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*Full Length Research Paper*

# Assessment of risk management practices in dangote cement factory, Ethiopia

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**This study aimed to assess the risk management practices in Dangote Cement Factory, Ethiopia. Descriptive research design was employed in this study along with quantitative and qualitative research approaches. The total population was 353 of which 192 respondents were selected using simple random sampling technique. In addition to this, four managers were chosen for interview using purposive sampling technique. The primary information or data were gathered using structured survey which enclosed both open and close ended questions. Moreover, data were analyzed using both descriptive analysis like frequency and percentages and inferential statistics with the help of Statistical Packages of Social Scientist 20 version computer software. The findings of this study shown that there was no awareness created regarding training of the risk management process in the company. Moreover, packing plant risk and material risk were the most faced risks in Dangote Cement Factory. Finally, the study recommended that, the company is better to provide awareness creation, and continuous training, fulfilling personal protective equipment and establishing safety supervision staff committees.**

**Key words:** Risk, risk management, dangote cement factory, Ethiopia.

## INTRODUCTION

Risk is inevitable alike the common death of people and companies' taxes. It is one of the rare things in human life that is unavoidable. All kinds of businesses, regardless of their size and shape, in any environments they function and no matter what goods and services they deliver, are continuously exposed with a multiple of risks, large or small. Certainly, businesses can only flourish by effective risk taking as argued by (Osborne, 2012). Besides, risk arises due to uncertainties, which in turn arises due to changes that could take place in the economic, social and political environments and as well as due to lack of information availability regarding such changes. Risk is

also an exposure to a transaction with loss, which occurs with some probability where such loss can be expected, measured and minimized.

In financial institutions and manufacturing companies, risk results from variations and fluctuations in assets or liabilities or fluctuation both in incomes from assets or payments on liabilities or variation in outflows and inflows of cash. In today's world, banks are facing various types of risks in the course of their service delivery and hence, a bank manager should ensure that he/she has a clear understanding of these risks to take sound measures effectively manage them. Therefore, bank managers

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have to be “risk intelligent”. Risk intelligence defined as the ability to make informed decisions based on past, current and future data (Whipple, 2010). In banks and financial institutions, risk considered the most important factor of earnings.

Therefore, they have to balance the relationship between risk and return. In reality, it can be said that management of financial institution is nothing but management of risk. Managing financial risk systematically and professionally becomes an even more important task. Rising global competition, increasing deregulation, introducing of innovative products and delivery channels has pushed risk management to the forefront of today's financial landscape. Ability to measure the risks and take appropriate position will be the key to success. It can be said that risk takers will survive, effective risk managers will prosper and risk averse are likely to perish.

According to Osborne (2012), risk management has an essential role in one's decision-making, whether or not it regards to start-up of business, developing strategies, taking advantage of opportunities, managing ones several projects or in one's business on a daily bases operations. Risk management can support to rationalize to the management group, employees, business stakeholders, investors, creditors and clientele.

In addition the research attempts to examine the incorporation of a formally delegated risk management body within a company structure, along with the necessary resource allocation, that is based on an established risk management policies, strategies and procedure which provides the guideline for the process of defining the risk appetite and identify and measure the major risks of a company in order to treat and exploit these risks. In addition, the research examines the existence of a periodic internal audit review that ensures the implementation of risk management policies and procedures.

### **Problem statement**

Manufacturing companies currently working in a situation marked by rising customer preferences, growing regulatory necessities, technological revolution and increasing competition (Ariful and Tedford, 2012).

In Ethiopia, the competition within the manufacturing industry has generated a greater concern to manage the entire activities of banks in order to avert any possible risks that may occur. The regulatory body believes that the growth should be matched with strong risk management Practices. However, the previous studies on risk management practices of manufacturing in Ethiopia were highly undertook. The exception to this argument is that the available various studies gave focused to assess types of risks. For instance, Fasika (2012) has investigated selected Ethiopian commercial banks operational risk management, Tefera (2011) has

studied on the effects of credit risk management regarding the effectiveness of commercial banks operating in Ethiopia, Liza (2018) identify the determinant of liquidity risk management of commercial banks in Ethiopia and risk management practice in commercial banks in Ethiopia, Haile (2016); JICA (2015).

Therefore, limited attention was given to the assessment of risk management practices on manufacturing companies. Furthermore few studies were conducted like; Debela (2009) on risk management practices in manufacturing companies in Ethiopia. Therefore, number of researcher studied risk which were faced in a manufacturing company mainly like; credit risk, liquidity risk, operational risk However, this study is aimed for the extension of the literature on this area by evaluating the several kinds of risks confronted including packing risk in manufacturing companies specifically on Dangote Cement Factory and intends to fill the existing literature gap.

### **Basic study questions**

For this study, the following basic research questions are developed. These are:

- 1) What are the nature, structure and strategies of risk management practices of Dangote Cement Factory?
- 2) What kind of risks is exposed in Dangote Cement Factory?
- 3) Are the staffs in Dangote Cement Factory familiar with the concepts of risk and its associated management?
- 4) What are the risk management mechanisms used by Dangote Cement Factory?

### **Research objectives**

#### **General objective**

The general objective is to investigate the risk management practice in Dangote Cement Factory.

#### **Specific objectives**

In connection with the above overall objective of the study, the listed precise objectives were designed to solve the basic research questions.

- 1) To evaluate the nature of risk management practices, strategies and objectives mostly used in Dangote Cement Factory.
- 2) To identify the type of risk exposures faced by Dangote Cement factory.
- 3) To ascertain the nature of risk management practice in Dangote Cement Factory.
- 4) To identify the process adopted by the Dangote Cement Factory for risk management.

**Table 1.** Summary of types of risks.

Types of risk	Author(s)	Definition(s)
Credit risk	Greuning and Bratanovic (2009)	-is the probability that a borrower of a financial instrument if an individual, a corporation, or a state will fail to pay principal and other investment related interests as per the terms stipulated in a credit contract
Liquidity risk	Gup and Kolari (2005)	-is defined as the hazard to earnings or capital related to a bank's capacity to meet its responsibilities to creditors and the wants of debtors by changing assets into cash swiftly with least loss, being able to borrow moneys when wanted, and having funds accessible to execute gainful securities transaction deeds
Market risk	Saunders et al. (2006)	-refers market risk as the chance of forfeiture to bank produced by the variations in the marketplace conditions
Interest rate risk	Gleason (2000).	-refers the possible adverse effect on the net interest revenue and is the exposure of an organizations financial situation to the changes in interest rates.
Foreign exchange risk	Raghavan (2003)	-defines as the risk that a bank could expose to loss as a result of hostile exchange percentage undertaking throughout a period in which the business has open position, either spot or forward.
Operational risk	(Njogo, 2012)	-referred as the hazard of straight or unforeseen loss resulting from insufficient or unsuccessful interior processes, persons and schemes or from outside events

Source: Compiled by the researcher.

