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# DETERMINANTS OF ELECTRONIC PROCUREMENT SYSTEM ADOPTION IN TANZANIA.

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## ABSTRACT

**Purpose:** This study examined the determinants of electronic procurement adoption in Tanzania. Specifically, it aimed to examine the influence of individual factors and organizational factors that affect electronic procurement adoption.

**Design/Methodology/Approach:** A prevalence study was employed by the researchers and a stratified method of chances technique was used to obtain the number of respondents needed from the population. The sample consisted of 106 respondents where 52 were from Tanzania Breweries Limited (TBL) which is a private organisation and 54 were from TANESCO which represents public organisations. Data were collected through questionnaires which were supplemented by a documentary review. Quantitative data analysis technique – Logistic Regression Analysis was used to analyse data.

**Findings:** Based on Technological Acceptance Theory, findings show that individual age and education had a significant relationship with electronic procurement adoption in Private Organisations while individual skills and education had a significant relationship with electronic procurement adoption in Public Organisations. Organization factors such as motivation and teamwork had a significant relationship with the adoption of electronic procurement in Private Organisations while the organizational structure and teamwork had a significant relationship with electronic procurement adoption in Public Organisations.

**Research Limitation/Implication:** This study is limited in terms of the geographical context that is conducted as the study was conducted in Tanzania. Therefore, the generalization of findings across nations should be made with caution.

**Practical Implication:** Public organizations should adopt fully electronic procurement at the pace of private organizations to increase the performance of the organization through cost reduction, efficiency and effectiveness.

**Originality/value:** The study adds knowledge to the current trends of electronic procurement in the Tanzanian procurement system.

***Keywords:*** *Adoption, electronic, organization, procurement, Tanzania*

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## INTRODUCTION

### 1.1 Background Electronic Procurement

Due to the increase of changing environment of globalization, most organization have committed their efforts to the procurement functions because most of the organizational resources are consumed through procurement (Mwita & Mwaighacho, 2017). The study explained the need of having electronic procurement to reduce procurement risks such as reduction in procurement cost, improve quality of goods, services and works and lead to timely delivery of goods. According to Teo, Lin, & Lai (2009), the level of electronic procurement adoption differs among countries, for instance, Singapore's varieties of items are procured to a different extent and most procured items via the internet are Material, Repair and Operation (MRO) which represent 57.6%, while manufactured goods represent 43.5% procured through internet and raw material represent 47.4%.

The concurrence with online procurement in Saudi Arabia is highly affected by outer elements rather than inner elements. The inner elements involve Government support, security and trustworthiness of the online payment option, policy and regulation as well as the country's business and national culture (Altayyar & Beaument, 2016). Similarly, Saudi Arabia is typified by both economic and political instability in that sense makes the rate of Information and communication technology innovation below. In United Nations (UN), electronic procurement adoption is highly influenced by Organization readiness, supply factor, policy factor, digital divide and strategic factors, and most electronic procurement is done on routine and non-standardized, at the same time, in most of all purchases and type of organization, recently electronic procurement used in the purchasing of few sets of goods, in the office supplies but also material requirement and operations (MRO) (Davila & Palmer, 2003). As documented by Makoba, Nyamagere, & Eliufoo, (2017) Tanzania like any other country strive to succeed in electronic procurement system to improve the organization's efficiency and effectiveness which will influence transparency. They also revealed that organizations that practise traditional procurement fear opting for electronic procurement because of risks associated with the system, although organizations that have opted for the system turned into vulnerable risks.

Electronic procurement enables the organization to reduce costs in terms of less paperwork in the procurement undertaken, and reduce inventory costs because goods or materials will be delivered faster due to timely information transfer (Aberdeen Group, 2005). Also, electronic procurement helps the organization to improve efficiency as the essence of maverick purchase will be reduced because of the automated procurement system which enhances good monitoring of procurement activities, in that essence transparency improve and the organization gain a good relationship with their supplier (Koech *et al*, .2016). As it has been observed that electronic procurement not only benefits the organization in cost reduction but also helps the organization to operate with few chosen suppliers of which the implementation will involve the use of Electronic Data Interchange (EDI) and the internet, where the organization will be able to search for suppliers and also supplier gets information on what it is required to meet (Teo *et al*., 2009). And it has been revealed that, organization that makes maximum use of internet technology are in a better

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position of reducing non-value-added tasks through the increased speed of information transfer which helps to link all members within a supply chain (Morosan & Jeong, 2008).

