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Financial Reporting as an IFMIS Module and Cash Management in County Government of Bungoma, Kenya

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Abstract:

Governments of developing countries have frequently explored techniques and systems on how to modernize and improve Cash Management in public sectors. The purpose of this study was to examine the effect of Integrated Financial Management Information System and cash management in Bungoma County Government. The anchoring theory of the study was systems theory. The following objective guided the study; to establish the effect of Financial reporting on cash management and cash management in Bungoma County Government. The target population of the study was 185 employees from sections using Integrated Financial Management Information System. A sample size of 177 respondents was drawn from the population by use of stratified random sampling method. Data from the sampled population was collected by use of well-structured questionnaires. Construct validity of the research instruments was determined using Kaiser-Meyer-Olkin (KMO) and Bartlett's tests with values of above 0.5 and probability values less than 0.05 considered valid. Internal consistency was measured by Cronbach's alpha with alpha coefficient of above 0.70 being considered reliable. Both descriptive and inferential statistics was used to analyses the data. Multiple regression and Pearson correlation were used for inferential statistics. Data results and findings were displayed in tables, figures, graphs and pie chart. The study findings revealed that Integrated Financial Management Information System had statistically significant influence on Cash Management in Bungoma County Government; Plan to Budget explained 12.9% of the variation in Cash Management [Adjusted R Square = 0.129, $F(1, 172) = 26.577$, Prob. = $0.000 < 0.05$], Government policies were found to have significant moderation effect on the relationship between Integrated Financial Management Information System and Cash Management in Bungoma County; plan to budget [R^2 change = 0.085, F -change = 18.631, $\beta = 0.075$, $t(174) = 4.316$, $p = 0.000 < 0.05$], All null hypotheses of the study were rejected since there was a significant positive relationship between IFMIS and cash management. The study recommends that for effective cash management in Bungoma County Government, there should be annual analysis of the achievements and challenges learnt from IFMIS so as to identify and solve any existing gaps. This study informed the executive management of Bungoma County Government on how to effectively manage cash by using IFMIS as the

Keywords: Integrated financial management, cash management, county government

1. Introduction

1.1. Background to the Study

Techniques and systems to improve and modernize cash management in the non-private sectors are increasingly being explored by governments in less developed countries. Efficient running of public funds mainly focuses on financial reporting. According to Zimmerer (2008) cash management is the process of predicting, gathering, distributing, investing and planning for finance a company requires in order to function efficiently. He went on to state that controlling of cash is a vivacious task due to the fact that cash is the most vital yet least productive asset owned by small business. For a business to be safe from being declared bankrupt, it must have sufficient cash to meet its obligations. Cash is the essential means of exchange and debtors, creditors and employees expect to be paid on (Zimmerer, 2008).

In the Slovak Republic and Kosovo, IFMIS has been a fruitfully implemented in managing of public funds. Among them, Slovak is the only country with a well-organized IFMIS and is close to the commercial model. The IFMIS database in Caribbean and Latin America region of the World Bank has the largest number of active (4) and completed (25) IFMIS projects (World Bank, 2011). In Vietnam there has been progress of introducing a new IFMIS since 2001 funded by the World Bank. The new IFMIS system plans to cover the central administration as well as the 64 provincial administrations in Vietnam. The Iraqi government has a unique combination of cash and accrual accounting methods that is not easily compatible into the IFMIS system (USAID, 2008).

In Africa, there are thirteen completed and twelve active IFMIS projects. For all countries, the use of Information Communication Technology (ICT) for government reinvention is increasing not only in investment but also in terms of visibility with a number of high-profile initiatives having been launched during the 1990s (Muigai, 2012). In South Africa, IFMIS builds wider part of the financial management reforms of the South African government since 1994 when democracy was instituted. The enhancement of integrity, effectiveness of expenditure management and performance reporting which ensured effective service delivery was one of the objectives of IFMIS (Nomvalo, 2008).