## LITERATURE REVIEW

### Theoretical literature

this part of the study talks about the different theoretical aspects of risk like its definition, types, management and others as well as empirical issues and works as to the risk management practice in the banking industry discussed.

### Defining risk

Risk is all about uncertainty. That is inability to precisely determine what will occur in the future, as the future is full of uncertainty. With regard to what is a risk Osborne (2012) has claimed that, what people stressing is a future difficulty, opportunity or the possible future consequence of a decision that can be decided today. And also each and every decision pass or any act taken comprises of some sort of risk. Furthermore, Osborne (2012) has indicated that, risks can be occurred because of peoples own business activities or because of outside forces like as regulations, market factors, and exchange rate volatilities, the actions of others or can be weather conditions.

### Types of risk

Banking is the bridge between money savers on one side and the financial seeking corporate entrepreneurs on the other side. As a result, in the procedure of providing financial services, banks can undertake numerous types of risks which might both financial and non-financial. Furthermore, this risk characteristic in the delivery of their facilities fluctuates from one product or service to the

other (Adarkwa, 2012). Various writers have categorized these risks in different manners to form the structures for their investigations (Table 1).

### Process of risk management

It is significant that a risk managing policy can be formed early in a project and such risk could be persistently solved through the project life cycle. Risk management contains numerous related activities which includes risk: planning, identification, analysis, response, and monitoring and control as indicated by Kerzner (2017).

### Risk planning

Risk planning process explains how to practice risk management frame's sub-processes. Without having risk planning, managers do not know accurately what, when and how to do.

This process makes the company for risk management like developing strategies, forming the process which should be engaged and their instruction, any other properties which may be needed, who is accountable for precise procedures and could even contain trainings or discussions for enlightening the risk management professionals of personnel (PMBOK, 2008). This kind of plan is crucial to communicate with and get agreement and backing from other all participants to safeguard the risk management procedure is reinforced and achieved efficiently throughout the project life cycle.

### Identification of risk

Risk identification is an important step compared with



another steps in the risk management procedure like analysis and responses are the only fruitful probable risks identified accurately (Toakley and Ling, 1991; Yang et al., 2005).

According to Chapman (2011), the purpose of this step is to identify both the threats to the business with the potential of reducing and eliminating the probability of the firms attaining its goals, and the chances, which may improve business firms' performance. External factors which may include economic, political, socio-cultural, technological and environmental as well as internal factors including infrastructure, personnel, process and technology may affect successful achievement of objectives (Marchetti, 2011).

PMBOK in similar way defines risk identification as the process of defining which risks could impact the project and recording their features. According to Kerzner (2017), risk identification should remain through all the project stages and is vital that such identification process dealt with the foundation of the risk than the incident itself or the effect it possess.

This is since the risk taker could do something about the bases of the risk, but not actually do very plentiful about the occurrence or the impacts (Roberts and Wallace, 2004).

Tayntor (2010), states that there some probable methods for identifying risks. As risk identification is a process of uncovering potential risk according to the PMBOK (2008).

The output is a risk register which clearly defines and explains each risk, which is referred to and incrementally developed throughout the overall risk management process (Chapman, 2011; Jordan, 2013). Also risks can be analyzed using different qualitative and quantitative analysis.

### **Qualitative analysis**

Once high risk has been identified and listed, the quality assurance tests need to be incorporated in the risk register document. The first procedure is to give a brief, clear explanation of each risk to avoid ambiguity and confusion. After a risk has been identified, it should be categorized according to its source (there should be enough sections to cover as many risks as possible), and a negative event that would expose the risk should clarified (PMBOK, 2008).

### **Quantitative analysis**

While the qualitative risk assessment is an excellent tool for assessing individual risks, quantitative risk analysis analyzes the combined impact of project risks. This is usually the end of an accurate assessment of the overall risk of a project, and should be done where necessary

(Hillson and Murray-Webster, 2017). Two popular Qualitative risk analysis techniques are the Monte Carlo Simulation and the use of the decision tree.

### **Review of empirical literature**

An efficient risk management helps construction companies to classify and measure risks and to consider risk control and risk reduction strategies. Construction companies that can manage risk successfully and proficiently enjoy financial savings, and greater productivity, enhanced success rates of new projects and well decision making. Straw (2015), states that the area of risk and uncertainty is particularly important in project management and is a natural element of projects. That is why risk management can be acceptable on nearly all projects whereas, the level of implementation could differ from project to project, based on such factors like size, kind of project, who the client is, in connection to the corporate strategic design, and company culture. Risk management is mainly vital when the general risks are high and a excessive deal of ambiguity exists. In the past, we treated risk as a "let's live with it." Nowadays, risk management is a main part of overall project management. It obliged us to emphasis on the forthcoming where uncertainty occurs and develops appropriate plans of action to avoid potential matters from unpleasantly impacting the business project Kerzner (2017).

A Survey was conducted by Frezewed (2016), regarding practice of project risk management in the case of Batu and Dukem town water supply projects and it revealed that risk management knowledge area is practiced little in the projects. The study also showed that there is no practice of assigning a risk manager, whose primary responsibility is managing risks. The same study sited that, other studies done in the country in the areas have also found similar findings. According to Yimam (2011), the practice of risk management in Ethiopia is very little and undeveloped.

A study conducted by Debela (2018), the practice of construction risks management with insurance in the Ethiopian federal road projects exposed that formal risk management is failed to be practiced very well. The road construction perils are not be able to manage through recognized risk management scheme. Nevertheless, there are repetitive practices utilized to manage risks. Such old practices, although contribute to risk management, do not follow to the formal risk management procedures which contains risk management preparation, identifications, evaluations, reaction planning, and monitoring. The above discussion on theories and summary of findings of related studies clearly indicates that project risk management practice is important to lead projects towards success by reducing the negative impact of risks and uncertainties.