Despite electronic procurement benefits to organizations still, the rate of adoption is low especially in developing countries like Kenya and Tanzania (Makoba *et al*, 2017). The study done by Koech *et al.,* (2016) in Kenya found that electronic procurement adoption in any organization must be supported by individual factors especially technical skills and the age of the employee. In this study, it was observed that the elder people were late adopters of information and communication technology compared to younger people. Some studies in Tanzania such as Mohammed (2013) indicated that the prosperous electronic procurement adoption needs various driver forces such as; technological factors in terms of technological infrastructure, organizational factors in terms of support of top management together with the attitude of the organization towards electronic procurement and environmental factors. The same study found that private organisations were better adopters compared to public organisations.

Although the United Republic of Tanzania government enacted the PPA in 2011 and the Public Procurement Regulations of 2013 which have specific sections and Regulations that govern and support electronic procurement and other information and Communication Technology activities, still compliance and application of electronic procurement in sectors of public organisations are very low. In 2016/17, PPRA established a pilot implementation of electronic procurement in 100 procuring entities before its rollout. However, procurement audit reports showed few organisations to have adopted the system in 2017/2018 (PPRA, 2018). In that sense, the key question was what caused a low rate of electronic procurement adoption in public sector organizations while private sector organizations have been able to adapt quickly in various countries? Since there were not many research studies highlighting the main drivers that influence the electronic procurement adoption in developing countries like Tanzania although the procurement law allows the application of an electronic procurement system. It was essentially a study to be carried out to assess the state of adoption of electronic procurement in public organisations compared to private organisations in Tanzania. Therefore, this study analysed the determinants of electronic procurement adoption in Tanzania by looking specifically at the influence of individual and organizational factors on electronic procurement adoption in both public and private organizations.

## 2.0 THEORETICAL REVIEW

This study was led by one theory which is Technology Acceptance Theory (TAT). According to Devis (1986) as modified by Chow, Herold, Choo & Chan, (2012) this theory explains that emerging new technology inside the organization cannot be implemented if it is not accepted by users. Electronic procurement technology adoption in the organization requires the involvement of employees and openly communicating with them concerns the new technology emerged. According to Shatta *et al.,* (2020), new technology leads to organizational and behaviour changes, hence attitudes and beliefs among employees must be aligned with the new technology imposed. Most individuals inside the organization may resist the changes that emerged hence it

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is important for the organization to find out the reason for the users resist any changes. The theory of Technological acceptance is based on two things namely perceived usefulness as well as ease of use. This study, the theory of Technological acceptance applies to this study because the electronic procurement adoption in an organization will be implemented if the employees inside the organization find it easy for them to use and the organization will insist on the implementation of the system if the technology found to be of the benefit to the organization. So that all the employees within the organization must feel positive concerning the adoption of electronic procurement.

## 3.0 RESEARCH METHODOLOGY

### 3.1 Research Design

This study used a cross-sectional method because the researchers intended to collect data from respondents in both private and public organizations only once without repeating the same phenomena. Also, the cross-sectional design made it possible for the researchers to collect enough amounts of data cost-effectively needed from the sizeable population. The same kind of research design has been revealed to assist researchers by giving more control over the research process (Saunders *et al.* 2009).

### 3.2 Sampling technique and sample size

Researchers used probability sampling techniques. Under this, a stratified sampling technique was used. In the Stratified simple random sampling method, the researchers selected the sample of respondents who dealt with procurement activities and were believed to be reliable, directly involved and knowledgeable for the study (Magigi, 2015). Pituch & Stevens (2015), as well as Pallant (2013), recommend at least subjects in the range of 10-15 to be involved in the conceptual framework specifically per independent variable to conduct multivariate statistical analysis, to achieve a required total sample size of 40-60 responds for individual and organizational factors respectively. This is because individual factors had four variables and organizational factors had four that were tested separately. The sample was drawn from all departments which were involved in procurement activities on daily basis. At least 50% of the population of each department was taken as a sample for this study. Data were collected in Dar-es Salaam of which respondents were requested to fill up the questionnaires presented to them and collected by researchers. A total of 106 respondents were used to provide information to researchers of which 52 respondents were from Tanzania Breweries Limited (TBL) and 54 respondents were from TANESCO. Respondents from each organization were considered to be optimal that aimed to meet the requirement of efficiency, reliability and representativeness (Kothari, 2004).