In Ghana, Aminatu (2015) looked at the impact of IFMIS on Ghana's economic development by looking at gross domestic product (GDP), economic growth, and resource allocation to major sectors of the economy. She noted from the analysis that some sectors of the economy contribute immensely to GDP growth whereas other sectors have an adverse effect. In Malawi, the country's financial accountability report indicates good institutional frame compared to most developing countries as a result of successful implementation of IFMIS (Aminatu, 2015). According to Rakner, Mukubve, Ngwira & Smiddy, 2004, process of including a sound system was spearheaded by wise legislations that regulated finances, audits, and procurements which were in time for the Malawi budget. Our neighbouring country, Uganda is among the countries that has successfully implemented IFMIS system. It was started in 2002 and was jointly financed by World Bank and Uganda government.

The development of IFMIS in Kenya started in 1998 but application government ministries and departments started in 2003 (Kinyua, 2003). In county governments it started in the year 2013. The Government of Kenya has undertaken several cash management changes for over the last ten years which are aimed at improving accountability and transparency in management of public resources (GOK, 2011). These reforms aimed at core cash management systems of budget formulation and execution, public procurement process, internal and external audit activities, public debt, accounting and reporting. Major reform that was given priority is the automation of government expenditure processes. There was an assumption that the introduction of the Integrated Financial Management Information System (IFMS) in Kenya can effectively leverage on existing and emerging technology to enhance the pace of cash management changes (GOK, 2011). The system, initially ran on an Oracle Financial platform which was good for the system though it later developed some design issues hence required re-engineering in 2011 (The National Treasury, 2013). This was called IFMIS Re-engineering Strategy 2011-2013 and later 2013-2018.

1.2. Statement of the Problem

There is an outcry of improved management of public cash allocated to county governments by Commission on Revenue Allocation (CRA) for sustainability of county governments and increased socio-economic by county management. The CRA allocated Ksh.329.34 billion to counties in equitable share and conditional grants for financial year 2017-2018 (Commission on Revenue Allocation, 2017). The Auditor General's Report, (2015) revealed that county governments have repeatedly been faced with misappropriation of public funds and lack of proper control systems to manage their cash effectively which has led to poor service provision and overspending.

Despite the employment of IFMIS as the main accounting system in counties since inception, lack of accountability in county government expenditures has been a concern to the whole public and international institutions e.g., IMF and World Bank (Auditor General's Report, 2015). There was a broad consensus that introduction of freely functioning IFMIS in Kenya will improve accountability of public funds by providing real time financial information useful to finance and other managers to dispense programs effectively, formulate budget and manage resources (GOK 2013).

Many studies have been done on the subject of public finance management. For instance, a study on evaluating financial management practices in the department of correctional services in South Africa by Mathiba (2011). In Ghana, Aminatu (2015) looked at the impact of IFMIS on Ghana's economic development by looking at gross domestic product (GDP), economic growth, and resource allocation to major sectors of the economy. In her analysis she noted that some sectors of the economy contribute immensely to GDP growth whereas other sectors have an adverse effect. Locally, Kiilu & Ngugi (2014) did a study on effect of Public Financial Management Reforms in the Effective Management of Public Funds in Kenya. They found out that budgeting reforms have an effect on efficient management of public funds in Kenya National Treasury (Kiilu & Ngugi (2014). Njonde & Kimanzi (2014) did a study on impact of integrated financial management information system (IFMIS) on performance of public sector focusing on Nairobi County Government.

However, there lacks an empirical study done to assess the impact of Financial reporting IFMIS module on cash management in Bungoma County Government despite the county being among counties that get a large share of equitable revenue shared by counties (Controller of Budget, 2016). In the financial year 2017-2018, CRA allocated Bungoma county Ksh.5,707,800,000 as equitable share of revenue raised nationally. The lowest allocation during that financial year 2017-2018 of Ksh.2,476,400,000 went to Lamu county (CRA,2017). Hence, this research endeavored to establish the effect of IFMIS on cash management in the County Government of Bungoma.

1.3. Purpose of the Study

The purpose of this study was to establish the effect of IFMIS Financial reporting module on cash management in Bungoma County Government, Kenya.

1.4. Objectives of the Study

The study objectives were;

- To establish the effect of financial reporting on cash management in Bungoma County Government

1.5. Research Hypothesis

The research was steered by the following null hypothesis;

- H_01 : There is no significant effect between financial reporting and cash management in Bungoma County Government.