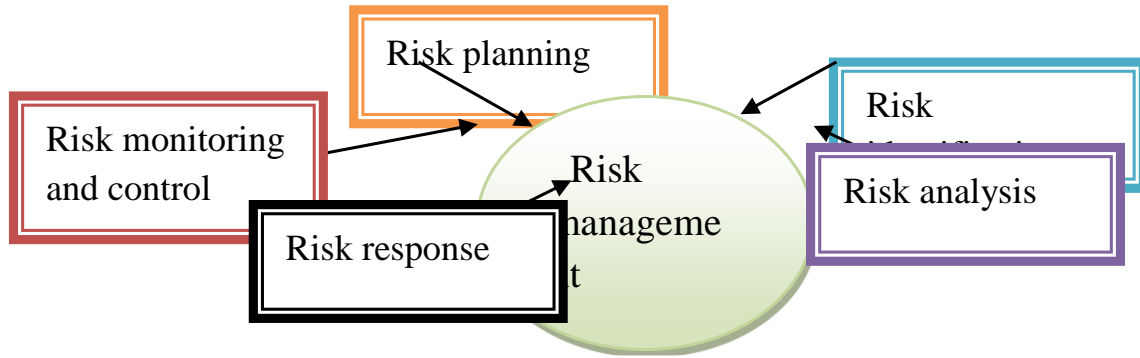


Figure 1. Own Conceptual Framework

**Conceptual framework**

Based on the above theoretical and empirical literatures the Figure indicated that conceptual frame work was developed for the purpose of the study (Figure 1).

**METHODOLOGY**

**Research design**

Research design reveals the research procedures used to generate important data for the research or dissertation. The research design was employed to describe the target population, sampling and sampling procedures. The methodology in data acquisition, techniques used to collect data and data analysis are also included in this research design. The descriptive research design was employed to describe the assessment of risk management practice in Dangote Cement Factory.

**Research approach**

Referring to Creswell (2009), there are three basic research approaches; these are quantitative, qualitative and mixed research approaches.

**Source and method of data collection**

In order to carry out any research activity, information or data would be gathered from proper source. According to Koul (2006), the reliable and consistent research, shows that the research was done by using suitable data gathering tools for increasing the creditability and value of research findings. The research used was primary data. The primary data collect both open-ended questions and closed ended questions likert scale in semi structured questionnaires.

**Study population and sampling frame**

Sampling can be defined as the process of selecting, from abundant large population, a group which desire to make generalized declarations so that the selected part represents the total populations (Leedy, 1989:158).

Among all department of the study company, five departments are the most faced by risk. Therefore, all employees of five

departments including agents of Dangote Cement Factory as target population of the study. The researcher considered all of these five departments of employees for this study as a population and to find out more information four position person (Manager of the company, assistant manager of the company, Head, of risk management and supervisor) was selected purposively. The researcher believed that from the fact that those who have close taking part in risk management practice than others.

**Sample size determination**

The sample size can be determined following Yammane’s formula (1967). The formula used to determine the sample size is:  $n = N/1+N (e)^2$ .

Where, n refers to the sample size, N is the population size, and e is the level of precision.5% level of significance/precision is chosen.

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

$$n = 353/1+353(0.05)^2 = 188+4 = 192$$

**Sampling proportional allocation**

Stratified sampling methods, is next to identifying the sample size using the above written equation, the researcher exhibited the projected sample scope to the strata under the study. One of such method is referred to as proportional allocation. It is utilized when the size of the sample from particular strata is proportional to the size of the strata. In proportional sample allocation, a trivial sample took small strata, huge sample took large strata, and the sample size in each stratum must be proportional (Table 2).

$$nh = \frac{nN_h}{N}$$

$$N = \sum N_h = \text{total number of employees}$$

$$N_h = \text{total number of population size in stratum- h}$$

$$n = \sum n_h \dots \text{total number of sample}$$

- $n_h = \text{total number of sample size in stratum- h}$
- Stratum- $N_1 = 15$ –Sales and Marketing
- Stratum- $N_2 = 17$  - Finance
- Stratum- $N_3 = 135$ –Packing Plant

**Table 2.** Respondents Strata.

S/N	St Departments	Population size	Strata
1	Sa Sales and Marketing	15	8
2	Fi Finance	17	9
3	Pa Packing Plant	135	72
4	M. Material Management	48	26
5	Pr Production	138	73
<b>Total</b>		353	188

Source: own survey, 2020.

**Table 3.** Summary of reliability statistics (Cronbach's Alpha).

Reliability statistics	
Cronbach's Alpha	N of Items
0.814	31

Sources: SPSS Output, 2020.

Stratum-N<sub>4</sub>= 48–Material Management  
 Stratum-N<sub>5</sub>= 138–Production

$$n_h = \frac{nN_h}{N}$$

$$n_1 = \frac{nN1}{N} = 188 * 15 \div 353 = 7.98 \approx 8$$

Where n<sub>1</sub> is sample size for sales and marketing

$$n_2 = \frac{nN2}{N} = 188 * 17 \div 353 = 9.05 \approx 9$$

Where n<sub>2</sub> is sample size for finance

$$n_3 = \frac{nN3}{N} = 188 * 135 \div 353 = 71.89 \approx 72$$

Where n<sub>3</sub> is sample size for packing plant

$$n_4 = \frac{nN4}{N} = 188 * 48 \div 353 = 25.56 \approx 26$$

Where n<sub>4</sub> is sample size for material management

$$n_5 = \frac{nN5}{N} = 188 * 138 \div 353 = 73.49 \approx 73$$

Where n<sub>5</sub> is the sample size for production.

**Method of data analysis**

Since this paper is the descriptive type of study, to achieve the objective of the study, collected data were examined with the help of Statistical Package for Social Scientists (SPSS) 20Version.

These descriptive statistics variables were analyzed using frequency and percentage.

**Validity and reliability**

Kothari (2004), states that Pilot testing was done to check the

reliability and validity of the instrument of data collection before using it. Validity is concerned with the extent to which a tool measures what it is expected to measure. Reliability on the other hand is concerned with consistency in measurement and can be studied through measuring the degree of uniformity between numerous measures of a hidden variable (Hair et al., 2006). The reliability of the items in the instrument was measured using Cronbach's alpha which is the most frequently used reliability test to measure internal consistency when using Likert scale.

In reference to Brymanan Bell (2003) Cronbach's Alpha reliability test was run in the data gathered to measure the consistency of the data. The overall Cronbach's alpha result of the 31 items was 0.814 (81.4%) which is still higher than the minimum alpha value set as acceptable (that is, 0.70). The Cronbach alpha result summary obtained from SPSS is indicated in Table 3.

**RESULT AND DISCUSSIONS**

**Response rate**

A total of 192 likert scale questionnaires including 5 open ended questionnaires were distributed to five different departments and four different person of Dangote Cement Factory by the researchers to collect primary data. Out of this, 157 questionnaires are completed and used for data analysis (Table 4).

A total of 157 questionnaires were returned with complete responses, which 7 were from sales and marketing, 9 were from Finance, 54 were from Packing plant, 22 were from Material management, 61 were from production departments, 1 was from Head of risk management, 1 was from manager, 1 was from assistant manager, and 1 from supervisor, which results in a response rate of 87.5%, 100%, 75%, 84.6%, 83.5%, 100%, 100%, 100%, 100% respectively. In general, out of 192 likert scale questionnaires including 5 open ended questioners 157 were returned which provides 82% response rate.

**Respondents' demographic information**

As shown in Table 5, 157 (100%) of the respondents were male and Zero of the respondents was female. Based on the information, the authors can infer that all respondents were male. This implies that there is no work force diversity which is not good for the organization since it seems gender biased. The level of education 127(80.9%), 30(19.1%) and 0(0%) were First degree, second degree and above and Diploma and below respectively. Based on the information the majority of the respondents' educational levels were first degree. This indicates that the organization is competitive in terms of having educated man power. The experience of the respondents were 84(53.5%), 67(40.5%) and 32(42.7%) were greater than 6 years, 3 to 5 years and 0 to 2 years respectively. So, this implies that majority of work experiences of the respondents were greater than six years.

**Table 4.** Response rate.

	Sales and Marketing	Finance	Packing plant	Material Mgt	Production	Head, RM	Manager	Ass.Mgr	Supervisor	Total
Distributor	8	9	72	26	73	1	1	1	1	192
Returned	7	9	54	22	61	1	1	1	1	157
Response Rate	87.5%	100%	75%	84.6%	83.5%	100%	100%	100%	100%	82%

Source: own survey, 2020.

**Table 5.** Demographic profile of the respondents.

<b>Gender of respondents</b>					
		Frequency	%	Valid %	Cumulative %
Valid	Male	157	100.0	100.0	100.0
<b>Respondents' Level of Education</b>					
		Frequency	%	Valid %	Cumulative %
Valid	First Degree	127	80.9	80.9	80.9
	Second degree and above	30	19.1	19.1	100.0
	Total	157	100.0	100.0	
<b>Work Experience</b>					
		Frequency	%	Valid %	Cumulative %
Valid	0 to 2 years	6	3.8	3.8	3.8
	3 to 5 years	67	42.7	42.7	46.5
	Greater than 6 years	84	53.5	53.5	100.0
	Total	157	100.0	100.0	

Source: own survey, 2020.

**Table 6.** Perception of respondents on strategic objective.

<b>The company considers risk management control among its strategic objectives</b>					
		Frequency	%	Valid %	Cumulative %
	Strongly Disagree	7	4.5	4.5	4.5
	Neutral	41	26.1	26.1	30.6
	Agree	69	43.9	43.9	74.5
Valid	Strongly Agree	40	25.5	25.5	100.0
	Total	157	100.0	100.0	

Source: Own computation, 2020.

### Perception of respondents on general risk management practice

As shown in Table 6, the existence of risk management control as one of the strategic objective, 7(4.5%) respondents were strongly disagree 0(0%) respondents disagree, 41(26.1%) respondents neutral, 69(43.9%) respondents agree and 40(25.5%) of the respondents were strongly agreed respectively. The result showed

that, risk management control was one of the strategic objectives of Dangote cement factory Ethiopia.

The company has clear risk management strategic plan, in the above Table 7, 2.5% responded strongly disagree, 15.3% said disagree, 20.4% said Neutral, 43.9% said agree and 17.8% of the respondents were said strongly agree. So most of the respondents agree 43.9 on the statement of the company has clear risk management strategic plan while the 2.5 least. This

**Table 7.** Perception of respondents on strategic plan.

<b>The company has clear risk management strategic plan</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
	Strongly disagree	4	2.5	2.5	2.5
	Disagree	24	15.3	15.3	17.8
	Neutral	32	20.4	20.4	38.2
	Agree	69	43.9	43.9	82.2
Valid	Strongly Agree	28	17.8	17.8	100.0
	<b>Total</b>	<b>157</b>	<b>100.0</b>	<b>100.0</b>	

Source: Own computation, 2020.

**Table 8.** The Company has established risk management committee under each department.

<b>The company has established risk management committee under each department</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
	Strongly disagree	38	24.2	24.2	24.2
	Disagree	48	30.6	30.6	54.8
	Neutral	16	10.2	10.2	65.0
Valid	Agree	45	28.7	28.7	93.6
	Strongly Agree	10	6.4	6.4	100.0
	<b>Total</b>	<b>157</b>	<b>100.0</b>	<b>100.0</b>	

Source: Own computation, 2020.

**Table 9.** There is brief risk management framework and guideline.

<b>Company's has brief risk management framework and guideline</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
	Strongly disagree	13	8.3	8.3	8.3
	Disagree	29	18.5	18.5	26.8
	Neutral	26	16.6	16.6	43.3
	Agree	53	33.8	33.8	77.1
Valid	Strongly Agree	36	22.9	22.9	100.0
	<b>Total</b>	<b>157</b>	<b>100.0</b>	<b>100.0</b>	

Source: Own computation, 2020.

implies that company has declared clear risk management strategic plan.

Respondents were requested to perception whether there is established risk management committee under each department of the company and their responses were in the Table 8 where 24.2% (38) of them strongly disagreed and 30.6% (48) disagreed while 10.2% (16) of them were still not certain whether there exists established risk management committee under each department or not. In contrast, 27.7% (45) of the respondents agreed 6.4% (10) of them strongly agreed even. From these results, it can be seen that majority of the respondents were not sure (not agreed) with the

existence of risk management committee under each department in the company.

The researcher continued to request whether there are brief risk management framework and guidelines in their respective companies and the responses were as tabulated in Table 9 and, it can be seen that only 8.3% (13) strongly disagreed, 18.5 % (29) disagreed while 16.6% (26) of them were neutral that there are brief risk management framework and guidelines in their respective companies. But, 33.8 % (53) and 22.9 % (36) of them agreed and strongly agreed respectively that there are brief risk management framework and guidelines. And, it can be observe that most of the

**Table 10.** The Company policy encourages training programs in the area of risk management.

<b>The Company's policy encourages training programs in the area of risk mngt</b>				
	<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
	Strongly disagree	16	10.2	10.2
	Disagree	33	21.0	31.2
	Neutral	25	15.9	47.1
	Agree	51	32.5	79.6
Valid	Strongly Agree	32	20.4	100.0
	Total	157	100.0	100.0

Source: Own computation, 2020.

**Table 11.** The Company has standardized risk management process flow that clearly understood by all members of the company.

<b>The company has standardized risk management process flow that clearly understood by all members of the company</b>				
	<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
	Strongly disagree	19	12.1	12.1
	Disagree	39	24.8	36.9
	Neutral	30	19.5	51.0
	Agree	59	37.6	88.5
Valid	Strongly Agree	10	6.4	94.9
	Total	157	100.0	100.0

Source: Own computation, 2020.

respondents agreed or strongly agreed that their existence of brief risk management framework and guidelines.

The company's policy encourages training programs in the area of risk management, in the above Table 10, 10.2% responses strongly disagree, 21% said disagree, 15.9% said Neutral, 32.5% said agree and 20.4% of the respondents were said strongly agree. So most of the respondents were agree 32.5 on the statement of the company policy encourages training programs in the area of risk while the least 10.2. This implies that company's policy highly encourages training in the areas of risk management to control risk will occur in the companies.

The company has standardized risk management process flow that clearly understood by all members of the company; as depicted in Table 11, 12.1% (19) of the respondents were strongly disagree 24.8% (39) were disagree, 19.5% (30) of them neutral, 37.6% (59) respondents were agreed with the statement and 6.4% (10) were strongly disagree. This implies that the greater part of the respondents were agreed with the company has standardized risk management flow within the company and briefly understandably by all members.

The researcher requested the respondents on the effective risk management practice enhance the performance of the company, the respondents forwarded their responses as Table 12; 3.8% (6) said strongly

disagree, 8.9%(14) disagree on the statement, 13.4%(21) were neutral, 32.5% (51) were agreed and 41.4% (65) were strongly agreed on the statement of the effective risk management system enhance the performance of the company.

The perception of the Respondents was requested on Effective and appropriate risk management tools available in the company in the Table 13 4.5% (7) of them strongly disagreed and 2.5% (4) disagreed while 35% (55) of them were still neutral. In contrast, 25.5% (40) of the respondents agreed and only 32.5 % (51) of them were strongly agreed. From these results, we can see that majority of the respondents were whether effective and appropriate risk management tools available in the company or not available.

As illustrated in the Table 14, 8.5% (13) and 17.8% (28) of respondents strongly disagree and disagree respectively on the existence of well planning done to perform risk management in the company; while 31.2% (49) of respondents shared their views by neutral and agreeing to the statement of a well planning and 11.5% (18) of the respondents strongly agreed.

As far as stakeholder involvement is concerned, 22.3% (35) and 42% (66) of respondents disagree and neutral respectively to the existence of stakeholder involvement in the planning of risk management; 24.2% (38) and 11.5% (18) of respondents agree and strongly agree

**Table 12.** Effective risk management system enhances company's performance.

<b>Effective risk management system enhance company's performance</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
Valid	Strongly disagree	6	3.8	3.8	3.8
	Disagree	14	8.9	8.9	12.7
	Neutral	21	13.4	13.4	26.1
	Agree	51	32.5	32.5	58.6
	Strongly Agree	65	41.4	41.4	100.0
	Total	157	100.0	100.0	

Source: Own computation, 2020.

**Table 13.** Effective and appropriate risk management tools available in the company.

<b>Effective and appropriate risk management tools available in the company</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
Valid	Strongly disagree	7	4.5	4.5	4.5
	Disagree	4	2.5	2.5	7.0
	Neutral	55	35.0	35.0	42.0
	Agree	40	25.5	25.5	67.5
	Strongly Agree	51	32.5	32.5	100.0
	Total	157	100.0	100.0	

Source: Own computation, 2020.

**Table 14.** Respondents' perception towards risk management planning.

<b>There is well planning done to perform risk management</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
Valid	Strongly disagree	13	8.3	8.3	8.3
	Disagree	28	17.8	17.8	26.1
	Neutral	49	31.2	31.2	57.3
	Agree	49	31.2	31.2	88.5
	Strongly Agree	18	11.5	11.5	100.0
	Total	157	100.0	100.0	
<b>Concerned stakeholders are involved in the planning and performing of managing risk.</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
Valid	Disagree	35	22.3	22.3	22.3
	Neutral	66	42.0	42.0	64.3
	Agree	38	24.2	24.2	88.5
	Strongly Agree	18	11.5	11.5	100.0
	Total	157	100.0	100.0	
<b>Trainings are planned to team members in the company on how to handle risk / uncertainties</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
Valid	Strongly disagree	21	13.4	13.4	13.4
	Disagree	14	8.9	8.9	22.3
	Neutral	45	28.7	28.7	51.0
	Agree	57	36.3	36.3	87.3
	Strongly Agree	20	12.7	12.7	100.0
	Total	157	100.0	100.0	

Source: Own computation, 2020.

**Table 15.** Respondents' perception towards risk monitoring and controlling.

<b>Companies are monitored and controlled based on the results</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
Valid	Disagree	27	17.2	17.2	17.2
	Neutral	43	27.4	27.4	44.6
	Agree	67	42.7	42.7	87.3
	Strongly Agree	20	12.7	12.7	100.0
	Total	157	100.0	100.0	
<b>Risks that are already faced in the project are controlled in line with the goal and objective of the Company</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
Valid	Strongly disagree	7	4.5	4.5	4.5
	Disagree	24	15.3	15.3	19.7
	Neutral	37	23.6	23.6	43.3
	Agree	81	51.6	51.6	94.9
	Strongly Agree	8	5.1	5.1	100.0
	Total	157	100.0	100.0	
<b>Risk Monitoring and controlling processes in the Company complies with the standards and procedures</b>					
		<b>Frequency</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
Valid	Disagree	14	8.9	8.9	8.9
	Neutral	58	36.9	36.9	45.9
	Agree	67	42.7	42.7	88.5
	Strongly Agree	18	11.5	11.5	100.0
	Total	157	100.0	100.0	

Source: Own computation, 2020.

respectively to concerned stakeholders involved in the planning and performing of managing risk. As shown in Table 14, the perception of the respondents on the statement; Trainings are planned to team members in the company on how to handle risk / uncertainties, 13.4% (21) of the respondents were strongly disagree, 8.9% (14) were disagreed on the statement, 28.7% (45) were neutral, 36.3% (57) and 12.7% (20) of the respondents were agreed and strongly disagree respectively.

From the above result, the researcher came to understand that majority of the respondents believed that they were no sure well planning and stakeholder's involvement done to perform risk management in the company and great part of the respondents agreed that trainings are planned to team members in the company on how to handle risk.

Table 15 shows, the distributions of the reactions of respondents to whether projects in the respective companies" projects are currently monitored and controlled as per the results of the risk management results and it can be seen that 17.2% (27) of them disagreed while 27.4% (43) of them remained Neutral. 42.7% (67) agreed and 12% (20) strongly agreed. This implies that, majority of the respondents agreed that projects in the respective companies are currently

monitored and controlled according to the risk analysis and responses results.

Another interesting statement posed by the researcher to know whether risk monitoring and controlling was no at the expense of their company's goals and objectives rather inline and supportive and the respondents reactions were as summarized in Table 15, where only 4.5% (7) of them strongly disagreed, 15.3%(24) of them were disagreed and 23.6% (37) of them were neutral. But, 51.6% (81) of the respondents had agreed and 5.1% ( 8) strongly agreed that risks were monitored and controlled in line with the goals and objectives of the companies. Therefore, it is deductible that majority of the respondents agreed that risks are monitored and controlled in line with the goals and objectives of the company.

The perception of the respondents were requested by the researcher who wanted to be reacted whether risk monitoring and controlling practices were in compliance with the standards and procedures and the respondents reacted as summarized in Table 15. As per to this Table 15, 8.9% (14 of them disagreed but 36.9% (58) of them were not sure or neutral whether risk monitoring and controlling practices were in compliance with the standards and procedures. But 42.7% (67) of the respondents agreed and the remaining 11.5% (18



strongly agreed. From these results, we can infer that greater number of the respondents was agreed to risk monitoring and controlling practices were in compliance with the standards and procedures of the perspective company.

## Conclusions

The key objective of this study is to evaluate risk management practice in Dangote cement factory in Ethiopia, the following conclusion are forwarded on the finding mentioned above about practice followed in these company. The findings of the study discovered that risk management control is one of the major strategic objectives of their companies.

They also added that their risk management strategies plan is clearly implemented and an already established risk management committee exists at company level. But the establishment of a risk management committee at department level is not yet organized by company and the finding of the result showed irregularity as far as handling of uncertainties that occur within the companies. In conclusion then is that departmental risk management committees would be well organized and works on the basis of regularity.

There is no systematic approach or a careful planning done to perform risk management in the company. Although the representation of relevant stakeholder was not most horrible, their involvement was not sufficient enough. Majority of the respondents believe that expert judgment or meetings is not considered while planning of risks. The study concludes that risk management planning should be done with experts to bring the desired results.

All team members do not play a role in identifying risks. Enterprise doesn't use the available method of risk identification adequately. The majority of source of risk in the company is packing plant risk followed by material and credit risks.

Risk responding processes are carried out by first properly identifying and allocating, in a well-defined manner and considering factors like budget, schedule and resources to avoid or minimize the negative of risks while improving its positive side. There existed no well-developed strategy to respond to risk but Controlling and reducing is the method most commonly practiced to respond to or mitigate risks that happened to occur in their companies. In conclusion, risk mitigation strategies need to be properly developed and implemented.

Risk monitoring and controlling practices of the case companies indicated that risks are monitored and controlled based on the current results of the projects and team members use available information to supplement project risk monitoring and controlling. Besides, study found that risk are monitored and controlled as per the goals and objectives of the companies though these

practices were not in compliance with the accepted standards and procedures. It can be concluded that the company under discussion need to practice risk monitoring and control as per standards and procedures available in risk management theories.

The most department which is familiar with risk in the company were Packing plant workers (employees), production department, Material management(store), operational management, sales department, finance, mechanical department (workshop area) etc, are familiar with the concept of risk, while the risk management department has responsibility to reduce or mitigate these types of risk happened in the company.

## RECOMMENDATIONS

Grounded on the conclusions of the research, the researcher suggested the below mentioned recommendations:

- 1) The companies should implement the risk management practice (control) strategies and guidelines with the involvement of all companies team members and stakeholders.
- 2) The Dangote cement factory in Ethiopia should provide awareness creation and continuous training regarding risk and its management system especially the department risk probability to happen; packing plant (employees).
- 3) To minimize the severity and frequency of the risk in the companies is better to establish risk management control at department level and risk supervision committee.
- 4) The company should give awareness to safety department to be properly matured and fulfill the personal, prospective equipment (PPE) for employees.
- 5) Since in the company risk happened in everywhere especially safety, physical disabilities and death of the employees; the Dangote cement factory in Ethiopia should better have safety supervision for staff committee
- 6) The company should be save from harm of employees from death risk, cement damage around the area of loading and land erosion risk with the factory bolt to save the company from repetition risk.

## CONFLICT OF INTERESTS

The authors have not declared any conflicts of interests.

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*Full Length Research Paper*

# **Factors affecting revenue collection at Tanzania official seed certification institute (TOSCI)**

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Revenue in the form of taxation, fees, service levy, licenses, customs, and excise duties is very important in ensuring efficient running of government operations. Taxation is a major source of revenue to governments all over the world. The study examined the factors affecting revenue collection at Tanzania Official Seed Certification Institute (TOSCI). The study adopted a descriptive research design based on mixed research approach. The study used a sample size of 70 respondents who were randomly selected while purposive sampling technique was used in selecting departments and directors. Both primary and secondary data were used, that is, primary data were collected using questionnaire and interview method while secondary data were obtained through documentary review. The study findings revealed that in the financial year 2015/2016 the institute's revenue target was not achieved due to lack of experienced and skilled revenue officers, lack of effective systems and procedures in revenue collection and low volume of service offered. It was further revealed that this ineffective revenue collection led to low working capital to facilitate daily operations, low liquidity level and hence a go-slow in progress towards achieving overall organizational strategic plan. Based on the study findings researchers came out with the measures to solve the problem of low revenue collection such as conducting training to revenue collection officers and reformulate revenue collection procedures.

**Key words:** Revenue collection, staff competency, volume of services, effective procedures.

## **INTRODUCTION**

Revenue collection is an important activity for all organizations (Edem, 2017). Revenue denotes the inflows

that make the achievement of organization objectives possible. The need to meet revenue collection targets is

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therefore an important preoccupation of private enterprises, government and non-Governmental organizations (NGOs). The inability to meet revenue collection targets may lead to liquidity problems (Liquidity Preference Theory) and financial distress (Financial Distress Theory), a situation where organizations are unable to meet their current and future obligations (Song'e, 2015).

According to Allen and Highfield (2013), the primary goal of a revenue body is to achieve the highest possible level of compliance with the prevailing laws or so it is generally described. In this way, the total revenue collected which can be made available for government programs is maximized. Developing effective revenue management strategies involves the guidance of revenue managers (Beck et al., 2012). Also, they investigated critical revenue management activities in the wake of a growing need for skilled staff in managing revenue collection. Moreover, they found that managers needed to embrace revenue management for effective revenue performance.

According to Susanto (2019), a company must have systems and processes in place to capture, record, summarize, and report the results of revenue related transactions. The processes are the policies and procedures that employees follow in completing sale, sales return, or cash collection, and then capturing customer data and sales quantities, and routing the resulting documents to the right departments within the company. Susanto (2019) stipulates that revenue processes are divided into the following groups: sales processes, including ordering, delivery, and billing, sales returns processes, and cash collection processes. Also, Maxwell (2012) argued that there is a need of controlling revenue collection requirements in order to enhance revenue collection process by considering optimum rate structure, appropriate rules and regulations and human capacity increasing control to reduce leakage by performing surprise audits to compliment self-assessment procedure, improving the control processes, put efforts to enforce a strict and heavy penalty for noncompliance, instill financial discipline to staffs that have contributed to leakage in revenues.

Tanzania Official Seed Certification Institute (TOSCI) was established by the Seed Act No. 18 of 2003 as a semi-autonomous regulatory authority mainly concentrated in the seed and planting material. As a seed and planting material regulatory authority, TOSCI's great commission is to link the gap between quality seeds and farming community by ensuring availability of quality seeds based on the established seeds certification standards and quality operation manual. The responsibility of controlling the quality of agricultural seeds covers the seeds produced in the country and those imported from other countries in order to curb or completely eliminate the presence of substandard

agricultural seeds in the market. Being considered as the backbone of the economy, agricultural sector solely depends on, among other things, the quality of the farming inputs which include quality seeds.

Growth of seed industry depends on the continuous monitoring and control of seed quality by TOSCI which requires a huge investment in technological laboratory equipment for seed testing. This investment depends on the amount of revenue collection from services that are offered by the institute. As pointed on report of Controller and Auditor General for the financial Year 2015/2016 shows that TOSCI has accounts receivable with less than 12 months' worth TZS 213,150,881/= and more than 12-month worth TZS 351,540,257 which make a total of TZS 564,691,138/=. Therefore, this indicates an insistent non-optimal revenue collection which necessitated the need for researchers to identify factors affecting revenue collection at Tanzania Official Seed Certification Institute.

## **THEORETICAL AND ANALYTICAL FRAMEWORK**

Researchers employed Liquidity Preference Theory which was first developed by John Maynard Keynes in his book (*The General Theory of Employment, Interest and Money*, 1936) to clarify assurance of the loan cost by the free market activity for cash (Davidson, 1978).

The theory suggests that everyone in this world likes to have money with him for a number of purposes. These purposes include transactional purposes, precautionary purposes, and speculative purposes. The theory was important in showing the rationale for enhancing revenue collection. The department of Immigration needs to enhance its revenue collection because it needs money for transactional purposes.

Organizations have to maintain liquidity at a level that enables them to settle their obligations in time. A relationship exists between liquidity and profitability (Kesenmwa et al., 2013). Rao and Apparao (2014) agreed with Kesenmwa et al. (2013) but noted that adequate revenue ensures liquidity, which determines the profitability of an organization. Therefore, organizations survive when their leaders display good financial performance. By implication, an organization's leader can go wrong to maintain adequate liquidity and fails to survive when he fails to maximize revenue collection from service offered. Revenue officers should spur revenue collection and management strategies to ensure the organizations operate in liquidity positions that would guarantee future investment.

The theory was appropriate for this study as it reflects a financial institution's ability to fund assets and meet financial obligations. Funds management involves estimating liquidity requirements and meeting those needs in a cost-effective way (Kesenmwa et al., 2013). Effective funds management requires organization to

estimate and plan for liquidity demands over various periods and to consider how funding requirements may evolve under various scenarios, including adverse conditions.

## RESEARCH METHODS AND METHODOLOGY

### Description of the study area

The study was conducted at TOSCI which is an institute under the Ministry of Agriculture. TOSCI is located at Tiba Road, street within Morogoro Municipal Council which is bordered to the south and east by Morogoro rural district, to the North and West by Mvomero district. It is situated between latitude 6 °S - 7 °S just South of the Equator and between longitudes 37° - 38° East. The place lies at an altitude of 509 meters above the sea level.

The area was chosen because the report of the Controller and Auditor General for the financial Year 2015/2016 had revealed that TOSCI was not able to collect TZS 212,323,183/= as fees on the service offered by the institute as planned in the particular financial year, a feature that had affected its operation and capital expenditure. Based on the aforementioned facts, the researchers utilized ample time and efforts to collect relevant information from different departments to examine the factors affecting revenue collection.

### Research design

The study adopted descriptive research design based on mixed research approach as it is concerned with describing the characteristics of a particular individual, or of a group, whereas diagnostic research studies determine the frequency with which something occurs or its association with something else (Kothari, 2004).

### Sample size and sampling techniques

The sample size of this study stood at 70 respondents who were randomly selected. Also, researchers used purposive sampling technique to select Head of Departments (HODs) in respective department.

### Data type and collection

Both primary and secondary data were used. Primary data were collected from 70 respondents using structured questionnaires and interview method while secondary data were obtained through documentary review, that is, TOSCI annual report, CAG report, journals and newspapers.

### Data analysis

The collected data were coded, cleaned (omitting outliers), processed and statistically analyzed using the Statistical Product and Service Solutions software, SPSS version 20, an IBM product since 2009 (Hejase and Hejase, 2013). Also, for accuracy and completeness, data were presented using descriptive statistics where frequencies and percentages are presented in table and figure to enable researchers to interpret the data and finally make necessary recommendations basing on the study findings.

## RESULTS AND DISCUSSION

### Factors affecting effective revenue collection

The study sought to identify the factors that hinder effective revenue collection at Tanzania Official Seed Certification Institute (TOSCI). Considering the significance of the study results identifying the areas of weakness in revenue collection would help TOSCI address them in order to be in a position to achieve effectiveness in revenue collection. The study asked the question on what are the hindering factors in reaching revenue collection targets at TOSCI. The respondents were required to indicate the degree of improvement they know about the hindering factors for effective revenue collection. Table 1 presents the study results.

As indicated in Table 1, 60% (42 out of 70) of the respondents strongly agreed that lack of experience and skills of officers was the hindering factor affecting revenue collection followed by 30% (21/70) of the respondents who indicated that lack of effective procedures in revenue collection was the reason while 10% (7/70) of the respondents indicated that the volume of service offered in particular period affected revenue collection. Figure 1 provides a visual representation of the results.

**Lack of experience and skills of officers;** it was found that 60% (42/70) of the respondents indicated that revenue collection at TOSCI is highly affected by staff competency, that is, lack of experience and skills. The study result implies that the low revenue collection has influenced by staff competency since professional revenue collection techniques have been imparted onto TOSCI staff to ensure efficiency and effectiveness in revenue collection. The study result is in line with the findings of various related studies (Beck et al., 2012; Harrison, 2007; Bird and Slack, 2002a, b; Adenya and Muturi, 2017; Mohammed and Muturi, 2018) who argued that weaknesses in revenue collections skills led to inadequate collections. They further stipulated that developing effective revenue management to achieve revenue targets involves the guidance of experienced revenue managers.

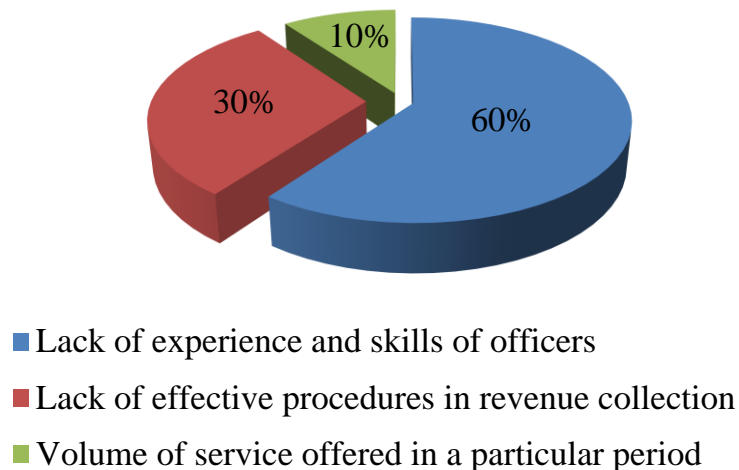
Also, during interview with the Director of Seed Certification, he said,

*...that 15 out of 20 officers who were involved in revenue collection functions were employed in May, 2015 to replace the officers who had either shifted to other organizations or retired from public service. Thus, they lacked experience and skills as they were still adapting to the new working environment. For example, during preparation of preliminary bills for inspection services, they skipped some of the crucial information such as signature of the client to approve acceptance of the service delivered to him.*

**Table 1.** Factors affecting effective revenue collection (n=70).

Factor(s)	Frequency	Percentage
Lack of experience and skills of officers	42	60
Lack of effective procedures in revenue collection	21	30
Volume of service offered in a particular period	7	10
Total	70	100

Source: Field Research, 2021.



**Figure 1.** Factors affecting effective revenue collection. Source: Field Research, 2021.

Also, researchers found that lack of experienced and skilled officer, results into improper calculation of seed fields that determine amount of fees to be paid by the client. This negatively affected revenue collection as bills were not properly prepared in line with supporting documents. The situation has contributed in the increase of accounts receivable by 32.6% in financial year 2016/2017, creating a deficit in revenue collection. Therefore, basing on the study findings researchers concluded that experienced and skilled revenue collectors influence the amount of revenue to be collected. It was further recommended that in order to reach revenue collection targets TOSCI has to conduct training to the officers on revenue collection in order to update their knowledge and enhance their efficiency in executing the task.

**Lack of Effective Procedures in Revenue Collection;** the study findings revealed that 30% (21/70) of the respondents indicated that low revenue collection is highly influenced by lack of effective procedures in revenue collection. According to Joulfaian (2000), the most important aspect of revenue administration and its goal is revenue collection procedures. Collection

procedures involve collecting money from customers. Procedures include rules and regulations that guide in revenue collection functions. The study result implies that low revenue collection at TOSCI is influenced by lack of effective revenue collection procedures i.e., complex procedures in revenue collection. The study result is in line with the findings of various studies (Adenya and Muturi, 2017; Mohammed and Muturi, 2018) who found that fundamental to the system of self-assessment is that taxpayers must have sufficient knowledge in the tax laws and procedures and confidence from taxpayers on tax administration. It was recommended that the revenue collection procedures should be simple and clear that will act fairly and treat taxpayers according to their individual circumstances. Moreover, Susanto (2019) argued that a company must have systems and processes in place to capture, record, summarize, and report the results of revenue related transactions. The processes are the policies and procedures that employees follow in completing sale, sales return, or cash collection, and then capturing customer data and sales quantities, and routing the resulting documents to the right departments within the company.

Also, during the interview with the Director of Research

and Promotion, he mentions,

*“...the institute lacks clear laid down procedures on revenue collection.”*

Moreover, the director revealed that the institute delivers its service on postpaid manner and the client only signs a form to acknowledge receipt of the service without commitment on specific number of days for payment. This form is forwarded to accounts department for writing a bill which is later issued to client to facilitate payment. Then there is no mechanism to make follow up on the concerned client to pay the debts. This had led to difficulties in collecting accounts receivable worth TZS 34,723,183/= in financial year 2015/2016.

The study concluded that lack of effective revenue collection procedures leads to low revenue collection. Therefore, there is a need to strengthen revenue administration through improving revenue collection procedures so as to get better revenue collection performance.

**Volume of service offered in a particular period;** service is an intangible item, which arises from the output of one or more individuals (Nasution, 2016). It was found that seven (7) respondents accounted to 10% indicated that revenue collection depends on the volume of service that is offered to the customers. This implies that the organization collects low revenue since the volume of service offered is moderate, therefore there is a need to increase the number of customers in order to increase the amount of revenue collected. Also, researchers found out that the institute did not offer the number of services as planned. In the financial year 2015/2016 the institute had planned to collect 2,000 seed samples for laboratory testing but only 1,556 Seed Samples were collected due to lack of resources. The institute charges TZS 400,000/= for each sample collected, therefore, due to its inability to meet the planned services, the institute lost a total revenue of TZS 177,600,000/=

Also, during the interview with the Director of Research and Promotion, he said,

*“revenue collection has a direct positive relationship with volume of service offered, therefore, if low volume of service will continue to be offered then revenue will be low. Also, the volume of service depends on the financial resource and capacity of the firm to reach out the available market by utilizing its potential. The major roles and functions of TOSCI includes; to conduct seed field inspection, to effect seed sampling, to train seeds producers, to carry out variety performance tests, to carry out pre- and post-control tests and to enforce Seed Act 2003 and promoted self-compliance by stakeholders.”*

The study result is consistent with the findings of Nasution (2016) who found that revenue collection depends on the

volume of service that are offered to the customers. The organization will collect high revenue if the volume of service offered is high. Therefore, there is a need to increase the number of customers in order to increase the amount of revenue collected. Besides, the institute has to find additional resources from different donors and government in order to purchase enough vehicles, pay inspectors and expand volume of service offered to the clients. Basing on the study findings researchers concluded that low volume of service offered below the targeted volume in the financial 2015/2016 at TOSCI led to low revenue collection below the budgeted amount.

## CONCLUSION AND RECOMMENDATIONS

The study aimed to enable readers to understand the factors affecting effective revenue collection at TOSCI. It was found out that lack of experience and skills of officers, that is, staff competency, lack of effective procedures in revenue collection and volume of service offered in a particular period were the major factors affecting revenue collection at TOSCI. However, the study also, points out the impacts associated with low revenue collection such as low liquidity level to execute capital expenditure. Based on the study findings researchers came out with the measures to solve the problem of low revenue collection such as conducting training to revenue collection officers and reformulate revenue collection procedures.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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