### 3.3 Data collection techniques

In this study, the choice of the data collection tool to be used was selected by considering how best the tool can serve the purpose of this study, of which the preferable selected data collection tool involved the use of questionnaire which was supplemented by a documentary review. The researchers prepared questionnaires that were applied as an extracting instrument for qualitative

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as well as quantitative evidence necessary to be used in the study. Questionnaires in this study were primarily designed to draw attention to the gathering of information concerning the adoption of electronic procurement in TBL and TANESCO, and the reason for selecting this method of data collection technique to be applied in this study was because researchers expected the questionnaire to help in examining and obtaining necessary information concerning the study. Also, the questionnaire is designed to cover or facilitated to gather all the intended information on the adoption of electronic procurement in the organization. Both close and open-ended questions were formulated. For the case of documentary review, documentary sources used in this study include magazines, journals as well as other potential library documents and materials. On the other hand, formal records for instance purchasing files, research as well as annual reports were used. Other sources of secondary data provided by the organization were Purchase requisition, Purchase order, Delivery, as well as Goods, received notes. The usefulness of these sources was on justifying several actions supporting to be involved in the research report.

### 3.4 Data Analysis

The comparison of the relationship between independent variables (organization structure, employee motivation, teamwork and leadership style) with the dependent variable (adoption of electronic procurement) applied the Binary logistic regression (LR) model. The response variable was treated in binary response measuring whether the organization adopted electronic procurement or not. For this case, a dummy variable was created 1= if adopted electronic procurement and 0= if not adopted electronic procurement. Thus,

$$\text{Logit}(Y) = a + \beta_1 SK + \beta_2 AG + \beta_3 ED + \beta_4 SE \quad \ldots\ldots 1$$

Where by

Logit (Y) = is a probability of electronic procurement adoption ranging from 0 to 1;

$a$ = constant term,

SK= Skills

AG= Age

ED= Education

Se = Sex

$\beta_1+\beta_2+\beta_3+\beta_4$ =coefficient of independent variables showing its effect on the dependent variable

Furthermore, to assess the influence of organizational factors (organization structure, employee motivation, teamwork, and leadership style) on the adoption of electronic procurement in the second part of the specific objective, the researchers used the same logistic regression model. The dependent variable was treated in binary response measuring whether the organization adopted electronic procurement or not. For this case, a dummy variable was created 1= if adopted electronic procurement and 0= if not adopted electronic procurement. Thus;

$$\text{Logit}(Y) = a + \beta_1 OG + \beta_2 EM + \beta_3 TW + \beta_4 LS \quad \ldots\ldots 2$$

Where by

Logit (Y) = is a probability of electronic procurement adoption ranging from 0 to 1;

$a$ = constant term,

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OG= Organization structure
EM= Employee motivation
TW= Team work
LS = Leadership style
$\beta_1+\beta_2+\beta_3+\beta_4$ = coefficient of independent variables showing its effect on the dependent variable

### 3.5 Testing binary logistic regression assumption

Works of literature indicate that to run a binary logistic regression model the assumptions of the model were necessary to be checked to avoid deviation from the assumptions. As said by Pallant (2007) the fundamental assumptions of the regression model must be checked before running a regression analysis. Therefore, all assumptions of the regression model were checked by the researcher during data analysis.

### 3.6 Evaluation of the model

Table 3.1 below demonstrates that the general model was statistically relevant ($p<0.05$), which indicates the - capability of the model that the electronic procurement adoption is influenced by the individual factors. Also, the excellence match of the model was measured by checking out the Hosmer and Lemeshow test where the results indicate that there is a goodness fit of the model as the p-value is more than 5% ($p>0.05$) as shown in Table 1. Furthermore, to test the effectiveness of the model Nagelkerke $R^2$ and Cox as well as Snell R-square must be observed. For this study, the value of Cox Snell R square and Nagelkerke $R^2$ was 0.620 and 0.857 consecutively. This implies that the independent variable (skills, age, education and sex) as indicated in the model explains 62% and 85.7% variance in the dependent variable (electronic procurement adoption).

*Table 1: Omnibus tests of model coefficients and Hosmer and Lemeshow test*

| | | **Chi-square** | **Df** | **Sig.** |
|---|---|---|---|---|
| Step 1 | Step | 48.314 | 4 | .000 |
| | Block | 48.314 | 4 | .000 |
| | Model | 48.314 | 4 | .000 |
| | | **Hosmer and Lemeshow test** | | |
| | | Chi-square | Df | Sig |
| | | 11.486 | 8 | .176 |

Nagelkerke R Square .857
Cox & Snell R Square .620
-2 Log likelihood 99.951[a]

Research findings (2020**)**

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## 4.0 FINDINGS AND DISCUSSION

### 4.1 Influence of individual factors on electronic procurement adoption

This part of the objective aimed to find out if individual attributes among employees have got any relationship with adopting electronic procurement in an organization. Individual factors in this research were analysed by considering four indicators which were education, individual skills, age and gender.

The results from the research findings (See table 2) revealed that the adoption of electronic procurement at TANESCO is influenced by individual factors of education and skills in an organization. This suggests that the adoption of electronic procurement at TANESCO is determined by the education level of employees such as having bachelor degrees and other highest levels of education like masters. Thus, employees who have the highest level of education such as a bachelor degree can learn very faster compared to those with a low level of education. The study was aligned with the study done by Caselli & Coleman, (2001), who found that organization's rate of electronic usage system is viewed on workers' ability in terms of their education level. This indicates that possession of the highest education by an individual in a particular field leads to the increased adoption of electronic procurement.

Also, the adoption of electronic procurement at TANESCO was influenced by individuals' skills which implies that employees who have skills concerning the use of different software such as electronic procurement software and other computer software we're able to adapt quickly to any changes in information communication technology because electronic procurement application requires to have employees who are familiar with the usage of computers. This corresponds with the study conducted by Mchopa, (2012) who found that the successful implementation of the electronic procurement system selected requires expertise from both the supplier entity and the buying organization, who are in charge in day to day procurement operation, indicating that increasing the adoption of the changing environment increases organization's efficiency, and for the organization to gain electronic procurement benefits employees should accept technological changes and be ready to learn on the new system that raises (Makoba *et al*,.2017). Furthermore, the study was aligned with technology acceptance theory which indicates that smooth adoption of new technology requires the involvement of employees to accept.

However, the study failed to find the existing relationship between individual factors of age and gender in influencing the adoption of electronic procurement in TANESCO because the p-value is greater than 5% ($p>0.05$). Hence the outcome was a rejection of the alternative hypothesis and acceptance of the null hypothesis. This implies that aged people such as elder people and young people cannot influence the adoption of electronic procurement which was in contrast to the study done by Meyer, (2007) which found that the adoption of electronic procurement in organizational progress is affected by the individual age of the employees by considering that the youth or younger people in the organization were capable to adapt easily the new technological changes, for instance, the application of electronic procurement as compared to the elder people,

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as from the demographic result indicated that age of employees at TANESCO many fall under 35-55 years. Also, the study was contrary to the study of Raufu, (2014) who found that there is an influence of gender (Male and female) in the adoption of new technology in an organization by observing that males were able to adopt the new changes of technology very faster compared to females.

*Table 2: Influence of individual factors on electronic procurement adoption in TANESCO*

| | **B** | **S.E.** | **Wald** | **Df** | **Sig.** | **Exp(B)** | **95% C.I. for EXP(B)** | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower | Upper |
| Individual skills | -3.367 | 1.282 | 6.896 | 1 | .009** | 1.034 | .003 | .426 |
| Age | -.651 | 1.408 | .214 | 1 | .644 | .522 | .033 | 8.236 |
| Education | -2.423 | 1.137 | 4.541 | 1 | .033** | .089 | .010 | .823 |
| Sex | .808 | .718 | 1.268 | 1 | .260 | 2.243 | .550 | 9.155 |
| Constant | 13.930 | 6.425 | 4.701 | 1 | .030 | 1120960.573 | | |

Dependent variable: Electronic procurement adoption (1=if adopted 0=if not adopted**) **** denote significant level

Research findings, (2020)

For the case of TBL the results (See table 3) indicate that electronic procurement adoption was influenced by the individual factors of age and education because the p-value was less than 5%. Therefore, there is a significant relationship between age and electronic procurement adoption hence alternative hypothesis was supported. This implies that the age of people in an organization influence the adoption of electronic procurement; normally the youth or younger people in the organization were able to learn very quickly due to the ability of youth to think critically and also faster compared to elder people. Also, the capability of youth to adopt easily the new technological changes for example the application of electronic procurement was very faster compared to elder people as it goes right with the results from the demographic information which indicate that there is more youth employee in TBL as most of them are between 21-35years. This study was consistence with the study done by Meyer, (2007) which found that any adoption of electronic procurement in the organization is mainly affected by the individual age of the employees by considering that the youth or younger people in the organization were capable to adapt easily the new changes of technology such as the use of electronic procurement compared to the elder people. Also, the study was aligned with that study of Frosch, (2011) who has found that active old age considers the ability and desire of a large number to continue being involved in socially and economically activities in production meanwhile the dangers of disability, as well as chronic illness, grow or matches with age. While this happens to TBL as age influences the adoption of electronic procurement in TANESCO age does not influence electronic procurement adoption.

Additionally, the education of employees influences the adoption of electronic procurement at TBL. Thus, having enough employees with the highest level of education contribute to better performance of the organization hence the adoption of electronic procurement is very easy. This

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is supported by Caselli & Coleman, (2001), who found that organization's rate of electronic usage system is viewed on workers' ability in terms of their education level.

However, the findings in TBL failed to establish the relationship between individual skills and gender in influencing the adoption of electronic procurement, the p-value is more than 5% ($p>0.05$). Hence the outcome was the rejection of the alternative hypothesis and acceptance of the null hypothesis, implying that the skills which employees do not influence the adoption of electronic procurement because the increase of individual skills leads to decreases in the rate of electronic procurement adoption in TBL due to negative insignificant relationship between skills and adoption of electronic procurement. This finding was contrary to findings obtained in TANESCO which indicate the positive relationship between skills and adoption of electronic procurement. Furthermore, this study is contrary to another study done by Mchopa, (2012) which indicates that the successful implementation of the electronic procurement system selected requires expertise from both the supplier entity and the buying organization, who are in charge of day-to-day procurement operation. Moreover, the study failed to find the association between gender and the adoption of electronic procurement in TBL. This study was contrary to the study conducted by Raufu, (2014) who found that there is the influence of gender (Male and female) in the adoption of new technology in an organization by observing that males were able to adopt the new changes of technology very faster compared to female.

*Table 3: Influence of individual factors on electronic procurement adoption in TBL*

| | **B** | **S.E.** | **Wald** | **Df** | **Sig.** | **Exp(B)** | **95%C.I.for EXP(B)** | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower | Upper |
| Individual skills | 1.175 | 1.268 | .859 | 1 | .354 | 3.238 | .270 | 38.871 |
| Age | 3.317 | 1.338 | 6.148 | 1 | .013** | 27.590 | 2.004 | 379.808 |
| Education | 2.607 | 1.170 | 4.961 | 1 | .026** | 13.556 | 1.367 | 134.383 |
| Sex | -.858 | .733 | 1.371 | 1 | .242 | .424 | .101 | 1.783 |
| Constant | -15.798 | 6.719 | 5.528 | 1 | .019 | .000 | | |

Dependent variable: Electronic procurement adoption (1=if adopted 0=if not adopted**) **** denote significant level
Research findings, (2020)

### 4.2 Influence of organizational factors on electronic procurement adoption

This second part of the objective aimed to find the existing relationship between factors of organization and the adoption of electronic procurement. The organization factors were analyzed by considering four indicators which are organizational structure, employee motivation, teamwork and leadership style. The outcomes from the findings (See Table 4) noted that there is a positive and significant relationship between organizational structure and electronic procurement adoption in TANESCO as the *p*-value is lower than 5% ($p<0.05$), resulting in the acceptance of the alternative hypothesis of the study. This implies that a well-established structure that allows smooth interaction of communication among employees within the

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organization enables easy adoption of new technology because the employees can communicate smoothly with the top management concerning any innovation which is wanted to be made in an organization, and the top management provides the support to the lower level. To this extent, a good organizational structure facilitates or encourages innovation which leads to easy adoption of any changes of new technology such as electronic procurement adoption. This is supported by the study done by Rahman, (2017) who found that the adoption of new technology in the organization was supported much by a good organizational structure which allows easy communication between top-level management and lower-level employees. Also, the study is supported by the Technology Acceptance Theory (TAC) done by Davis (1986), that the technology will be accepted by the employees if they find it easy to use but also if the management within the organization insists on the benefit that can be gained from the system.

Moreover, the results revealed the existence of a significant relationship between teamwork and adoption of electronic procurement in TANESCO as the p-value is lower than 5% ($p<0.05$), so the alternative hypothesis of the study was accepted. This implies that electronic procurement adoption in an organization was influenced by the teamwork of employees because the availability of teamwork among the employees in performing tasks and any other issues facilitates easy adoption of electronic procurement in the organization through participation in understanding and implementing the new technology and software. This is underpinned by a study conducted by Gunaseharan *et al.* (2009) which found that having teamwork among employees and top management facilitates and encourages the faster adoption of electronic procurement because of the easy sharing of knowledge and skills. Also, the study Teo, *et al. (*2009) concluded from the analysis of the study that there is a significant positive relationship between teamwork and the adoption of electronic procurement in an organization.

However, the results failed to establish the relationship between motivation of employees and leadership style with the adoption of electronic procurement in an organization as the p-value is more than 5% ($p>0.05$) of which, the alternative hypothesis of the study was rejected and the null hypothesis was accepted. The study is contrary to the study done by Chopra, (2002) who found that motivation factors such as better wages, promotion and allowances by motivating the employees to increase their productivity through innovation and adoption of new technology influenced the adoption of electronic procurement in an organization. Also, there is the existence of an insignificant relationship between the leadership style and the adoption of electronic procurement. Thus, whether leadership style is good or bad did not influence the adoption of electronic procurement which is supported by the study done by Abdullah et al., (2015) Who found that there is no association between the leadership style of top management and the adoption of electronic procurement within an organization. Further (Bohoris, 2007), said that leadership style encourages or discourage employee to perform a better job but concerning the adoption of electronic procurement the study failed to establish the existing relationship.

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*Table 4: Influence of organization factors on electronic procurement adoption in TANESCO*

| | B | S.E. | Wald | Df | Sig. | Exp(B) | 95% C.I.for EXP(B) | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower | Upper |
| Organization structure | 2.602 | 1.112 | 5.476 | 1 | .019** | .074 | .008 | .655 |
| Employee motivation | -2.404 | 5.217 | .212 | 1 | .645 | .090 | .000 | 2491.685 |
| Teamwork | 3.275 | 1.561 | 4.404 | 1 | .036** | .038 | .002 | .806 |
| Leadership style | 1.381 | 5.234 | .070 | 1 | .792 | 3.981 | .000 | 113609.813 |
| Constant | 17.228 | 7.485 | 5.297 | 1 | .021 | 30352317.444 | | |

Dependent variable: Electronic procurement adoption (1=if adopted 0=if not adopted**) **** denote significant level
Research findings (2020)

For the case of TBL, findings indicate that (See Table 5) there is a statistically significant relationship existing between employee motivation and adoption of electronic procurement as the p-value was less than 5%, which supports the alternatives hypothesis. This implies that electronic procurement adoption in TBL was influenced by the motivation of an employee. Through motivation, employees might be eager to learn new technology which may result in to increase in organisation performance. In this case, the motivation of the employee was in terms of a better salary, overtime payment, promotion and extra allowance. These results are consistent with that study of Chopra, (2002) which found that the adoption of electronic procurement in an organization was influenced by the motivation factors such as better wages, promotion and allowances by motivating the employees to increase their productivity through innovation and adoption of new technology. This result is also supported by the Theory of Planned Behavior (TPB) which indicates that certain variables influenced the new technology adoption, in the sense that, employee behaviour toward the new technology adoption is predicted by the organization's intention

Also, TBL was influenced by the teamwork within the organization as the p-value was less than 5%. This implies that the presence of teamwork such as collaboration in doing tasks or work in TBL among employees contributes to the easy adoption of electronic procurement because of sharing of knowledge, technology and experience among the employees. This corresponds with the study conducted by Gunaseharan *et al.* (2009) which found that having teamwork among employees and top management facilitates and encourages the faster adoption of electronic procurement because of the easy sharing of knowledge and skills. This is the same as the study conducted by Teo, *et al. (*2009) who concluded that there is a positive and significant relationship between teamwork and the adoption of electronic procurement in an organization.

However, the findings failed to identify the relationship existing between organization structure and electronic procurement adoption in TBL as the p-value was greater than 5%, and the alternative hypothesis was rejected. This indicates that the organization structure did not

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influence the adoption of electronic procurement, thus, having a good or bad organization structure does not influence the electronic procurement adoption. This was contrary to the findings of TANESCO which shows the positive and significant relationship between organization structure and electronic procurement adoption. Also, the findings were contrary to the study done by Rahman (2017) who found that the adoption of new technology in organization was supported much by a good organizational structure that allows easy communication between top-level management and lower-level employees. Also, the findings in TBL failed to establish a significant relationship between leadership style and adoption of electronic procurement. Thus, the adoption of electronic procurement was not influenced by the leadership style. The study is opposing the study done by Bohoris, (2007), which indicates that leadership style encourages or discourages employees to perform the better jobs but to the adoption of electronic procurement this study failed to establish the existing relationship

*Table 5: Influence of organizational factors on electronic procurement adoption in TBL*

| | **B** | **S.E.** | **Wald** | **Df** | **Sig.** | **Exp(B)** | **95% C.I. for EXP(B)** | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower | Upper |
| Organization structure | .550 | 2.457 | .050 | 1 | .823 | 1.733 | .014 | 213.709 |
| Employee motivation | 2.789 | 1.106 | 6.364 | 1 | .012** | 16.266 | 1.863 | 142.029 |
| Teamwork | 3.583 | 1.523 | 5.536 | 1 | .019** | 35.983 | 1.819 | 711.686 |
| Leadership style | .582 | 2.159 | .073 | 1 | .787 | 1.790 | .026 | 123.166 |
| Constant | -18.923 | 7.892 | 5.748 | 1 | .017 | .000 | | |

Dependent variable: Electronic procurement adoption (1=if adopted 0=if not adopted**) **** denote significant level
Research findings (2020)

## 5 CONCLUSION

Based on the study found shows that TANESCO as a public organization is at the preliminary stage of adopting electronic procurement and the main tools used were e-informing and e-sourcing, which indicates that in a public organization the application of electronic procurement is still lagging. Practically, public organisations were still in pilot-study on implementing the system of electronic procurement despite the public procurement regulation of 2013, Reg. 342 which require public entities to implement the use of electronic procurement in procurement proceedings. But at TBL as a private organization, the findings indicate that the organization was in a transactional perspective on electronic procurement adoption and the main tools used were e-tendering and e-payment and including all tools which were used from an information perspective because the organization moved from the preliminary stage to final stage of electronic procurement adoption. TBL through adopting electronic procurement had advantages of reductions in paperwork in procurement, reductions in procurement cycle-time, improve integrity, transparency and ease of conducting the audit.

Therefore, in this study researchers observed that technology is growing fast and most activities can be easily completed with the use of technology and still achieve efficiency and effectiveness.

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In this sense, if TANESCO (which represents Public institutions in this study) will not adopt the new system fully immediately, the organization will continue to face cost overruns, inefficiency, ineffectiveness and overall failure to achieve value for money in procurement. However, electronic procurement adoption as has been observed in TBL may lead to the reduction of employees in the future.

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