2. Literature Review

2.1. Meta Theory

Studies on Accounting Information System (AIS) has been generated from various disciplines, like computer science, cognitive psychology and organizational theory (Ruchala & Mauldin (1999). Therefore, earlier applications of information technology in accounting systems were mainly processes of transactions that would repeat the manual processes. This necessitated need of incorporating more accounting sub-disciplines into various research on accounting information systems with increased focus on the design of these systems. The requirement for an organized way of doing things was brought about by the changing nature of information systems.

According to Dunn & Grabski (2001) Information systems in accounting are mostly used by accountants and other key decision makers who make use of the accounting data. The Meta theory model is built on past frameworks on the management information systems. Technology is a very important component in accounting work. It enables work process to flow efficiently. This is something that is well known in the accounting theory. Different research techniques are being employed to look into inherent issues in AIS and accounting difficulties. This is called managerial accounting whereby field work, experimental work and analytical works solve the association that already exist between management accounting and information systems.

Plan to budget and procure to pay modules of IFMIS are viewed as accounting subsystems. The county government cannot procure items that were not budgeted for in the initial stage. Also, items procured cannot exceed the budgeted amounts as inserted in IFMIS using approved county budget. The limitations of this theory are that it views all modules of IFMIS as only useful for accounting, however IFMIS goes beyond accounting. According to Rodin-Brown, 2008, IFMIS an accounting system programed to work according to the needs and specifications of the environment in which it is installed. It helps in planning, monitoring, communication and promoting effectiveness in public cash management. This theory endeavors to explain the plan to budget and procure to pay modules of IFMIS which form part of independent variables for this study.

2.2. Conceptual Framework

A conceptual framework is product of qualitative processes of theorization or a plane of interlinked concepts that together provide a comprehensive understanding of a phenomena (Jabareen,2009). The conceptual framework developed for this study was drawn from various theoretical perspectives including system theory, The E-Technology Perspective theory and task technology fit theory. Figure 1 represents conceptual framework showing systematic interpretation explaining the relationship between independent variables and dependent variable.

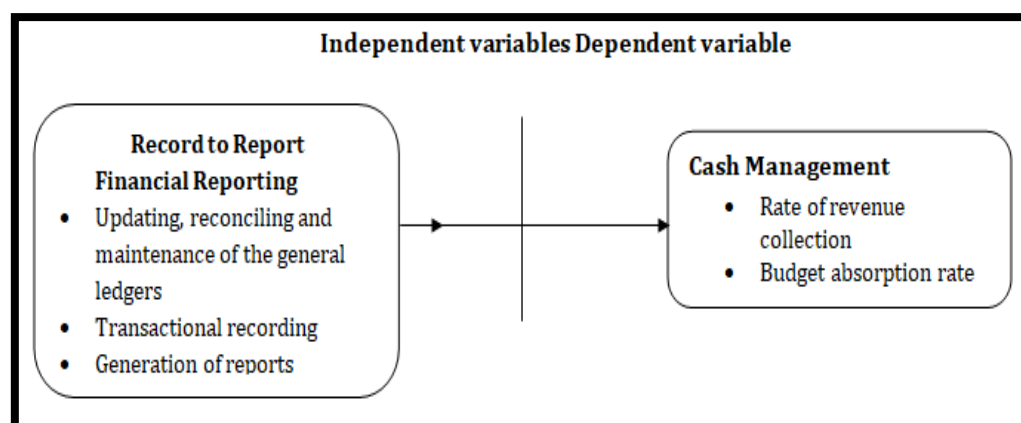


Figure 1: Conceptual Framework 1

Source: Author, 2019

The conceptual framework in Figure 1 shows IFMIS as independent variable, while Cash Management as dependent variable. Variables of IFMIS are record to report. Plan to budget was conceptualized by chart of accounts, Program Based Budget and annual development program while procure to pay was measured by electronic tendering, E-procurement plan and electronic payment and finally record to report was measured by automated general ledger, automated bank and generation of electronic bank statements from CBK. IFMIS is a standard system that monitors and reports, also sums up all the financial data requirements of a government into a single information database. Cash management was measured by rate of revenue collection, county asset trend and Budget absorption rate. The moderating variable was Government Policy and was measured by ICT & Vision 2030, Kenya ICT Policy 2016 and Public Finance Management Act, 2012.

