



EFFECTIVENESS OF INTERNAL CONTROLS ON THE MANAGEMENT OF INTERNALLY GENERATED FUNDS UNIVERSITY TEACHING HOSPITAL

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Abstract

While there exist internal controls in the public health institutions in Zambia, several inconsistencies; violation of established financial management guidelines and procedures, contracts and services are not being rendered in accordance to set-out procedures, cost overruns due to delays in project completion, inappropriate payments for equipment supplied, equipment and goods procured at a much higher cost than market value, have been observed and cited by stakeholders and the Auditor General's report. It is not clear therefore, why these irregularities would exist in public health institutions when the internal controls system exists. We aimed to assess the Effectiveness of internal controls on internally generated funds at the University Teaching Hospital. We employed a cross sectional descriptive study design. We sampled 40 study participants composing of the finance/revenue and procurement officers. Purposive sampling was used to select respondents and primary data was collected using a semi-structured questionnaire. Data was analyzed using SPSS version 26.0. A binary logistic regression model was fitted on the data to determine the factors that influence the effectiveness of internal controls on the internally generated fund. Findings show that the internal controls implemented at UTH are; control environment, risk assessment, control activities, information and communication, and monitoring activities. The factors which were found to influence the implementation of internal controls are; age of the employees, having employees with Certificate, Degree, Masters levels of education, having employees with an accounting profession and having employees with 1+ years of experience. Age of the employees, having employees in tertiary education; Degree, Masters levels of education, having employees with an accounting profession and having employees with 1+ years of experience influenced the effectiveness of internal controls positively while having employees with certificate influenced the effectiveness of internal controls negatively. Furthermore, findings indicate that internal controls at the University Teaching Hospital are quite effective. There is greater need of improving them especially in the areas of information technology, information and communication, and Monitoring activities, they need more improvement in audits and accountability as this would make the system very effective.

Keywords: Management, Effectiveness, Internal Controls, and Internally Generated Funds

Introduction

Many governments across the globe are aware that high quality financial management can lead to the success of their programs and activities (Porter and Kramer, 2019). Therefore, to further enhance the credibility of public funds management (PFM), governments have established the Internal Audit (IA) Units in their various departments and agencies (Baharud-din et al., 2014). However, in some countries the internal control system has worked well while in others, it has proved difficult to adhere to especially in highly corrupt countries. Outside Africa, most countries including United States (US), China, United Kingdom (UK), Korea, Australia and Sweden have demonstrated an effective implementation of the Internal Control Systems (ICS) (Cho and Cheon, 2005). In many African countries, weaknesses and irregularities have been observed in the establishment and implementation of the internal controls system (Njeri, 2014).

In Zambia particularly, some of the inconstancies have been observed and reported by the Auditor General's report for quiet many times (Auditor General's Report, 2021). This therefore, leaves many unanswered questions about the effectiveness of internal controls of the involved ministries and other departments especially on the internally generated funds. Consequently, a number of projects and programs are being put in place for the purpose of improving internal control systems and one of these is the USAID Accountable Governance for Improved Service Delivery (AGIS) (McGregor et al., 2020). This project seeks to strengthen the accountability and transparency functions within Zambia as regards to financial resources in the Ministry of Health (MOH) among others, to improve health outcomes. The project was premised on the assumption that if targeted government institutions adopt more transparent and accountability practices, service delivery would be more efficient and effective and this would lead to improved development outcomes in the country. Project activities are being implemented in line with Zambia's 7th National Development Plan (NDP) 2016 – 2021, and the Zambia National Health Strategic Plan 2017 – 2020 (McGregor et al., 2020).

The ministry of health and its line institutions are key to the development of the Zambian economy (Asangansi, 2012). As such, it stands imperative that available financial resources within the ministry and its line health institutions are put to good use for efficient provision of health services to the public. Sources of financial resources for public health institutions in Zambia include internal generations (Chansa et al., 2019; Cheelo et al., 2010). If well managed, internally generated funds can help health institutions to provide quality health services to the public to a larger extent (KARANJA, 2011). While this has worked well in other countries, developed and some of the developing countries; it still proved difficult for Zambia to effectively manage public financial resources in the public health institutions (Burnell, 2001). In view of the increased demand for funding, public health institutions need to become more accountable for their use of resources through prudent financial management (Cheelo et al., 2010). In order to promote a highly effective internal control system, the government has, through the office of the Auditor General, increased its Audit mandate for public

institutions to become more compliant to internal controls in the organizational structures, management systems, accounting and budgetary control practices and accountability concepts to accomplish the internally generated funds (IGF) (Cheelo and Banda, 2012).

