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# **User Involvement and Performance of Enterprise Resource Planning System Implementation in Multi-national Organizations in Kenya. A Case of Un-Habitat in Kenya**

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### **Author's contribution**

*The sole author designed, analyzed, interpreted and prepared the manuscript.*

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## **ABSTRACT**

Most multi-national organizations in Kenya are adopting an entire suite of enterprise resource planning Software and customize them to fit the business processes. Despite the continued review of the enterprise resource planning suite, the realization of a successful enterprise resource planning implementation for multi-national organizations is becoming difficult, owing to user involvement issues. This research, therefore, addressed this by assessing the effect of user involvement on enterprise resource planning implementation for multi-national organizations in Kenya. The study used a descriptive research design, where it obtained a sample size of 70 respondents and selected the respondents from 85 subjects using stratified proportionate sampling. The data for the study was gathered from primary sources using a questionnaire. Data was evaluated using quantitative analysis to provide descriptive statistics accompanied by inferential analysis to estimate the model. Guided by the study findings, it was concluded that; there is a positive and significant relationship between users' functional requirements activities and enterprise resource planning implementation; users' presentation requirement activities positively significantly influence enterprise resource planning implementation, users' quality assurance activities has a significant moderate influence on its enterprise resource planning implementation, and users'

project management activities have a significant moderate influence on enterprise resource planning implementation. The study recommends that these organizations should; develop users' functional requirements activities policy, review policies on business processes to accommodate different system implementation practices; review current quality assurance activities by consumers to satisfy the planned enterprise resource planning system demand of the provider, and acquire as well as retain the appropriate users' project management.

*Keywords: Enterprise resource planning; functional requirements; presentation requirement; project management activities; quality assurance activities; user involvement.*

## 1. INTRODUCTION

Owing to the demand for streamlining operations, Enterprise Resource Planning (ERP) systems have been developed worldwide for helping companies manage their businesses in supporting different functional areas [1]. These systems guarantee and assure that different modules are transparently integrated and information flow easily between different functions as opposed to traditional incompatible legacy information systems [2] Berente et al., 2009. Multinational companies are implanting these ERPs owing to the capability of enhancing automated and integrated real-time solutions over voluminous business processes and functions [3].

The management of UN-Habitat chose a SAP product ERP to replace the legacy systems. Like most organizations, UN-Habitat bought the entire suite of SAP's ERP Software Suite and is customizing it to fit the environment. Even though UN-Habitat chose the ERP system, each division was given the autonomy to establish a reasonable timeframe for implementation.

Each branch/division has its own legacy systems in place that serve the same basic functions as the ERP solution. Each implementation will also duplicate the same knowledge curve incurred by previous divisions because new individuals will have to understand the legacy systems and SAP system in sufficient detail prior to initializing custom views and processes to fit its function. For the success of the implementation of any information system, the main components must work together, tacit knowledge users must use technology to capture the necessary data or information using the available standard operating procedures that are in place in the organization on adaptable use of resources. For an ERP's proper implementation in organizations, it is important that information is shared within the organization to the right tacit knowledge users and at the right time for

effective business process re-engineering, in a manner that represents the organization's workflow. Furthermore, knowledge management strategies and Systems (KMS) must be in place so as to capture best practices, lessons learned as well as explicit and tacit knowledge which resides with the individual but might be necessary for ERP implementation

Although the ERP's have significant promising benefits to the multinationals that have substantially invested in these systems, they rarely produce successful outcomes from ERP implementation [4]. That is, multinationals companies are facing a myriad of problems and challenges in implementing ERP systems [2]. Diverse challenges are facing the ERP implementation, negatively affecting their success [5]. User involvement is regarded in many circles as being among the most important success factors of ERP implementation [6]. However, the absence of poor user involvement has been identified as the major of most ERP implementation failures [5,2]. Furthermore, Rishi and Goyal [7] postulate that there is little or low consumer engagement in ERPs in addition to staff and other users being improperly trained for new procedures (Laudon & Laudon, 2006). Consequent to lack of or low customer participation, a comprehensive roadmap for the operation of the framework would not always be given for Multinational enterprises (MNEs).

Numerous empirical studies have revealed that user involvement positively impacts the success of ERP implementation. Bradford [8] points out that user engagement in ERP deployment efforts guarantees user inputs to different technical decisions, with greater effect because such decisions are more social-technical than strictly technical. In this sense, user participation would be of special significance. Abuwarda [2] carried out a study on four customer engagement practices; technical requirements, monitoring requirements, quality assurance activities, and project management activities. Although the field

of ERP is of significance with a vast amount of scientific literature, there has been little study of the consumer role in applying ERP [1]. While this perception of user contribution as one crucial factor for the effective creation and execution of the information system has not allowed analytical research to conclusively correlate user involvement with the performance of systems [9]. This research, therefore, examined the impact of the user involvement among multi-national organizations in Kenya on the application of the business resource plan system. The goal of this research is to concentrate on the participation of users; activities on functional requirements; activities on presentation requirements; activities on quality assurance and project management ERP among multi-national organizations in Kenya.

