Kakira Sugar Company.

It was noted that Kakira sugar prices at the company is 2000 Uganda shillings for direct buyers and 3500 to the retailers shops for a kilo

It was noted that Out grower Farms poses a range of around 15,000 hectares however, the new Sugar Company would not only supply seed-cane to these Out grower Farmers, but would also provide complete extension services, which will include advice on land suitability, land development, land preparation, planting techniques, maintenance practices, use of agro-chemicals (fertilizers, weedicides and pesticides), harvesting, land/soil improvement and other crop husbandry practices.

It was noted that the company has developed the required infrastructure for its operations this would include offices; stores for consumables; workshops for factory mechanical and electrical equipment as well as for agricultural equipment; staff housing; workers camps; schools for all employees; a central hospital (as well as a mobile health unit); staff recreational facilities; etc. Development of a sugar complex requires development of roads in the Out grower area, which benefit the entire community who grow food and other crops in addition to sugarcane.

It was discovered that high sugar quality and the existence of the company of over 30 years of Kakira has attracted the consumption of Kakira sugar.

This was noted that the price levels of Kakira sugar can also determine the demand and supply of sugar in Uganda.

## **5.2 conclusions**

- I. The over all purpose of the study was to find out the relationship between the raw material availability and sugar production. The main method of collecting data was purposive and questionnaires were structure to get the primary data. The findings got from Kakira sugar works are important to many citizens of Uganda.
- II. The study confirmed that raw material availability affect the level of sugar production as it is discovered in a research.
- III. The research also said that the scarcity of canes also affect the level of sugar production at Kakira mostly during the dry seasons which leads to the price rise of the product.
- IV. The study also suggested the establishment of a fixed price of sugar to all retail shops all over Uganda.

### **5.3 Recommendation.**

- I. Kakira Company should provide adequate training to the staff on how to utilize the available resources and raw materials.
- II. Kakira Sugar Company should also establish new variety of products like sweet with the same brand of kakira so that all kinds of customers are covered.
- III. Kakira also should consider trade credit to the customers so as to increase the sales of sugar in order to increase returns.
- IV. Kakira should also increase on the seeds spread to its outside growers so as to increase the cans that are brought in by the out growers so as to increase more of the sugar production than now.
- V. Kakira should can also ask the government to reduce on the levels of taxes that are collected on the production of sugar so that prices of sugar can directly reduce on a local consumer of sugar.

### **5.4 planning, testing and monitoring**

Production companies should evaluate the risk associated with raw material availability and production levels and kakira board should implement a comprehensive program to manage the raw material availability risk prior to implementation of production activity.

Planning, testing and monitoring Kakira raw materials activity should be conducted as part of the system development methodology and risk management process of sugar production which involves in the a dynamic environment that requires continuous testing and monitoring.

## **5.5 Limitations other study**

**The research was subjected to various problems ranging from;**

Lack of enough finance resources to carry out the research adequately

The time factor was not adequate owing to the bulk information needed

Obtaining information from Kakira Sugar Company was difficult due to fear that information might be leaked to their competitor.

## **5.6 Area for further research.**

Due time problems, the project could reflect the issues of raw materials as related to sugar production in the production industry hence there is need for further research

**The following are further research topics**

- I. Inadequate raw materials and sugar production.
- II. Relation between government taxes and production of basic products.
- III. Price rates and development of agricultural products like sugar.
- IV. Contribution of raw materials and production of basic products.

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## APPENDICIES

### APPENDIX (1) RESEARCH INSTRUMENT

#### Questionnaire

I am a student of Kampala international university pursuing a bachelor of business administration and I am carrying out a research study on raw materials and production of sugar at Kakira sugar works in Jinja district Uganda. This questionnaire intended to collect data on the about matter, Therefore this kindly requests you to feel this questionnaire properly in spaces left below.

**(Tick where applicable)**

#### Part 1: Social demographic characteristics

##### Profile of the respondents

1. Name

##### 2. Gender

(a) male

(b) Female

##### 3. Marital status

(a). married

(b). single

##### 4. Age

(a). below 20

(b). 20-30

(c).30-40

(d). 40 and above

##### 5. Highest educational level attained

(a). primary

(b). secondary

(c). university

- (d). masters
- (e). PhD

**6. Business form**

- (a). sole proprietorship
- (b). partnership
- (c). co-operation

**7. Number of employees**

- (a). 40-30
- (b). 40 and above

**8. Number of years in the business**

- (a). 5000-7000
- (b). 7000-7500
- (c). 7500 and above

**Part 2: level of raw materials available.**

**(9) The level of raw materials availability**

- (a). very high
- (b). high
- (c). low
- (d). very low

**(10). How effective is the level of raw materials in the production of sugar at Kakira**

- (a). very effective
- (b). effective
- (c). Less effective

**(11). How dose the scarcity of raw materials affect the level of sugar production at Kakira sugar works**

- (a). Very high
- (b). high
- (c). low
- (d). very low

**(12). Can the scarcity of raw materials lead to the price increase of sugar?**

(a). yes

☐

(b). no

☐

(c). not sure

☐

**Part 3: level of sugar production**

**Success of sugar production at Kakira**

1. Quality sugar

☐

2. Good customer care

☐

3. Presence of consumers

☐

4. Low price rates

☐

5. Good management skills

☐

**(13) What do you consider to be the cause of success of sugar production at Kakira sugar works jinja district**

(a). 1 only

☐

(b). 1 and 2

☐

(c). 4 only

☐

(d). 3, and 5

☐

**(14) What is the attitude of the employees towards the management of Kakira sugar production levels?**

(a) Negative

☐

(b) Positive

☐

**(15) Do you consider the answer in question 15 to have a significant effect on Kakira Sugar Company?**

(a) Yes

☐

(b) No

☐

(c) Not sure

☐

**(16) Do tax holiday result to success of sugar production?**

(a) Somehow

☐

(b) True

☐

(c) Very true

☐

(d) False

☐

**(17) The price rate at which Kakira is selling sugar is?**

(a) Low

☐

(b) High

☐

(c) Very high

☐

(d) Very low

☐

**(18) How do you relate raw materials and production of sugar at Kakira sugar works?**

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## **INTERVIEW GUIDE**

This is an instrument which involves a researcher asking direct questions from the respondents face to face. The researcher used this interview guide to ask the following questions

- I. How does the price rate affect the production activity in Kakira sugar works?
- II. How does Kakira compute its interest rates?
- III. Is the current price rate favorable to the company?
- IV. How do customers react towards the price rate charges of sugar by Kakira sugar works?
- V. How does the government affect the price rate of sugar at Kakira sugar work

The following are the expenditures that incurred during the preparation of the report.

**APPENIX (2) STUDY BUDGET**

<b>Items</b>	<b>Quantity</b>	<b>Amount</b>
Papers	1 ream	10,000=
Pens	5	2,500=
Typing		50,000=
Internet surfing		15,000=
Binding		60,000=
<b>TOTAL</b>		<b>137,500=</b>

### APPENDIX (3) TIME FRAME

ACTIVITY	DURATION (2012/2013)
Proposal writing	April 03-20
Familiarizing with the research are and the people	April 21-26
Collecting data	May 27-31
Analyzing the data (Dissertation)	June 26-29
Documenting the data	July 20 <sup>th</sup> -28 <sup>th</sup> Aug