2.3. Cash Management

Cash management means the management of daily cash inflows and outflows in order to meet the day-to-day commitments of an organization. Zimmerer (2008) describes cash management as the process of forecasting, collecting, disbursing, investing, and planning for cash a company requires to have seamless operations. Cash Management in

government is misunderstood to be same as budget execution, accounting control or debt management; instead it is an exercise that focus on minimizing costs and managing government cash and their risks.

2.4. Empirical Literature Review

2.4.1. Concept of IFMIS

Dorotinsky (2003) and Rozner (2008) both confirmed that IFMIS is an information system which summarizes financial information and also tracks financial events. The system helps adequate management reporting, fiduciary responsibilities, policy resolutions, and preparing financial statements for audit. Rodin-Brown, 2008 asserts that basic form of IFMIS is more than an accounting system tailored to work in agreement to the requirements and specifications of the environment in which it working.

IFMIS is financial tool of the government which sums together all fiscal management tasks into one suite of applications. This system helps national government and county governments to plan and prepare budget requests since this is an Information Technology (IT) based budgeting and accounting system. Also helps governments to expense budgets, report on their financial activities, and render services to the public in a more proficient, efficient and cost-effective way. IFMIS has a platform that will help improve compatibility and consistency of both fiscal and financial information. This prevents every government from investing in an expensive accounting. IFMIS is a standard monitoring and reporting system that sums up all the information requirements of any government into a single information database. It also allows a government to make major conclusions that affect the whole nation by facilitating consistent recording and reporting of information, (Government of Kenya, 2003). The most vital feature of IFMIS is the ability to interface with several of existing and organized automated systems for example the Integrated Personnel Payroll Data (IPPD) and Government Payments Solution (G-pay). The Kenyan government contracted IFMIS software to Oracle Financials in 2003. Oracle Financials is Entrepreneur Resource Planning (ERP) that was designed to sum up all the important modules to every ministry. The modules were; accounts payable module, purchasing module, general ledger module, cash management module and public sector budgeting module (GoK, 2014). Once IFMIS was acquired, its major outcome was effectiveness and improved results. The core target of implementing IFMIS system was to step-up the effectiveness and efficiency of state financial management. Also, it was to enable acceptance of modern public cash expenditure management practices. Better financial management, maximum resource allocation, improved management of public resources, decreased fraud and corruption, improved transparency and accountability, lower transaction costs are the major benefits of IFMIS (GoK, 2014).

Therefore, IFMIS is the employment of information and communication technology in financial tasks which then supports management on budget conclusions, fiduciary obligation and preparation of financial reports and statements. According to Casals & Associates, 2009 IFMIS in the government domain refers to computerizing of the public fiscal management procedures, starting from budget preparation and execution to accounting and reporting, through the assistance of an integrated system for financial management of line ministries, spending agencies and other public sector operations. Out of the six (6) IFMIS modules, the study focused on only three (3) modules; procure to pay, plan to budget and report to record.

2.4.2. Financial Reporting

Record to report is an IFMIS module that focuses on updating and maintenance of the general ledger, reconciliation of sub-ledgers to the general ledger and closing of books which entails recording and reporting of fixed assets owned by county and national governments. Record to report process starts with collection of original transactions then accounting data and ends with production of reports. This component of IFMIS enables counties to apply period closure, support preparation of financial accounts, provide accurate and timely financial information and finally facilitate consolidation of county accounts (GoK, 2013).

This is the process of producing reports or statements that disclose financial status of an organization to management, investors and the government. It encompasses the preparation and submission of financial returns. Financial reporting is one of the most important modules in IFMIS. Selfano, Peninah, & Sarah (2014) stated that the reports generated by this module are; bank reconciliation statements, financial accounts, trial balance, imprest register, asset registers, and monthly returns among others. The acceptance and subsequent use of Chart of Accounts allows for the continuation of cash basis reporting - a necessary element of accrual system which serves as the logical step in improving the data base of the treasury system as far as financial reporting is concerned. The government must stipulate reporting needs and objectives in two areas; external reporting which avail information for audit purposes and internal reporting for policy makers.