Even though internal controls exist in the public health institutions in Zambia, several inconsistencies; violation of established financial management guidelines and procedures, contracts and services not being rendered in accordance with the set-out procedures, cost overruns due to delays in projects' completion, inappropriate payments for equipment and other materials procured at a much higher prices than market values among others, have for long been observed and cited by the Auditors (Auditor General's Report, 2021). Given the current country's financial situation, effective financial control systems in public health institution cannot be overemphasized. Existing information does not provide a clear documentation of the reasons why these irregularities exist in public health institutions while internal controls systems exist. This study therefore, was conducted to assess the Effectiveness of internal controls on the management of internally generated funds in Public Health Institutions using the University Teaching Hospital as a case study. Therefore, conducting this study was critical to the establishment of effective measures that would enhance the financial control systems in the public health institution to relieve the government of huge budgetary allocation to the health sector.

Literature

The COSO Model (Theory)

We adapted the COSO Model which was published in 1992 by the Committee of Sponsoring Organizations of the Treadway Commission. Globally, many organizations and scholars have adopted the internal control concepts presented in this publication (Janvrin et al., 2012). The COSO report defines internal control as; the process, which is affected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of organizational objectives in the following respects; effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations. Expectedly, COSO describes internal control as consisting of five essential components; control environment, risk assessment, control activities, information and communication, and monitoring; which are further subdivided into seventeen factors (Janvrin et al., 2012). The COSO model is depicted as a pyramid, with the control environment forming a base for control activities, risk assessment, and monitoring. Information and communication link the different levels of the pyramid. As the base of the pyramid, the control environment is arguably the most important component because it sets the tone for the organization. Factors of the control environment include employees' integrity, the organization's commitment to competence, management's philosophy and operating style, and the attention and direction of the board of directors and its audit committee. The control environment provides discipline and structure for the other components (D'Aquila, 2013).

Figure 2.1: COSO Pyramid



Source: (D'Aquila, 2013)

Risk assessment: Risk assessment focuses on the uncertainties in meeting the organization's financial, compliance, and operational objectives.

Control activities: These are policies and procedures maintained by an organization to address risk-prone areas.

Information and communication: Encompass the identification, capture, and exchange of financial, operational, and compliance information in a timely manner. This is premised on the assumptions that people within an organization who have timely, reliable information are better able to conduct, manage, and control the organization's financial operations.

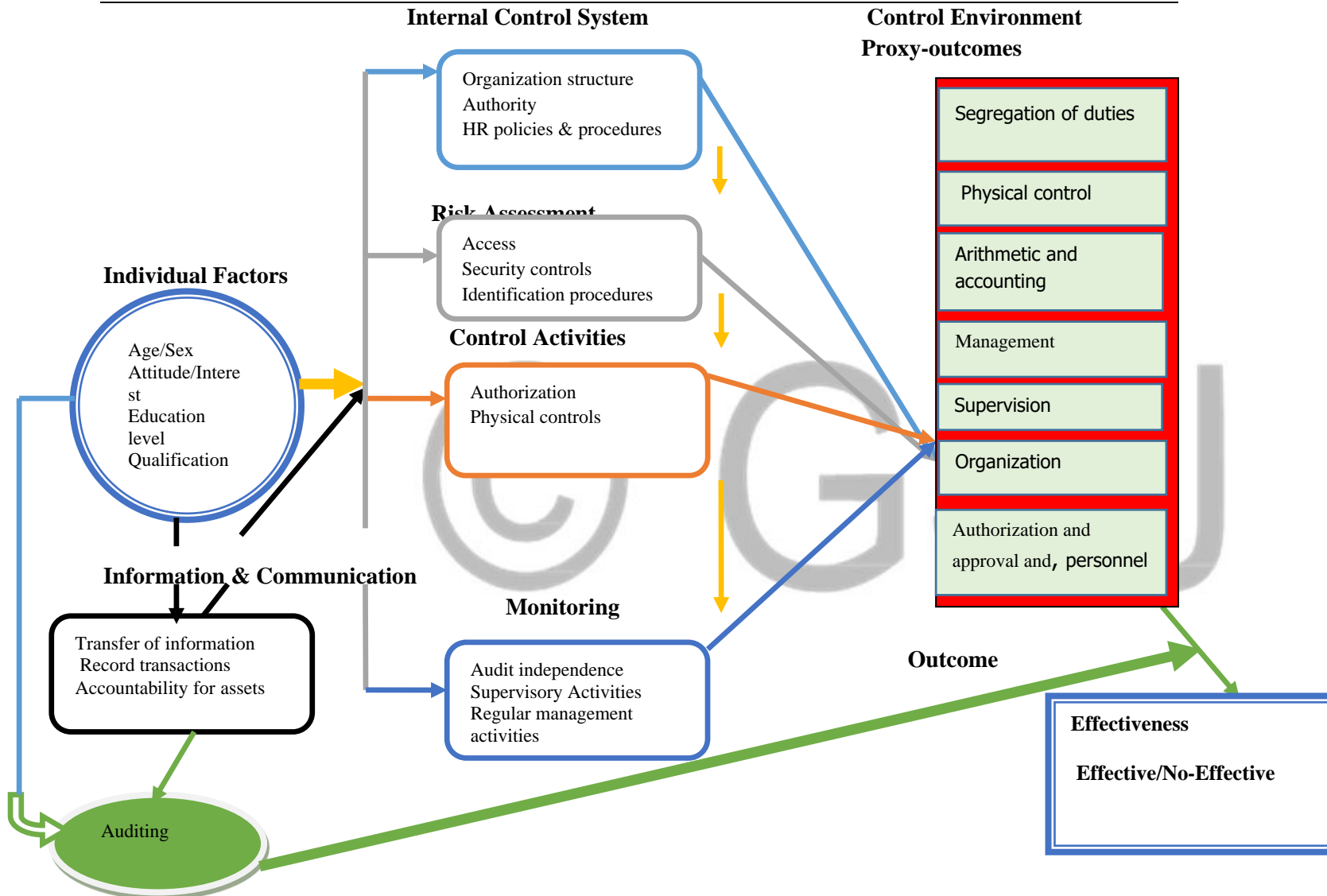
Monitoring: This provides information about potential and actual breakdowns in a control system that could make it difficult for an organization to accomplish its goals (D'Aquila, 2013).