Like most organizations, multi-national organizations in Kenya have adopted ERP systems and customized them to fit their business processes. Despite this, the actualization of a successful ERP implementation in these organizations has been elusive [10]. Habitually, failures in the implementation of ERP have usually been associated with absence or poor user involvement in the process [1]. Based on the findings by Chofreh et al. [1], the absence or poor user involvement in the process of ERP implementation affects the master plan; roadmap, framework, and guidelines, negatively. Therefore, addressing the failures in the implementation of the ERP needs consideration of user involvement factors that have a role in directing the implementation of the ERP system among multi-national organizations in Kenya [1]. In particular, due to current deficiencies and contradictions, there is a scarcity of research that provides information on the relationship between users' engagement and the ERP implementation guidelines to multi-national organizations in Kenya [9]. This research addressed the issue and addressed this void by analyzing the impact of user engagement factors; user's technical requirements activities, user requirements activities, quality assurance operation of users, and project management activities of users, on ERP applying guidelines between Kenyan multinationals...

The main objective of the study will be to assess the effect of user involvement on enterprise resource planning system implementation among multi-national organizations in Kenya and specifically;

- (a) To establish the effects of users' functional requirements activities on ERP implementation.
- (b) To assess the effects of users' presentation requirement activities on ERP Implementation.
- (c) To analyze the effects of users' quality assurance activities on ERP Implementation.
- (d) To determine the effects of users' project management activities on ERP Implementation.

## 2. LITERATURE REVIEW

Literature analysis was done on what other scholars have done in regards to user engagement and enterprise resource planning framework implementation on examining the literature on existing theories and empirical research. This helped construct a conceptual framework to guide the research.

### 2.1 Theoretical Framework

Certain theories are found useful in explaining the proposed ERP implementation and these include; Updated Theory of User Participation, ERP Orchestration Theory, and the Information Systems Success Theory.

The updated theory of user participation is founded on the assumption that the success of solution creation does not indicate a good solution; where enthusiastic user engagement may lead to a false loyalty to a low-quality solution [11]. So, even if the solution is implanted later, users might assess the solution to be very effective. Markus and Maos [11] suggest that the production and execution of strategies are more likely to work where socio-technically and technologically trained, customers are present, and management and organizational staff and external partners may give valuable information on functional and other specifications. There should be a close link between involvement of solution creation and the consequence of the solution quality and involvement of solution execution and the outcome of adoption and usage. The revised user engagement theory is therefore important for this research since it illustrates and builds important philosophical implications in the study. The 3 buildings provide activities to include the users listed by Abuwarda [2] activities on technical specifications, presentation requirements, quality improvement, and project management activities. As the key

users' involvement practices leading to ERP deployment progress, this research was adopted, which included activities on technical specifications, presentation requirements activities, quality assurance activities, and project management.

ERP orchestration theory was developed to explain when an organization can extend its IT base within the ERP system [12]. The ERP orchestration theory shows that benefits can be realized based on the maturity scale. Moreover, the ERP automation assets plus ERP organizational automation capabilities enable organizations to realize ERP automation benefits [13]. These organizational capabilities which are appropriate for the ERP implementation in multinational organizations in Kenya would include; organization resources and user involvement [12]. Within the ERP Orchestration Theory is the ERP asset orchestration theory, which was developed to help understand the way organizations' ERP can be diffused by adequate user involvement activities [12]. Thus, the ERP Orchestration theory shows ample evidence that consumer engagement plays an important role in the performance of ERP, indicating that this operation in Kenya's multinational institutions would be crucial for the introduction of the ERP. Accordingly, without the use of customer involvement practices, companies cannot allow innovation advantages of ERP programs.

## 2.2 Empirical Review

Several empirical findings have been assessed ERP implementation, with a view to formulating the system structure. While the Abuwarda [2] research results revealed that users of the ERP system participated in the ERP project and made valuable contributions to the numerous programs, the study by Bradford [8] revealed that user participation in requirements selection practices was supported as variables that influence user satisfaction. Discenza, Tesch, Klein and Jiang [14] study findings suggest that both customer and business associates have a significant impact on the performance of the ERP implementation.

The research by Abuwarda [2] showed that ERP system customers had favorably influenced the design of the ERP system and the technical functionality of the ERP system. The research by Bradford [8] proposed that a more advanced user model be used to define potential

measurement variables based on the identity of the user. The findings of Desalegn and Pettersson [15] suggest that users are vital in ERP implementation.

The results of the Abuwarda report [2] indicate that project management practices have the highest effect on customer satisfaction, followed by presentation requirements activities, then quality assurance activities, and finally, practical requirements activities with the lowest impact. It was found that the two customer satisfaction metrics in relation to ERP system market functionality and ERP system technical functionality had a positive effect on the project management tasks carried out by ERP system users. Hsu et al. [16] study findings showed that user co-production could contribute to higher project efficiency, improved system output, and higher levels of user satisfaction. The Harris and Weistroffer [17] study conclude that the engagement of consumers in the system creation process is also important to the performance of the system.

## 3. RESEARCH METHODOLOGY

The methods and techniques used in data collection are illustrated in this chapter. It also includes the research design, populations, sampling design, sampling techniques, data collection instruments, the validity and durability of data collection tools, data sources, data collection methods, and data processing methods.