In order to facilitate the functioning of the management, there should be quick preparation and prompt submission of the report to all those executives who depend on it (Thurakam, 2007). According to Modina & Zanolli, 2008, punctuality means quick retrieval of information and reports as and when required by the users of the information system. The promptness in the flow of information is critical in better resource utilization (Kumar A, 2014). IFMIS can improve county government cash management by availing real-time financial information to both executive and legislative arm in order to heighten their decision-making capabilities (Hendricks, 2012).

According to Simson (2011), financial reporting includes retrieving and reporting data from the accounting system in a form that it can be easily analysed. Several reports are produced by governments which are either consumed internally or externally. The most common reports are; daily reports on hard cash flows, monthly reports on financial plan execution, revenue reports, half-year reports and yearly financial statements or reports. The annual fiscal reports follow

requirements which are internationally recognized. The reports produced are part of the scope that the Auditor General reviews when auditing county government performance.

2.5. Research Gap

While abundant literature exists on the subject of IFMIS, most of the studies have however not exhaustively investigated the relationship between IFMIS modules and cash management hence there were recommendations for further studies. The current study has filled the literature gap by establishing the link between IFMIS and cash management in Bungoma County Government as a devolved unit in Kenya.

3. Research Methodology

3.1. Research Design

According to Yin, 2003, a research design is the legitimate sequence that links the empirical data to a study's hypothesis and, finally to its conclusions. The study adopted a descriptive survey research design a method that explores the relationship between the different variables in the study. It involved collecting information by administering a questionnaire to a sample of individuals (Orodho, 2005). Design is useful in identifying characteristics of an observed phenomenon or exploring possible correlations among two or more phenomena (Leedy, 2001). The research design enabled the researcher to integrate questionnaires, a pilot study and the actual survey as main procedures for data collection.

3.2. Target Population

Target population is the sum of components on which the researcher wishes to make some inferences (Ghauri & Gronhaug, 2005). Also, according to Mugenda & Mugenda, 2009 target population can be outlined as an accomplished set of individuals, objects with some common observable features of a particular nature different from other population. The target population of this study consisted of 185 employees of Bungoma County government from sections using IFMIS that is budgeting, accounts, internal audit, procurement and revenue section.

The practical consideration that dictated the choice of this study area was that Bungoma County is among the counties that get large budgetary allocation from the national treasury. According to County Allocations 2016/2017 financial year, Bungoma County was allocated Ksh. 6,030,878,991 (GOK 2016). Table 1 gives a summary of target population.

| Sections | No. of Employees |
|------------------------|------------------|
| Budgeting and planning | 10 |
| Accounts | 20 |
| Internal Audit | 5 |
| Procurement | 15 |
| Revenue | 135 |
| Total | 185 |

Table 1: Target Population Distribution Matrix 1

Source: Human Resource Department Bungoma County Government (March, 2018)

3.3. Sampling Procedure and Sample Size

Kombo & Orodho, 2006 defines sampling techniques as a process of where a number of individuals are selected from a population such that the selected group has elements representative of the characteristics found the entire target population. Mugenda & Mugenda (2009) assert that a sample is a small group obtained from the accessible population as a representative of the whole population. Stratified sampling method was employed since the population under the study was not homogenous as it included respondents from different sections of the county government who use IFMIS. Simple random sampling technique was adopted to select respondents from each stratum. The formula that the study used to arrive at a sample size of 177 based on Yamane (1967) as below.

$$n = \frac{N}{1 + e^2(N)}$$

Where:

n represents desired sample size

N represents the Target population

e represents the standard error (0.05)

Substituting the values in our formula gives approximately 177 respondents therefore a sample size of 177 respondents was selected randomly from strata. According to Sekaran (2003) a sample that is larger than 30 and less than 500 is appropriate for most researches.

| Sections | Targeted Population | Desired Size | Sample Size |
|------------------------|---------------------|---------------------------------|-------------|
| Budgeting and planning | 10 | $\frac{10}{1 + (0.05)^2(10)}$ | 10 |
| Accounts | 20 | $\frac{20}{1 + (0.05)^2(20)}$ | 19 |
| