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Effect of Information Quality on Project Performance in Public Institutions: A Case of theMinistry of Planning Hargeisa Somaliland.

Abdihamid Hussein Adur

Chief technology officer, Gollis University Hargeisa, Somaliland
ORCID iD: https://orcid.org/0000-0001-6449-4191
Corresponding author: Abdihamid Hussein Adur

Abstract: *The study assessed the effect of information quality on project performance in public institutions at the ministry of planning in Hargeisa, Somaliland. Ensuring the quality of information is inevitably vital in public and private organizations. Project performance is a measurement of the result, or the outcome of the project against the project plan specifically in the areas of scope, cost, time, and quality. The objectives of the study were to assess the effect of information quality on project performance. The study used a cross-sectional survey from a sample of 40 employees of the ministry of planning. Data was collected using questionnaires and analyzing using simple linear regressions. The study found that information quality, [Fo = 9.929 > F (1, 39) = 4.17] has a significant effect on project performance at the ministry of planning. The researcher recommends to the ministry to adopt the use of a project management information system to generate, relevant, accurate, and secure information needed for the effective and efficient management of the project and performance of the project; also, recommends the ministry should make sure all employees are well equipped adequate technological facilities. Finally, the Researcher recommends future studies to investigate other performance factors towards project performance.*

Keywords: *Information Quality, Project performance, Public Institutions, ministry of planning Hargeisa, Somaliland*

I. INTRODUCTION

Information quality is a key resource for the success of any institution. Information quality is a characteristic of the output offered by the IS such as accuracy, timeliness, reliability, and completeness (Peter & Mclean, 2009). At the same time, information quality has a significant effect on the use of the information system (Gorla, Somers & Wong, 2010). Information quality was measured in terms of intrinsic, contextual, representational, accessibility, ease of understanding, security, and timeliness (Gable et al, Petter et al, 2008).

In Somaliland information sources in the ministries are mostly provide traditional and complicated network sharing for controlling projects and collation of project reports (Somaliland NDP-II, 2017). As projects have become more complex and time-driven, especially as the amount of project information and active project participants increase. Thus, we require more effective project software applications for integration, management, and communication.

This study was guided by DeLone and McLean's IS success model theory and was introduced 1992. In management information systems (MIS), a wide range of research has proposed IS success model. This study was determining the effect of information quality on project performance at the Ministry of Planning Hargeisa Somaliland.

II. RESEARCH METHODOLOGY

Research Area

The study was conducted in Hargeisa, the current capital and the largest city in the Republic of Somaliland.it lies at latitude 9.5624° N, longitude 44.0770° E, and 1334m above the sea level. Hargeisa city is selected because it has a ministry of planning of the country which provides data that is accurate, relevant, and timely about the nation's people

and economy.

Research Design

This study was used a cross-sectional study. Cross-sectional studies are carried out at one point in time or over a short period. They are usually conducted to estimate the prevalence of the outcome of interest for a given population (Campbell, 2007). Data can be also collected on individual characteristics, including exposure to risk factors, alongside information about the outcome. In that way, cross-sectional studies provide a snapshot of the outcome and the characteristics associated with it, at a specific point in time (Taylor & Bogdan, 1999).

The benefits of a cross-sectional survey is relatively inexpensive and takes up little time to conduct; can estimate the prevalence of outcome of interest because a sample is usually taken from the whole population (Campbell, Machin, & Walters, 2007).

Target Population

The target population for this study is 50 grade A level employees in the Ministry of national planning's five departments. These employees consist of top management, middle-level management officials, and technical staff that are involved in the day to day activities of the ministry.

Accessible Population

The accessible population for this study was the same as the target population. All employees in the ministry of planning were reached by the researcher within the time and resource available.

Sample Size

Scholars like Trotter (2012) define a population as a complete collection of all elements of the study particularly those with similar interests in an investigation at a given time. Therefore, the sample size for this study was 40 respondents who were selected from the overall total population of 50 workers at the Ministry of Planning to include, some top managers, middle and technical staff. The determination of this size is arrived at using Krejcie and Morgan (1970) sampling table as cited in Kumar et al. (2013).

Sampling Technique

The study was adopted the probability sampling method, particularly the simple random sampling was used. Each individual is chosen randomly and entirely by chance, such that each individual has the same probability of being chosen at any stage during the sampling process. The reason why this method is preferred is that it reduces the chances of systematic errors. It also minimizes the chances of sampling biases in order for a better representative sample to be produced (Alvi, 2016).

Data Collection Methods

Due to the current lockdown, the main data collection method was questionnaire survey method if possible, monkey survey to the Ministerial official since they can read and understand, using mails. The researcher intends to drop questionnaires to the selected respondents on distinct days and picked later at agreed times. The questionnaire was structured based on the research Objectives.

Data Collection Instrument

In this study, the researcher has used a questionnaire as an instrument tool for data collection. The use of these instruments will help the researcher to cross-examine the quality of the information provided by respondents (Ryan, 2005).

Piloting

The instruments were piloted in Berbera local municipality. Piloting will necessary to ensure that the study attained validity and reliability. During piloting the researcher sought to attain a validity and reliability tool rate of 0.70. Piloting enabled the researcher to determine the adequacy of instructions and how well they flow (Bryman & Bell, 2007).

Validity of Instrument

Validity is the extent to which an instrument measures what is supposed to measure and performs as it is designed to perform (Babbie, 2010). The validity of the instrument was assessed through expert judgment method, expertise was reported that S-CVI= 0.93. The expert judgment method is a method that assesses the representativeness

of the items in an instrument as they relate to the entire domain.

Reliability of Instrument

Reliability is an index that is estimated the dependability (consistency) of a score (Mitchell, 2006). Reliability is the overall consistency of measure (Mohajan, 2017). Reliability refers to the consistency of the result in research (Golafshani, 2003). In this study, reliability indicates that Cronbach's alpha was scored 0.73. Reliability instrument is vital in research because it tests if the study fulfills its predicted aims and hypothesis and also ensures that results are due to the study and not any possible extraneous variable.

Data Analysis

This study was analyzed through a Descriptive and simple linear regression model to determine the nature of the relationship between the two variables under the study. According to Bluman (1998), simple linear regression models are a statistical method to examine the relationship between two variables, collect data and develop a scatter plot to visualize the trend of the relationship.

Ethical Consideration

The researcher was ensured that all the ethical standards were maintained as much as possible. The respondents have briefed the importance of the study a how they will be going to benefit to avoid suspicion on anything. The questionnaires were framed in such a way that the identity of the respondent would be revealed. It therefore will not contain anywhere where the name of respondent or protect name is written.Respondent was informed that all information would be treated with the utmost confidence. The respondents were given the questionnaire to fill in only after they had accepted. They were mobilized to fill questionnaires and summit in time to save the researcher time for collection and complication of the data.

III.   RESULTS AND DISCUSSIONS

Gender

Thestudysoughttoestablish thegenderoftherespondents. Theresponsesareshown inTable 1.

Table 1: Gender of Respondents

Gender	Frequency	Percent	Valid Percent
Male	25	62.5	62.5
Female	15	37.5	37.5
Total	40	100.0	100.0

Table 1 shows that out of 40 respondents 62.5% of the respondents indicated that they were male while those who indicated that they were female were 37.5%. This representation showed that most of the employees in the ministry of planning are males.

AgeofRespondents

The study also sought to establish the age ranges of the respondents. This was important in knowing which age range formed the majority of those who utilized the system in project management. The findings were as shown in table2.

Table 2: AgeofRespondents

Age	Frequency	Percent
20-25Years	18	45.0
26-35Years	17	42.5
36-45Years	5	12.5
Total	40	100.0

Table 2 shows the distribution of respondents by age. Is shows that majority of respondents (45%) were aged between 20 – 25 years while 42.5% were aged between 26 – 35 years, 12.5% of them were aged 36 – 45 years. This

suggests that the majority of respondents' age were above 35 years which is about 87.5%.

EducationLevel
The study also sought to establish the respondents' uppermost level of education. The level of education was very necessary in order to determine the capability of the respondents to utilize project management information system. The findings are represented in Table 3.

Table 3: EducationLevel

Qualification	Frequency	Percent
PhD	1	2.5
Master's Degree	20	50.0
Postgraduate Diploma	4	10.0
Bachelor's Degree	13	32.5
Ordinary Diploma	2	5.0
Total	40	100.0

Table 3 shows that 5% of the respondents indicated that their level of education was Ordinary Diploma, 32.5% of the respondents indicated that their level of education was bachelor's degree, 10% of the respondents indicated that their level of education was Postgraduate Diploma, 50% of the respondents indicated that their level of education was a master's degree and lastly 1% of the respondents indicated that their level of education was a PhD. These findings showed that most of the employees had master's degrees.

WorkedYears
The respondents were requested to indicate how many years they were worked in the ministry of planning and national development. The researcher obtained the following results.

Table 4:WorkedYears with the ministry

Worked Years	Frequency	Percent	ValidPercent
2 YearsandBelow	16	40.0	40.0
3-5Years	18	45.0	45.0
6-8Years	4	10.0	10.0
9 Yearsand Above	2	5.0	5.0
Total	40	100.0	100.0

Table 4 shows the worked years in the ministry. It shows that the majority of respondents (45%) were worked between 3 – 5 years while 40% were worked between 2 years and below, 10% of them were worked 6-8 years and lastly, 5% were worked 9 Years and above. This suggests that the majority of respondents were worked below 5 years which is about 85%.

InformationQuality andProjectPerformance
The objective of this study was to determine the relationship between Information Quality and Project Performance in the Ministry of Planning. The researcher assessed the effect of Information Quality on Project Performance. Respondents were provided to react statements on this variable intending to determine the status of Information Quality. Based on the responses provided by the respondents the Information Quality was rated very good, good, moderate, and poor very poor. Information Quality status of each respondent has compared Project Performance and the obtained result was summarized in Table5.

Table5:Information Qualityand ProjectPerformance

	Mean	Std. Deviation	N
ProjectPerformance	22.2250	2.95685	40
Information Quality	15.0750	2.46397	40

Note. N= Sample;Std. = Standarddeviation;

Table 5 shows the descriptive statistics obtained from information quality on project performance in the ministry of national planning in Hargeisa, Somaliland. It indicates that the mean project performance is 22.2250 (S = 2.95685) and mean of information quality is 15.0750 (S = 2.46397), for 40 employees were surveyed.The data in Table 5 was analyzed by using simple linear regression to determine if there is a relationship between Information Quality and Project Performance in the Ministry of Planning the result of linear regression analysis summarized in Table6.

Table6: SimpleLinearRegressionofInformationQuality and ProjectPerformance

Model	B	R	R^2	R^2_{adj}	Std. Error	F	df	t	Sig
Constant	13.991				2.647			5.286	.000
IQ	.546	.455	.207	.186	.173	9.929	39	3.151	.003

Note.F (1, 38) =4.17; IQ=InformationQuality.R^2adj =R^2adjusted

In Table 4.6, F measures the overall significance of the regression model. It is used to test the statistical significance of the regression model therefore if F is significant, the model issignificant and further analysis is ensured, F (1, 39) = 9.929, p = .003. In further, Fo = 9.929 > F (1, 39) = 4.17. Hence, there is a significant effect of Information Quality and Project Performance.R shows the correlation between Information Quality and Project Performance. R = .455 indicates that there is a moderate positive association between Information Quality and Project Performance.R2 is the proportion of the variance in Projects' Performance that is explained from Information Quality. R2 =. 207, shows that 20.7% of the variance in Projects' Performance can be explained from Information Quality. Adjusted R-square (R2 adj. = .186) indicates that Information Quality is accounted for 18.6% of the variance observed in Project Performance. The other 81.4% is due to other factors not investigated in this study and errors in measurement.B is the unstandardized regression coefficient. It represents the significance Information Quality in the regression model. Using the value of B and constant term, an equation of regression was developed as:

$$PPI = 13.991 + 0.546\ IQ + \varepsilon \qquad\qquad Eq\text{---}\ 1$$

Where PPI is Project Performance and IQ is Information Quality. Therefore, 0.546 units of increase of Information Quality is accompanied by 1 unit increase of Project Performance. Hence, the study determined that the Information Quality has a significant effect on project performance in the ministry of planning Hargeisa, Somaliland

IV.　SUMMARYOFTHEFINDINGS
The objective of this study was to assess the effect of information quality on project performance at the ministry of planning. The study found that the information quality has a significant effect on project performance in the ministry of planning a Hargeisa Somaliland; [Fo = 9.929 > F (1, 39) = 4.17]. It indicates that information quality is accounted for 18.6% of variance in project performance; R = .455; R2 adj. = .186, p = 0.003.

V.　RECOMMENDATION
With reference to the above findings and discussions, the researcher has shown in this report that information quality has a significant effect on project performance.Therefore, the researcher recommends to the ministry to adopt the use of a project management information system to generate, relevant, accurate and secure information needed for the effective and efficient management of the project and performance of the project.

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