### 3.1 Research Design

The present study identified descriptive research design as the most suitable ERP implementation research design among multi-national organizations and details all tasks involved in performing the research at hand. The current study called for perspectives on the application of the ERP, which can be easily accomplished by describing, forecasting, anticipating, and analyzing related relations. Six Ws (whose, when, where and why) from research are used for descriptive analysis and this is a major contribution in this [18].

### 3.2 Target Population

In the current analysis, the population was drawn from 85 UN-Habitat staff who work on a daily

basis on the ERP, though a sample of five (5) departments was used to represent the whole agency. The population under study was chosen based on the core functions and modules that are conducted through the ERP. In the present research, the target population comprised 85 staff of UN-Habitat in Nairobi.

### 3.2.1 Sample and sampling methods

The sample size was determined using this formula; (Smith, 2013)

$$\text{Necessary Sample Size} = \frac{(Z\text{-score})^2 * \text{StdDev} * (1 - \text{StdDev})}{(\text{margin of error})^2}$$

*Confidence level being 95%*  
*Population size 85*  
*Margin of Error 5%*  
*Giving us a sample size of 70.*

In this study, the study used 70 respondents who were selected using stratified random sampling. In selecting individual respondents from each stratum, the researcher used a basic random sampling procedure. Based on the acceptable amount of respondents needed in each department a Sampling period was created for each department. The sampling period was reached by divisions in that department with the appropriate respondents from the respective department's total number of executive members. After this, the fixed sampling intervals were used to set up a random starting point. The respondents were chosen from the random point of departure and at the rate of the sampling interval.

### 3.2.2 Data collection tools and procedures

Data were gathered using questionnaires, interviews, impressions, and paper reviews, which were semi-structured. Questionnaires were necessary in order to collect opinions on this phenomenon from many people. Questionnaires were used to gain a general picture on what ways knowledge is shared within the organizations as well as to find out other challenges that are experienced in implementing the ERP system.

### 3.2.3 Validity and reliability

The present study tested the tool to determine the validity of the questionnaire with the material validity test, to ensure its consistency and significance. Content validity checks assessed to

what degree the questionnaire gathered data will reflect the basic field of ERP implementation. The validity checks were done by the supervisor and information science specialist using content analysis. They measured the instrument and made accordingly suggestions. Both of them decided to calculate the optimal goal and to use testing instruments (questionnaires) in the industry. However, they proposed improvements that had effectively been made to the questionnaire. Restructuring and elimination of the questions checked the questionnaire. The questionnaire was reviewed and made available for management.

The reliability checks were performed to classify the essential problems in the analysis, including data sources, data collection processes, data collection time, tool bias, and accuracy [19]. During the present analysis, seven respondents were given the questionnaire for a one (1) week response to the issue. After having collected the answers, the researcher then strengthened the questionnaire by editing the elements that were not consistent. The research tested the reliability of the questionnaire using the Cronbach alpha internal consistency methodology. In order to achieve a coefficient of association, defined this time as alpha ( $\alpha$ ), the Cronbach's was calculated internal accuracy of the data obtained through correlating the elements of the questionnaire. The magnitude of  $\alpha$  ranges from 0 to 1. If the magnitude of Cronbach's alpha is less than 0.7 in the social sciences, the instrument is graded as unsatisfactory or simply incompatible with internal consistencies. However, Cronbach alpha values greater than or equal to 0.7 suggest greater accuracy, although otherwise reassessed for reliability testing was acknowledged.

Table 1 reveals that the mean alpha of Cronbach obtained by SPSS was 0.978. Kothari [19] suggests that the tool is accepted or the instrument would be checked by modifying or deleting objects from a value of as little as 0.7, and then the tool is accepted. This means that the tool was highly consistent, at  $\alpha = 0.978$  which was greater than the threshold of 0.7. Since the Cronbach alpha was greater than the threshold 0.7, the tool was considered reliable and all the items were therefore retained and used for further analysis.

**Table 1. Reliability statistics**

Variable	Cronbach's Alpha	N of Items
ERP implementation	.875	7
Users' functional requirements activities	.919	9
Users' presentation requirement activities	.853	11
Users' quality assurance activities	.966	10
Users' project management activities	.625	5
Overall Alpha (α)	.978	42

Source: Researcher (2019)

**3.3 Data Analysis**

In order to obtain the desired results, data were analyzed using a quantitative analysis method to produced descriptive statistics including; means, frequencies, percentages, and standard deviations, describing the properties and goals of the respective sample variables. Inferential research was performed to provide inferential statistics to decide if the Independent Variables (IVs) had significant relationships with the Dependent Variable (DV). The research attempted to develop the DV (response) model with multiple regressions on the basis of the model below, based on the predictor IVs;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \dots \dots \dots (i)$$

Where:

Y = ERP implementation framework at UN-Habitat

X<sub>1</sub> = Top management support

X<sub>2</sub> = Business processes

X<sub>3</sub> = ICT Infrastructure

X<sub>4</sub> = Tacit knowledge users

β<sub>0</sub> is a constant and is the value of Y dependent variable when X<sub>1</sub> = 0 and X<sub>2</sub> = 0 and X<sub>3</sub> = 0 and X<sub>4</sub> = 0).

β<sub>1-4</sub> is the regression coefficients or change induced by X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, and X<sub>4</sub>

e = error term

**4. RESULTS AND DISCUSSIONS**

The sample size of the analysis was 70 respondents who received questionnaires. The response rate, however, was 58, which is 82.86%, The research response rate above 69% is high and very strong, according to Mugenda and Mugenda [20], and is adequate to deliver favorable results. This is ample evidence for the beneficial and exact findings of this analysis.

The majority of respondents were male (38 (65.52 percent), while the remainder were female (20(34.48 percent). This indicated that

the bulk of workers in the company were male while the female employees constituted the minority. However, the average number of workers in the male sector did not exceed 2/3 and the female amount did not exceed 1/3. Meanwhile, most of the interviewees (34.48%) were from 41 to 50 years of age. When 27.59% showed they were 31 to 40 years old, 25.86% showed that they were over fifty years old. While 10,34% showed between the ages of 21 and 30 years, 1,72% showed under the age of 21 years. Much of the interviewees were between the age of 18 and 65 years of active labor.

The majority of the respondents were university graduates, with first university degrees, of which 56,90 percent had 56,90 percent, while 20,69 percent had college degrees and 15,52 percent had PhDs. However, 6.90% showed they were high school drop-outs. A majority of 48.28 percent showed that they had a highly qualified college diploma.

The highest proportion of participants (29.82%) revealed they worked with UN-Habitat between the ages of six and ten, while 22.81% (between 16 and 20 years), while 17.54% (between 11 and 15) showed that they had worked with industries. 14,04% have shown they have worked for UN-Habitat for less than 5 years while 14,04% have worked for 21 to 30 years and 1.75% have worked for over 30 years; where most respondents are middle-level managers 24(41.38%), while 23 (39.66%) showed that support workers and 11 (18.97%) show that they are senior managers.

**4.1 Descriptive Analysis**

The research analyzed collected statistics, which helped determine the effect of independent variables on the dependent variables, to explain the study variables using descriptive statistics. The research was based on the goals of the report. All questions were on a 5-point Likert scale in the questionnaire.

## 4.2 ERP Implementation

The study first evaluated the status of ERP implementation to established the far the organization had performed in relation to ERP implementation integration. The study relied on results produce from analysis of data collected using questions ranked on 5 points Likert scale;

“1 = Strongly Disagree; above; 2 = Disagree; 3 = Neutral; 4.= Agree; and 5.= Strongly Agree” The study obtained a mean (M) and standard deviation (M) for each indicators of ERP implementation. The means obtained for these indicators were used to obtain the overall mean for the ERP implementation (Mean of Means). The same applied to the SD. Since the M and SD were in ratios, the study moderated these using the statistics;

“1– 1.8 for Strongly Disagree; above 1.8 – 2.6 for Disagree; above 2.6 – 3.4 for Neutral; above 3.4 – 4.2 for Agree; and above 4.2 – 5.0 for Strongly Agree” during interpretation. These statistics were also considered to imply that; Strongly Disagree indicates not at all; Disagree is for low, Neutral indicated moderate, agree represents high and Strongly Agree means Very high. The results obtained for ERP implementation industry were recorded in Table 2.

The above findings in Table 2 revealed that, on average, the respondents decided that current ERPs were not successful (M = 2.29; SD = 1.08). That's how the ERP device works below the user's standards. They disagreed to the

asserting that the ERP system was implemented within the stipulated timelines without any delays as per the project schedules (M = 2.05; SD = 1.08) and also disagreed to the statement that the cost of implementing the ERP was within the budget provisions of the projects (Cost-effectiveness) (M = 2.00; SD = 0.90). As they disagreed to the assertion that the ERP was free of integrity issues such as data redundancy (M = 2.19; SD = 1.03), they further disagreed to the statement that the ERP implementation had successfully integrated all the sustainable data and activities across different branches and divisions within the organization (M = 2.51; SD = 1.24). They further disagreed to the assertion that the ERP system was implemented to user satisfaction (M = 2.36; SD = 1.15) and disagreed to the assertion that evaluation of the implemented system indicated that the set objectives were achieved (M = 2.44; SD = 0.95). The findings indicate that the participants did not believe that the applied ERP was effectively tailored to suit the organization's market environment (M = 2.50; SD = 1.17).

### 4.2.1 Influence of Users' functional requirements activities

In assessing objective 1, the study sought to find out the influence of users' functional requirements activities on ERP implementation at UN-Habitat. The research then explored the effect on the application of EPR in UN-Habitat by users of practical criteria practices. Table 3 displays these findings.

**Table 2. Analysis by y Status of ERP implementation**

ERP implementation	M	SD
The ERP system was implemented within the stipulated timelines without any delays as per the project schedules	2.05	1.08
The cost of implementing the ERP was within the budget provisions of the projects (Cost-effectiveness)	2.00	0.90
The ERP is free of integrity issues such as data redundancy	2.19	1.03
The ERP implementation has successfully integrated all the sustainable data and activities across different branches and divisions within the organization	2.51	1.24
The ERP system was implemented to user satisfaction	2.36	1.15
The evaluation of the implemented system indicated that the set objectives were achieved	2.44	0.95
The implemented ERP has been successfully customized to fit the business environment of the organization	2.50	1.17
Average ERP implementation	2.29	1.08

Source: Research Data (2019)

**Table 3. Influence of users’ functional requirements activities**

<b>Users’ functional requirements activities</b>	<b>M</b>	<b>SD</b>
Commitment to the implementation of the ERP system	3.61	1.01
Top management involvement and support	3.76	0.98
Appointing a ERP Project team from the beginning	3.40	0.95
Training of the staff, management, and users of the ERP	3.62	1.02
Definition of roles and responsibility	3.48	0.96
Change management for managing risks and any changes (issues) arising during the implementation of the project	3.24	0.94
Managing internal communication among all relevant parties effectively	3.84	1.09
Allocation and provision of Project resources allocation such as funding, equipment, human capital, education	3.26	0.89
Project planning in terms of scope, objective, goals, budgets, contingent plans, time, and completion schedule	3.40	1.12
<b>Average Users’ functional requirements activities</b>	<b>3.51</b>	<b>1.00</b>

*Source: Research Data (2019)*

On analyzing the influence of indicators of the influence of users’ functional requirements activities on ERP implementation at UN-Habitat, the results showed that respondents indicated that they were committed to the implementation of the ERP system would highly contribute to the framework (M = 3.61; SD = 1.01) and that top management involvement and support would also highly yield to the success of the proposed framework (M = 3.76; SD = 0.98). They showed that appointing an ERP Project team from the beginning would also highly enhance the framework (M = 3.40; SD = 0.95) as well as training of the staff, management, and users of the ERP which was shown to be a strong contributing factor to the proposed framework (M = 3.62; SD = 1.02). As the respondents showed that the definition of roles and responsibility was a factor highly contributing to the success of the proposed framework (M = 3.48; SD = 0.96), they, however, showed that managing change through change management practices for purpose of managing risks and any changes (issues) arising during the implementation of the project would moderately influence the success of the proposed ERP framework (M = 3.24; SD = 0.94).

As they showed that managing internal communication among all relevant parties effectively highly enhance the ERP implementation (M = 3.84; SD = 1.09), the interviewees pointed to the essential factors of the progress of adoption of the ERP system (M = 3.26; SD = 0.89) in allocating and supplying Project services such as the findings, the facilities, human capital, and the education. The project preparation was also shown to greatly increase the performance of ERP (M = 3.40; SD

= 1.12) with respect to scale, deadlines, budgets, contingent schedules, time, and execution date. On average, the respondents showed that users’ functional requirements activities were contributing highly to the success of the implementation of ERP at UN-Habitat (M = 3.51; SD = 1.00).

**4.2.2 Users’ presentation requirement activities**

The study assessed the second objective and the results are captured in Table 4.

The findings of the user reporting requirement practices for ERP implementation in United Nations-Habitat in Table 4 reveal that respondents suggested the average impact of user reporting requirements (M = 3.42; SD = 0.98). The input types (M = 3.43; SD = 0.90) had a modest impact while it was possible to better describe outputs (M = 3.24; SD = 1.03). It was proposed. Based on these findings, the respondents claimed that it may have a significant effect on the execution of the ERP by determining the device formats and displays of a device (M = 3.69; sd = 0.98) while assisting in identifying graphical representation of the data (M = 3.19; sd = 1.03). Although it revealed that the use of report formats to better determine ERP execution would significantly affect (M = 3.50; SD = 1.00), it demonstrated a modest effect in the classification of queries (M = 3.34; SD = 0.98). The findings show that the participants suggested that the ERP would significantly affect its execution if all elements of the ERP specifications are specified (M = 3.52; SD = 0.96).



**Table 4. Influence of users’ presentation requirement activities**

<b>Users’ presentation requirement activities</b>	<b>M</b>	<b>SD</b>
Defining input forms	3.43	0.90
Helping define output forms	3.24	1.03
Specifying screen layouts and displays of the system	3.69	0.98
Assisting define graphical representation of data	3.19	1.03
Helping define reports’ formats	3.50	1.00
Involvement in defining queries	3.34	0.98
Participating in defining all items of the field	3.52	0.96
Average Users’ presentation requirement activities	3.42	0.98

Source: Research Data (2019)

**4.2.3 Users’ quality assurance activities**

The third objective was to establish the influence of Users’ quality assurance activities on ERP implementation at UN-Habitat and results are in Table 5.

Grounded on in Table 5, the findings show that the participants indicated that on average users’ quality assurance activities would have a moderate influence of the ERP implementation (M = 3.06; SD = 1.11). As they showed that facilitating the use of automated testing tools would have a moderate influence (M = 2.88; SD = 1.17), they also showed that each of; helping design the test scripts to validate functionality (M = 3.29; SD = 1.09), and testing design and execution (M = 2.76; SD = 1.13) would also have a moderate effect on the implementation of ERP. While the respondents showed that helping execute the tests scripts to validate functionality would moderately influence the ERP implementation (M = 3.36; SD = 1.18), it was demonstrated that system verification features can have a high effect on ERP execution by evaluating system prototypes (M = 3.41; SD = 1.04). and to review the data to be transferred into the system (M = 2.67; SD = 1.08) moderately influenced the ERP implementation.

**4.2.4 Influence of users’ project management activities**

The fourth objective was to establish the influence of users’ project management activities on ERP implementation at UN-Habitat with findings reported in Table 6.

The findings in Table 6 suggest a clear high impact on the introduction of ERP at UN-Habitat through project management practices of the users (M = 3.46; SD = 0.96). These results show the respondents indicating that scheduling project activities would highly influence its

implementation (M = 3.69; SD = 1.00). Danger and dispute management (identification, prevention and resolution) has shown modest influence (M = 3.26; SD = 0.89), they showed that monitoring progress of the project activities would highly influence its implementation (M = 3.79; SD = 1.02). They showed that communicating ERP project progress (M = 3.24; SD = 0.90) would moderately influence the ERP implementation and as well training program and training others have a moderate effect (M = 3.34; SD = 0.97).

**4.3 Regression Analysis**

The ANOVA findings obtained were depicted in Table 7.

The research analyzed model fitness using the model coefficients by evaluating whether  $\beta_1 = \beta_2 = \beta_3 = 0$ , (op management support coefficients, user presentation requirement activities, user quality assurance and project management activities are all zero) or at least one  $\beta_i \neq 0$ . If at least one  $\beta_i \neq 0$  the model will suit.

The results (F=19.710, p-value =.000) show p-value below <.05 for a value of p. so, there is enough data at 5% of the significance stage (i.e.  $\alpha=0.05$ ) to infer that at least one of the predictors is present; assistance to the management of alternatives, user criteria practices, user quality assurance and project management activities are useful to predict the application of ERP at UN Habitat.

The research models findings are shown in Table 8.

First of all, the analysis hypothesized (believed) this;

*H<sub>1a</sub>: There is no statistically significant relationship between users’ functional*

*requirements activities and ERP implementation at UN-Habitat*

T = 2.052 and p-value = .045 are the products of these results. The null hypothesis has been denied from  $p < .05$  and the alternative hypothesis has been approved. There is ample evidence at  $\alpha = 0,05$  that the *functional requirements activities are useful estimator ERP implementation at UN-Habitat*.

Secondly, the study hypothesized that;

*H<sub>2a</sub>: There is no statistically significant relationship between users' presentation requirement activities and ERP implementation at UN-Habitat*

T=2,248 and p-value=0,029 have been derived from these results. The null hypothesis has been denied from  $p < .05$  and the alternative hypothesis has been approved. There is ample proof at the  $\alpha = 0.05$  stage that the user's presentation criteria are not zero and, hence, that appropriate users' presentation requirement activities are useful as a predictor of ERP implementation at UN-Habitat.

Next, hypotheses;

*H<sub>3a</sub>: There is no statistically significant relationship between Users' quality assurance activities and ERP implementation at UN-Habitat*

T=2.488 and p-value=.016 are the products of these results. The null hypothesis has been denied from  $p < .05$  and the alternative hypothesis has been approved. There is enough proof at  $\alpha = 0.05$  that the quality assurance practices of users are not negligible, and therefore that quality assurance activities are of benefit to users as an indicator for the application of ERP on UN-Habitat.

Lastly, hypotheses;

*H<sub>3a</sub>: There is no statistically significant relationship between users' project management activities and ERP implementation at UN-Habitat*  
From these results, T= 2.530 and p-value= .014. Since  $p < .05$  then the null hypothesis is rejected and the alternative hypothesis accepted. At the  $\alpha = 0.05$  level of significance, there exists enough evidence to conclude that the users' project management activities is not zero and, hence, users' project management activities is useful as a predictor of ERP implementation at UN-Habitat.

The estimated equation, derived from Table 9, is

$$Y = 1.099 + .267X_1 + .264X_2 + .214X_3 + .262X_4 \dots \text{(iii)}$$

According to these results, an increase of one unit in users' functional requirements activities causes a 0.267 increase rate in ERP implementation at UN-Habitat and vice versa. A unit increase in users' presentation requirement activities causes an increased rate of .264 in ERP implementation at UN-Habitat while a unit decrease in users' presentation requirement activities causes a decrease rate of .264 ERP implementation at UN-Habitat. Based on the equation, anyone unit increase in Users' quality assurance activities causes a decrease rate of 0.214 in the growth of ERP implementation at UN-Habitat and one unit decrease in Users' quality assurance activities causes a decrease rate of 0.214 in the growth of ERP implementation at UN-Habitat. Any improvement in project management practices by one unit leads to an increase of 0.262 in ERP implementation development in the United Nations-Habitat, and a reduction in internal controls by one unit leads to an increase of 0.262 in ERP implementation in UN-Habitat.

Table 9 indicates that the operations of the users' technical specifications, users' requirements for presentation, user quality assurance, and project management tasks have optimistic coefficients that indicate that they are directly proportional to the application of ERPs by UN-Habitat. Increased user requires operations, user requirement presentation practices, user quality assurance operations, and user project management operations could result in better ERP implementation in United Nations Habitats and vice versa.

Finally, the model description seen in Table 9 was obtained.

Findings in Table 9 indicate that the determination coefficient was .5677, suggesting that the users' practices on technical criteria, users' requirement submissions, users' quality improvement activities and users' project management activities account for 56.77% of the variance in ERP implementation in UN-Habitat. There are, thus, clear determinants for ERP deployment in the UN habitat for all the variable; user's practical needs activities, user criteria presentation operation, user Consistency

Assurance activities and user project management activity. In conclusion, there was a substantial positive and positive clarification of the ERP deployment at UN-Habitat, through user operations of technical specifications, user requirements activities, quality improvement activities for users, and project management activities for users.

**Table 5. Analysis by Users' quality assurance activities**

<b>Users' quality assurance activities</b>	<b>M</b>	<b>SD</b>
Enabling the use of automatic research equipment	2.88	1.17
Helps to verify the functionality of test scripts	3.29	1.09
Plan and deployment verification	2.76	1.13
To support run scripts for feature validation	3.36	1.18
Check system capabilities by evaluating system prototypes	3.41	1.04
Support review the data that will be passed to the system	2.67	1.08
Average Users' quality assurance activities	3.06	1.11

Source: Research Data (2019)

**Table 6. Influence of users' project management activities**

<b>Influence of users' project management activities</b>	<b>M</b>	<b>SD</b>
Scheduling project activities	3.69	1.00
Management (identification, mitigation, and resolutions) of risks and conflicts	3.26	0.89
Monitoring progress of the project activities	3.79	1.02
Communicating on ERP project progress	3.24	0.90
Training program and training others	3.34	0.97
Average Influence of users' project management activities	3.46	0.96

Source: Research Data (2019)

**Table 7. Analysis of Variance for all Variable**

<b>ANOVA<sup>a</sup></b>					
	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	14.863	4	3.716	19.710	.000 <sup>b</sup>
Residual	9.992	53	.189		
Total	24.855	57			

a. Dependent Variable: ERP implementation

b. Predictors: (Constant), Users' project management activities, Users' presentation requirement activities, Users' quality assurance activities, Top Management Support

Source: Research Data (2019)

**Table 8. Results of Regression ERP implementation**

<b>Coefficients<sup>a</sup></b>	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
(Constant)	-1.099	.403		-2.724	.009
Users' functional requirements activities	.264	.129	.278	2.052	.045
Users' presentation requirement activities	.264	.117	.292	2.248	.029
Users' quality assurance activities	.214	.086	.241	2.488	.016
Users' project management activities	.262	.104	.239	2.530	.014

a. Dependent Variable: ERP implementation

Source: Research Data (2019)

**Table 9. Model Summary for ERP implementation**

<b>Model Summary<sup>b</sup></b>				
<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	<b>Durbin-Watson</b>
.773 <sup>a</sup>	.5980	.5677	.43419	1.747

a. Predictors: (Constant), Users' project management activities, Users' presentation requirement activities, Users' quality assurance activities , Top Management Support  
 b. Dependent Variable: ERP implementation

Source: Research Data (2019)

The study showed that each degree of priority has a positive impact on the introduction of ERP at 0,05; users' technical criteria behavior, user requires presentation practices, user quality improvement activities and user project management activities. This means that the operations of users' technical specifications, users' requirement introduction, users' quality assurance practices and project management operations are essential determinants of the implementation of the ERP. The study explains that, in terms of technical specifications of users' processes, presentation requirements of users, quality assurance of users' and project management activities, 56.77 percent of differences in ERP implementation are protected. Based on the results, the relationship between each of users' functional requirements activities ( $r = .657$ ) and users' presentation requirement activities ( $r = .623$ ) and DV (ERP implementation) is high while the relationship between each of Users' quality assurance activities ( $r = 0.488$ ) and users' project management activities ( $r = 0.487$ ) and ERP implementation at is moderate.

**5. CONCLUSION**

The study demonstrated that the addition of ERP has a strong impact on the success and efficacy of ERP implementation by way of user operations of technical specifications, user quality assurance, and project management practices of developers. The ERP then incorporates sustainable data and practices within the enterprise through various sectors and divisions. This would ensure that cost of ERP implementation is within the budget but not exaggerated, the implementation is done within the scheduled timelines and the ERP achieves the set objective.

The study concludes that users' functional requirements activities positively and significantly influence the ERP implementation, positively improving the ERP implementation activity. Thus, the user's technical specifications

tasks and ERP deployment are constructive and important. Activities of functional needs by consumers relate greatly and marginally to the introduction of ERP. Commitment to ERP system implementation, top management engagement, project team, preparation (of staff, management and users of the ERP), the definition of roles and responsibility, internal communication, and project planning highly contribute to the ERP implementation. However, change management, and allocation and provision of project resources moderately contribute to the ERP implementation.

The study concludes that users' presentation requirement activities positively significantly influence ERP implementation. Thus, user design criteria contribute to the application of ERP favorably. Input types are specified, output forms are defined by users, device displays and screen templates are set, report formats may be defined, the most relevant variables in users' presentation practices are ERP execution. The most important elements are, participating in defining all items of the ERP requirements, a high degree of customization in ERP application, and participating in defining all items of the ERP requirements. Meanwhile assisting define the graphical representation of data, helping define output forms, the actual implementation of the new ERP, stabilization of the ERP moderately contribute to ERP implementation.

The study concludes that the users' quality assurance activities have a significant moderate influence on its ERP implementation. Thus, Users' quality assurance activities have a significant moderate relationship with ERP implementation. When an organization manages effective Users' quality assurance activities then there is the assured establishment of an effective ERP implementation that ensures success in ERP implementation. The main considerations when developing the users' quality assurance activities for ERP implementation are; facilitating the usage of automatic testing software, support to design the

functionality test scripts, test design and run, help to run the functionality validation test scripts, check system functionality by testing system prototypes, help to track data to be transferred into the system.

The study concludes that users' project management activities have a significant moderate influence on ERP implementation. The best users' project management activities are necessary for the development of ERP implementation as informed by; scheduling project activities, management of risks and conflicts, monitoring the progress of the project activities, communicating ERP project progress, and skills development (for ensuring ERP projects are run and managed by staff with varied knowledge, experience, and skills).

Finally, the analysis reveals that the user's technical criteria activities, user presentation requirements, users quality assurance activities, and users' project management activities for applying the ERP are making a considerable positive impact at 5% (0.05) level. User behaviors, user specifications, and project management activities are also predictors of the ERP implementation, and that 56,77 percent of the variance in ERP implementation is clarified by users' operations for technical requirements, user requirements, and user behavior for quality control activities.

## 6. RECOMMENDATIONS

Based on the outcomes and priorities, the report made a policy recommendation. Firstly, the analysis suggests that organizations need to establish an ERP implementation founded on users' functional requirements activities through the development of a policy for top management involvement. The framework should have an allowance for the participation of the top management by spelling out that the Users' functional requirements activities should be actively involved in the ERP implementation. This would be enhanced by clearly documenting the role of the users' functional requirements activities. The main considerations covered in the policy on users' functional requirements activities should include; commitment to the implementation process, providing for education and training, involvement in the project, project team selection,, defining roles and responsibility, ensuring clear internal communication, managing change, ensuring the presence of an

influential champion and change agent, and project planning, and allocation sufficient resource to the implementation process such as; funding, equipment, human capital, education. All this should be documented in advance and assurance provided by the top management on adherence.

Secondly, the study recommends that on agreeing to acquire a new ERP system, the project team should define input, output, screen layouts, graphical representation, reports, and queries and user should participate in defining all items of the ERP. Thus, the user should play a key role in defining all the input and out forms. This will pave way for the development of requirement specifications of the ERP system to be implemented. Importantly, the project team, with the involvement of the user, should require specification.

Thirdly, this research suggests that companies evaluate the quality assurance practices of their actual customers by contrasting them to the vendor's suggested ERP framework requirement. The use of automated testing software is important; Support the creation and implementation of ERP programs, the checking of the software validation scripts, testing system functionality by testing system prototype, as well as the validation of testing scripts for the application, verification of data migration through the system. system functionality The ERP framework can then be designed and implemented by the organization to build ERP systems to reproduce the previous model. This is combined with the relocation of the data, which plans for movements or migration in the current ERP setting the legacy masters data of the original system. Any problems found in this process should be reported promptly and rectified by daily notifications of occurrence. To provide maintenance and honesty and accessibility of data, the ERP should be checked.

Lastly, the study recommends that multi-national organizations should acquire and retain the appropriate users' project management activities for ERP implementation through scheduling project activities, scheduling project activities, management of risks and conflicts, monitoring the progress of the project activities, communicating ERP project progress as well as skills development. There is a need for enough training and the company should encourage efficient and accurate use of the ERP framework

which should be given for the users from the outset of the ERP project.

### 6.1 Contribution to Knowledge

The research for the successful introduction of ERP was undertaken at United Nations Habitat. It will first ensure efficient ERP deployment by the use of the ERP. This would be enforced through ERPs between multinationals. The study will also contribute to overcoming the current obstacles which prevent multi-national organizations from implementing the ERP. Consequently, credible research carried out will improve managers' ability to make decisions that contribute to the execution of ERPs amongst multi-national firms.

This research would provide an impetus for an example that can be placed into action or followed by organizations in the attempts of other multinationals to carry out outstanding sustainability initiatives.

Finally, the research is a significant resource in the area of ERP deployment by adding new information about the implementation of ERP. The latest ERP contribution will help both researchers and academics finding similar knowledge tremendously. A thesis will open a window on the uses of ERP implementation, which will promote and inspire further studies on ERP deployment, making the link between ERP implementation and performance of ERP implementation valuable to researchers researching.

### 6.2 Practical Implications

This study is useful for the implementation of ERP information systems among multinationals companies to; assist in providing information to the management of these companies and help avoid problems that arise out of the involvement of the user during ERP system implementation. The outcome of the research may also help different stakeholders in the multinationals to establish good plans and policies about user engagement which could benefit ERP systems in various regions.

The results would be helpful for ERP providers who could use the usable knowledge in order to improve the desirable consumer features in favor of the international organizations introducing ERP programs.

The results of the study could allow various organizations to determine user processes, specifications for users, quality assurance practices for users, and the user's project management activities, which will enhance the adoption of ERP programs by multinational corporations.

The research would enable academics and scholars to add to existing information on the adoption of ERP systems as well as to propose a potential mechanism that will concentrate on the need for user participation to incorporate ERP systems in organizations. The thesis would support other researchers by the observations and recommendations reported in this area. It would then be a reference article

### CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the authors.

### COMPETING INTERESTS

Author has declared that no competing interests exist.

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