3.2 Conceptual Framework

Predictor Variables

Outcome Variables



Source: (Janvrin et al., 2012)

Figure 2: Summary of the Adapted Conceptual Framework

Every establishment is managed by individuals regardless of its purpose, mission, goals and objectives (Oke, 2016). While there are projects which can be done to address problems which do not directly involve humans, humans are the ultimate beneficiaries of the end product of such projects (Oke, 2016). Therefore, humans are involved in every program as either implementers or as beneficiaries or both. To this attest, the involvement of human hands on the internal control systems cannot be over emphasized. The adapted model summary above presents, closer to reality, inter relationships among the factors that may be at play in trying to effectively implement the internal controls on the management of internally generated funds in the public health institutions alike. As presented in the model summary, the basic unit in the internal control system is a human being. Attitudes, interests, age, sex, education level, job qualification and experience may directly influence all the five components of the entire internal control system and the audit activities (Oke, 2016). Therefore, individual factors may confound the operation of the five components of the internal control system. The five components of the internal control system has direct impact on the proxy-outcomes (Oke, 2016). It is the setout of the proxy-outcomes determines how effective the system would be in operation. In addition, the audit activity also re-enforces the effectiveness of the system by providing end-result checks and balances which act as a control measure.

Problem Analysis

Segregation of duties: The duties in the implementation of the system should be divided between employees, in such a way that no one individual or groups of individuals have unrestricted control over an activity or transaction. Each employee should be assigned specific responsibilities in line with job description and qualifications. If this aspect is overlooked, the system may be impaired and this would ultimately affect its effectiveness (Janvrin et al., 2012).

Physical control: This means preventing unauthorized persons from entering the premises or offices because they can steal or temper with the assets of the organization. This involves locking premises and offices with grill door and employee security officers. Without this measure in place anything can happen to the assets from external forces and this would result in the failure of the system (Janvrin et al., 2012).

Arithmetic and accounting: This mean that the financial information of the organization should be accurate and complete without any errors. Not having well skilled workers in this critical area of this financial control spars negative efforts exerted on the system. Most internal controls are rendered in effective because of so many errors which get committed by those charged with this responsibility (Janvrin et al., 2012).

Management: Management of the institution should exercise control in order to ensure that all internal control systems are working in a proper manner and that employees follow all the outlined guide lines and regulations. This includes establishing information systems to collect relevant information for performance management and internal audit functions to enable them to evaluate the effectiveness of internal control systems (Janvrin et al., 2012).

Supervision: This implies monitoring and reviewing the work of individual employees, functions, and the organization. It communicates with employees in order to ensure that their performances are being observed, measured, and they can be rewarded or personalized for their good or bad performance. Lack of supervision implies failure to implement the system (Janvrin et al., 2012).

Organization: This involves coordinating and activities across the organization in order to accomplish this, the roles, reporting lines and organizational structure should be formally established and clearly communicated. This present the basic unit of the organization's life without which there would be disorderly in the operations (Janvrin et al., 2012).

Authorization and approval: This require permission or signature of a person(s) at an appropriate level in the organization. This ensures that only activities and expenditure that are necessary for the achievement of organization are done (Janvrin et al., 2012).

Personnel: This involves recruiting qualified individuals, doing inductions, retaining key employees, and motivating underperforming employees. This is critical as it is the main determinant of the result of any project undertaken. Housing the appropriate workforce would spar the effectiveness of the system. This may also involve setting-out clear and formal policies and procedures for rewarding or penalizing employees (Janvrin et al., 2012).

Methods

This study employed a descriptive study design, a quantitative study in nature (Ghosh, 2013). The study was conducted in the University Teaching Hospital. The University Teaching Hospital is the largest public hospital and main referral health institution in Zambia and is in Ridgeway area at about 4 kilometers east of Lusaka City Centre along Nationalist Road (Langridge, 2004). The target population for the study was the employees in the finance/revenue and procurement departments at the University Teaching Hospital in Lusaka Zambia. In this study, a sample size of 40 respondents was drawn from the study population of employees in the Finance Finance/Revenue Departments in UTH. The sample size was estimated using the following formula by (Langridge, 2004).

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

Where; n= Sample size,

N=Known population of employees in Finance/Revenue and procurement departments (Ministry of Health, 2018).

e = error level or margin of error at $\pm 5\%$, Standard value= 0.05 (Ghosh, 2013).

$n = 44 / [1 + 44(0.5^2)] = 44 / 1.1 = 40$. **Therefore, the study participants were 40.**

The study used purposive sampling procedure. The researcher collected primary data using a semi-structured questionnaire with both close-ended and open-ended questions. The statistical Package for Social Sciences (SPSS) software was used to verify the reliability of collected data (Hair et al., 1998). To determine the effect of the independent variables on the outcome variable we used binary logistic regression (Jindal, Malhotra, & Jain, 2017). Log odds of the outcome variable was modelled as a linear combination of the predictor variables. Binary Logistic Regression was chosen in this study, as opposed to Ordinary least squares and multiple regression, poisson and other regressions methods which may be applicable, because the study simply intended to ascertain whether internal control at UTH were effective or not (Jindal, Malhotra, & Jain, 2017). This implies that the outcome variable, which may have had points of Likert scale measure, were collapsed into two responses (**effective/Not-effective**), to allow for the application of the binary logistic regression model (Jindal et al., 2017).

Binary Logistic Model

The model was built using the equation bellow;

$$\text{Logit (P)} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_pX_p + e$$

P: - denotes the probability of the risk of infant mortality.

Where P is a dichotomous dependent variable with values 0 (not-effective) or 1 (effective)

b₁... b_p: - Is the coefficients of the independent variables.

$X_1...X_p$: - Denotes the independent variables.

Dichotomous variables were converted into dummy variables and the model was built using the **Enter Method** in which all the predictors were entered at once (Jindal et al., 2017).

Findings

Internal controls implemented on internally generated funds at UTH.

It was established that the five key components of the internal control system exist and are implemented at the University Teaching Hospital; Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring Activities:

Control Environment: under control environment, it was established that there is commitment to integrity and ethical values among the personnel in the system; an independent board of directors exists, structures, reporting lines, authorities and personnel responsibilities are established. It was further established that the system retains and develops competent human resource. Added to all, the system personnel are held accountable for roles in internal controls.

Risk Assessment: under risk assessment it was established that clear objectives are specified, risks are identified, potentials for fraud are considered and controlled, and that significant changes are identified and assessed.

Control Activities: within control activities it was established that activities for control are selected and developed, IT controls are selected and developed, and that controls are employed through policies and laid down procedures.

Information and Communication: for the Information and Communication, it was established that internal control information is always adequately communicated, quality information obtained, generated, and used, Internal control information, internally communicated.

Monitoring Activities: under monitoring activities there exists ongoing/or separate evaluations and audits which are conducted at the health institution and the internal control deficiencies are evaluated and communicated to authorities.

Factors Influencing the Implementation of Internal controls on Internally Generated Funds at UTH

We fitted binary logistic regression on the data determine the influence of the individual characteristics of the respondents on the effectiveness of the overall Internal Control System at the University Teaching Hospital. The individual contributions to the overall performance of the Internal Control System were taken as the proxy-measures of the effectiveness of the internal control system. In this case therefore, binary logistic was fitted on the data to predict the contribution to the system's functioning in a binary response. It was intended to measure whether or not, based on the regressed characteristics, individuals contributed to the system positively or negatively. The **Enter** method was used to fit the model on the data, and the outcome effects were explained in terms **Log Odds**.

Binary logistic Model One.

In the first model, the relationship between all the five predictors and the outcome variable was tested. in order to allow correct predictions, gender which is a dichotomous variable was converted into a dummy variable with female coded as '1' as higher category and male coded with '0' as reference category. **Figure 1** indicates that on overall all the variables age, sex, education level, profession and experience significantly influenced the individual

contributions to the implementation of the internal control system. However, this stage does not indicate the single-category influence and the direction of the relationship. Therefore, this called for further building of the model.

Binary Logistic Model

Table 1 indicates that when all the variables in the equation are held constant, the effectiveness of Internal Controls reduces by 416.99 **log odds**. Holding all the variables constant, one unit increase in the age of the employees by one year, increases the effectiveness of internal controls by 8.69 **log odds** [**P = .000; CI: 8.452 - 8.934**]. When all other variables are held constant, having female employees in Internal Controls, increases the effectiveness of Internal Controls by 19.88 **log odds** [**P = .000; CI: 12.811 - 26.957**]. Ceteris paribus, having employees with secondary of education reduces the effectiveness of internal controls by 170 **log odds** [**P = .010; CI: -43.711 - -24.604**]. Ceteris paribus, having employees in Masters level of education in internal controls increases the effectiveness of internal controls by 247.86 **log odds** [**P = .000; CI: 267.138-228.584**]. Ceteris paribus, having employees in Degree level of education in internal controls increases the effectiveness of internal controls by 35.93 **log odds** [**P = .000; CI: 38.268 - 33.594**]. Holding all other variables constant, having employees with a purchasing and supply profession increases the effectiveness of internal controls by 101.27 **log odds** [**P = .000; CI: 94.131 - 108.403**]. Having employees with a Business Administration Profession, ceteris paribus, reduces the effectiveness of internal control by 129.16 **log odds** [**P = .000; CI: -135.799 - -122.519**]. Holding other variables constant, having employees with an Accounting Profession increases 220.56 **log odds** [**P = .000; CI: 213.97 – 227.16**]. Ceteris Paribus, having employees with 7+, 4 – 6 and 1-3 years of experience in creases the effectiveness of internal controls by [319.81, 185.56 and 283.79 **log odds**; CI (309.512 -330.116, 180.063 - 191.049 and 276.023 - 291.558)].

Table 1 Single Category Predictor Influence on the Individual Contribution to the System.

Model Term	Coefficient	Sig.	95% Confidence Interval	
			Lower	Upper
Intercept	-416.985	.000*	-428.541	-405.429
Ungrouped Age	8.693	.000*	8.452	8.934
Gender= Female	19.884	.000*	12.811	26.957
Level of Education = PhD	-34.158	.900	-43.711	-24.604
Level of Education= Masters	247.861	.000*	267.138	228.584
Level of Education= Degree	35.931	.000*	38.268	33.594
Level of Education= O' Level Certificate	-170.592	.010*	-173.853	-163.331
Profession = Purchasing and Supply	101.267	.090	4.131	5.403
Profession = Business Administration	-129.159	.100	-5.799	-1.519
Profession = Accounting	220.563	.000*	213.969	227.158
Experience= 7+ years	319.814	.000*	309.512	330.116
Experience= 4 -6 Years	185.556	.000*	180.063	191.049
Experience= 1-3Years	283.791	.000*	276.023	291.558

Effectiveness of Internal controls Implemented on Internally Generated Funds at UTH

This part of analysis evaluates the implementation of each component of the internal control system at the University Teaching Hospital. It covers all the five components: Control Environment, Risk Assessment, Control Activities, Information Communication, and Monitoring Activities. In analysing the implementation of these components, summary proxy-measures were used.

Table 2 Evaluation of the Effectiveness of Internal Controls on Internally Generated Funds at UTH

Duties are well Apportioned		
1. Strongly Agree	5	12.5
2. Agree	29	72.5
3. Not Sure	2	5.0
4. Disagree	4	10.0
Total	40	100.0
Physical Control of the System is Adequate		Q30
1. Strongly Agree	5	12.5
2. Agree	15	37.5
3. Not Sure	7	17.5
4. Disagree	13	32.5
Total	40	100.0
Arithmetic Accounting is Effective		
1. Strongly Agree	3	7.5
2. Agree	26	65.0
3. Not Sure	11	27.5
Total	40	100.0
Management and Supervision are Effective		
1. Strongly Agree	6	15.0
2. Agree	16	40.0
3. Not Sure	11	27.5
4. Disagree	7	17.5
Total	40	100.0
The Control System is Fully Organised		
1. Strongly Agree	2	5.0
2. Agree	29	72.5
3. Not Sure	9	22.5
Total	40	100.0
There is Effectiveness in the Authorisation Procedures and Approvals of Financial Transactions		
1. Strongly Agree	11	27.5
2. Agree	29	72.5
Total	40	100.0
Overall Status of the Effectiveness of in the Internal Control System		
1. Very Effective	6	15.0
2. Effective	24	60.0
3. Less Effective	10	25.0
Total	40	100

Segregation of Duties: as indicated in table 5. 8, 12.5% of the respondents strongly agreed and 72.5% agreed that the duties in the implementation of the system are well divided among employees, in such a way that no one individual or groups of individuals have unrestricted control over an activity or transaction. Only 5% of the respondents indicated that they were not sure not whether the duties are apportioned accordingly at UTH.

Physical Control: table 8 further indicates that of the total respondents 12.5% strongly agreed, 37.5% agreed, 17.5% were not sure and 32.5% disagreed, that physical controls are adequate on the internal control system at UTH

Arithmetic and Accounting: it further indicated on table 8 that of the total respondents, 7.5% strongly agreed, 65.0% agreed, and 27.5% were not sure that there is an effective financial arithmetic and accounting in the implementation of the internal controls at UTH.

Management and Supervision: on table 8, it is further indicated that, of all the respondents 15.0% strongly agreed, 40% agreed, 27.5% were not sure, and 17.5% disagreed, that Management and Supervision were effective in the implementation of internal controls at UTH.

Organization: as regards to organization of the system, it was established that of the total respondents, 5% strongly agreed, 72.5% agreed, and 22.5% were not sure that internal control system at UTH is fully organized.

Authorization and Approval: regarding Authorization and approval of financial transactions, table 8 show that of the total respondents, 27.5% strongly agreed, and 72.5% agreed that there is effectiveness in the authorization procedures and approvals of financial transactions on the internally generated funds at UTH.

Overall Effectiveness: Respondents were asked about the overall status rating of the effectiveness of the internal controls on internally generated funds at UTH. The evaluation was done at three status scales; very effective, effective, and less effective. Information on table 8 shows that of the total respondents, 15% indicated the internal control system was very effective, 60.0% indicated that the internal control, system was effective, and 25% indicated that the internal control system is less effective.

Discussion

Internal controls implemented on internally generated funds at UTH.

The findings indicated that all the five key components of internal controls; Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring Activities are implemented at the University Teaching Hospital: -

Control Environment: this was found with the supreme importance of the five components because it impacts on the other four. It provides the fundamental base for establishing the complete control system in an institution. It has five principles pertaining to setting the tone at the top, demonstrating a commitment to competence, and establishing oversight, structure, responsibility, and enforcing accountability. Similarly, other scholars AlRawi et al., (2019); Arjoon, (2006); Ebrahim, (2003); Moeller, (2013) postulates that control environment is the foundation for implementing and promoting ethical standards, integrity, and accountability policies, setting missions, goals and objectives, establishing the structure, organizational responsibilities, and reporting chains; Hiring competent and trustworthy staff members and provide necessary training for them. Another scholar Mahadeen et al., (2016) argues in line with findings of the current of the study that, control environment provides leadership and good governance through the process of staying on top of operations and performance, and correcting problems when identified and focusing and emphasising that compliance with laws and regulations is the expectation for the organization.

Risk Assessment: in this study risk assessment was found to be implemented on the second line of the system and it had four principles that principally addresses defining of objectives, identify, analyse, and responds to all types of risk and change. At the University Teaching Hospital, managers have a responsibility for not only identifying

risks but also to establish the level of risk they are willing to accept. This is achieved by calling for and implement stringent control activities. These findings are consistent with literature which indicates that risk assessment is the identification and analysis of risks that could prevent the organization from achieving its set out goals or objectives within the specified period of time. If risk assessments are properly implemented, identifying risks can allow management to determine how to mitigate and manage these risks. Furthermore, Koutoupis and Tsamis, (2009); AlRawi et al., (2019) postulates that, risk factors could consist of internal and external factors. What is critically paramount is that management should evaluate risks in the organization on a regular basis, as changes in an organization, such as staffing, new policies, new software applications, new regulations among others could all impact on the efficiencies of the.

Control Activities: just like other scholars have reported for other institutions Commission, (2013); Ejoh and Ejom, (2014); Rezaee, 2018), the third component of the internal control framework is the control activities. The three associated principles connect to designing and implementing control activities. this is implemented for the purpose of designing mechanisms for policies, procedures, and security measures to be put in place in order to accomplish agency objectives. Consistence of the findings of this study is with the finding of the study which was conducted by Ejoh and Ejom, (2014) which found that control activities are the set out policies and procedures that help ensure that management directives are effectively carried out states that one of the most important control activities is segregation of duties. What is implied here is that different individuals should be responsible for authorizing transactions, recording transactions, having custody of assets, and performing comparisons as well as reconciliations. Findings of the current study shows that duties are well separated. However, it is argued that, having proper segregation of duties is sometimes difficult for some organizations but by all means, organizations' managers should try to segregate these functions to the best of their ability (Kure et al., 2018).

Information and Communication: it is the fourth component established and comprises of three principles; processing data into quality information; communicating to internal audiences and communicating to external audiences. At the University Teaching Hospital use this component to identify and transfer pertinent information in a timely and effective manner that permits personnel to perform its responsibilities. To effectively set a standard information and communication system, internal control management, establish relevant and reliable information to track operations, goal progress, and compliance. Information is disseminated throughout the organization to ensure that critical; information is delivered to the right staff in timely and effective ways. These results are consistent with the findings of the study which was done by Abu Naser et al., (2017). This author, Abu Naser et al., (2017), indicated that appropriate information must be acknowledged, captured and communicated in a timely and effective manner that would enable people to carry out their responsibilities. This therefore, implies that information systems produce reports containing operational, financial and compliance-related information that makes it easy to run and control any given organization. In this sense, effective communication must occur in a broader sense, flowing down, across and up the organization (AlRawi et al., 2019). This means that clearly, lines of communication shouldn't just flow from management to subordinates, but it should also flow from the subordinates to management to allow each member of the team to successfully carry out their responsibilities in the organisation (Abu Naser et al., 2017).

Monitoring: monitoring is the 5th internal control employed at UTH. This component has two principles which outlining responsibilities for monitoring and correcting deficiencies which identified. Internal control systems are monitored and during this process there is an assessment of the quality of the system's performance over time. This part is accomplished through ongoing monitoring activities, separate evaluations or a combination of the two

and independent audits. It was found that ongoing monitoring occurs in the course of operations and internal control deficiencies are reported upstream, with serious matters reported to top management. As literature presents it; establishing controls alone is not enough (Koutoupis and Pappa, 2018). Therefore, managers need to verify the effectiveness of the controls. They have to establish a system of quality control over all processes such as supervisory reviews, approvals, and automated exception checks and conduct routine reviews of actual performance compared to set out goals and budgets (Ebrahim, 2003). In addition, they have to conduct independent audit reviews of a function to determine whether it is working as intended or not (Wang et al., 2010).

Factors Influencing the Implementation of Internal controls on Internally Generated Funds at UTH.

In this study it was determined that one-unit increase in the age of the employee by one year, increased the effectiveness of internal controls. The possible explanation to this could be that; employees mature and become more responsible as they grow older. Elderly people take things more seriously as compared young people. Therefore, having elderly people in internal control positions could indeed contribute to the effectiveness in the implementation of internal controls in public institutions. Older workers are highly skilled and experienced, they work longer hours and have a strong work ethic (Vasconcelos, 2018). According to the united states Bureau of statistics, in 2014, the median tenure of workers aged 55-64 in all industries was 10.4 years, more than three times the 3.0 years for workers ages 25-34 years (Stoesz et al., 2020). Businesses facing high worker turnover consistently said they prefer to hire older workers because they perform effectively, they are consistent (Liang et al., 2019) and highly committed to their call (Stoesz et al., 2020).

Having female employees in internal controls, increased the effectiveness of internal control system. The reasons to this could be that female employees are more reliable and honest as compared to male employees. They are even more responsible and take care of their roles on the job very well compared to male employees. Despite them having other household roles, they still seem to out-perform male employees in many areas. In a similar study, which was conducted by Liang et al., (2019) to examine the association between the gender of accounting employees and internal control quality, it was found that firms with a higher proportion of female accountants were less likely to have future internal control weaknesses. According to the authors of this study Liang et al., (2019), this association was robust to using entropy balance matching and an instrumental variable approach that exploits variation in the external supply of female accountants. In the same study, additional analyses indicated that firms with a higher proportion of female accounting employees had fewer future financial restatements and higher accruals quality. They Liang et al., (2019), further indicated that female accountants are less likely than their male counterparts to separate from their firms after internal control weaknesses. This could best explain the reason having female employees would increase the effectiveness in internal control in a public institution like UTH.

Having employees with secondary education reduced the effectiveness of internal controls. To some extent, school leavers maybe underqualified for their positions and as a result, this could be detrimental to them as there would an existing miss-march between there level of knowledge and the roles required them to play in the place of. In addition, most secondary educated individuals spend less of their time in school and as such they end up acquiring less knowledge that would be required to carry out the job activities. As such, their contribution to the overall performance of an organisation in most cases becomes affected negatively. This result is in line with the findings of recent studies which highlight that, in European countries, school certificate holders experience under-education once they enter the labour market (Enders, 2004). They experience a vertical mismatch between the grade twelve

qualification acquired and the level of qualification required for the jobs they find (Ermini et al., n.d.). This under-education condition might exert detrimental influence on both the societal outcomes of secondary education as they might find it hard to fully exploit their innovation potential in their placed job roles and this can as well undermine private returns (Ermini et al., n.d.).

Having employees in Masters level of education in internal controls increases the effectiveness of internal controls. This could be linked to literature which indicates that, individuals with a mastery knowledge execute their duties at the levels that match their qualification. Individuals in this level of education are at the steering point of activities in their job site. They participate and contribute greatly to activities assigned to them. Therefore, the mastery individuals playing various roles in internal controls at UTH could indeed be contributing to the effectiveness of the system implementation. Literature marries with the findings of this study as it specifies that; mastery is a pillar of motivation in a work place (Lantz Friedrich et al., 2016). It brings about better productivity, engagement, and other desirable work-related traits among the work force. According to Lantz Friedrich et al., (2016) the mastery provide four key factors needed in a workplace to facilitate productivity; instituting a learning environment; increase the flow of tasks; insure having small goals in place; and establishing constant practice.

Having employees in certificate level of education in internal controls reduces the effectiveness of internal controls. The possible reasons to this finding could be that certificate holders have low understanding of issues, and concepts as well as the ways to handle challenging roles. Exposure to critical roles among certificate holder as well seems to be low among certificate holder as they are rarely involved in complex roles in many work settings (Akpabore and Omosokejimi, 2020). Therefore, their contribution to the overall output of the certificate holders becomes very low. Literature from past studies indicates that employee advanced training plays a vital role in improving performance as well as increasing productivity and in turn, this leads to placing organizations in the better positions to face competition and stay at the top on the market (Akpabore and Omosokejimi, 2020). Further existing literature presents evidence of an existence of obvious effects of advanced training and development on employee performance. Therefore, low contribution can be expected from employees with qualifications (Migdadi and Elzzqibeh, 2018).

Having employees with an accounting profession increased the effectiveness of internal controls. By nature of their training, accountants are more exposed to financial issues ranging from generation to expenditure. This can explain why having employees with accounting professions in internal controls increased the effectiveness of internal control systems. Similarly, a study which was done in South-Western Nigeria using a standardized self-report questionnaire, containing job performance scale ($\alpha=.81$), indicated that bursary staff with accounting professional qualification reported more job performance than the non-certified staff (Ogunbamila, 2016). The findings of this study are in line with the findings of the current study. However, other factors such as experience of the employees plays a bigger role in effectiveness of the contribution of individual workers in the implementation of the internal controls (Cogin, 2012).

One unit increase in the years of experience by one year, increase the effectiveness of internal controls. The possible explanation to this scenario could be that employees with more years of experience tend to be more productive than those with less experience in any industry firm or work set-up. In line with the findings of this study, a study conducted by Baron, (1983) found that, 37% of employers interviewed ranked, among other things, experience as the most important qualification in an applicant for respective advertised positions. Experience comes with expertise in the work place and enhances productivity among the workers in the work place. This could

suffice for the reasons experienced employees in internal controls at UTH contributed to the effectiveness of the system implementation (Awada et al., 2021).

Effectiveness of Internal controls Implemented on Internally Generated Funds at UTH

Just as other studies found on the implementation of internal controls in public institutions Akinleye and Kolawole, (2020); Benedek et al., (2014); Campbell et al., (2006); Chalmers et al., (2018); Commission, (2013); Horvat, (2017); Ncgobo and Malefane, (2017), on overall, duties among the workers in internal controls are well separated and physical controls are well implemented, arithmetic and accounting are well functional, management and supervision are effective, organization authorization and approval of financial transactions are effective. It was established that internal controls on internally generated funds at the UTH were fairly effective. A smaller proportion of the respondents stated that internal controls at UTH are very effective while a reasonably bigger proportion indicated that internal controls at UTH are effective. However, some employees stated that internal controls are not effective, they need improvements, there is need for computerisation of the internal controls, they need more improvement in audits and accountability.

This study adapted the COSO model structured with the control environment forming a base for control activities, risk assessment, and monitoring. Information and communication link the different levels of the pyramid. As structured in the COSO model, the control environment is arguably the most important component because it sets the tone for the organization: Factors of the control environment include employees' integrity, the organization's commitment to competence, management's philosophy and operating style, and the attention and direction of the board of directors and its audit committee. The control environment provides discipline and structure for the other components; risk assessment include set out objectives, risk identification consideration for the potentialities for fraud, and significant change indemnification; Control activities include the selection and development of various activities including the development of the general IT as well as the general policies and procedures; information and communication is made up of information obtaining, generation and use, and adequate information communication internally; and monitoring is made up of ongoing internal/or separate evaluations/audits and evaluation of internal control deficiencies (D'Aquila, 2013). This model fitted very well in this study as it fully underpinned all the analyses and explanations to the study. However, the study has not analysed data in absolute terms because situations in every public institution differ and as such the application of the COSO model to this study may have left out other important consideration which could have been of great addition to the study in general. In this study, the author modified the COSO model by adding a component of the characteristics of the employees who work on internal control system.

Conclusion

All the five components of the internal control system; control environment, risk assessment, control activities, information and communication, and monitoring activities are implemented at UTH. However, information technology, information and communication, and monitoring activities are fully implemented. Increase in the age of the employees, having employees in Masters level of education, having employees in Degree level of education, having employees with an accounting profession and having employees with 7+, 4 – 6 and 1-3 years of experience increased the effectiveness of internal control. Having employees in certificate level of education in internal controls reduced the effectiveness of internal controls. In all plannings for improvements in the effectiveness of internal controls stakeholders need to consider these factors. Duties among the workers in internal controls were well separated; physical controls were well implemented, arithmetic and accounting were

well functional, management and supervision were effective, and the organization authorization and approval of financial transactions are effective. Overall, internal controls are well effective at the University Teaching Hospital. However, there is greater need of improving them especially in the areas of information technology, information and communication, and Monitoring activities, they need more improvement in audits and accountability as this would make the system very effective.

Recommendations

1. Based on the findings this study suggests the following recommendations if the implementation of the internal controls system can be very effective:
2. UTH needs to employ young adults at least in ages of 36 and above, increase on; female employees, Bachelor's and Master's Degree holders, accounting professionals and years of experience of at the point of recruitment of at least 1 year. In addition, UTH must stop employing school leavers in internal generation of funds.
3. UTH needs to, to a greater extent, improve information technology and, the information and communication infrastructure, to increase on the efficiency in dealings with transactions and quicken communications within and outside the department. Furthermore, the Department needs to establish an independent monitoring and evaluation unit for monitoring activities which will routinely assess achievements and failures in the system and recommend positive changes to the system and the internal audit unit to provide effective routine checks and balances on all internally generated funds. Future research should consider a nationally representative sample in order to make a robust assessment of the effectiveness of internal controls in all public health institutions. This will create basis for national policy amendments on internally generated funds. Further, future research should consider a method research approach which will fully give the true picture of the situation on the ground through the triangulation of quantitative and qualitative data.

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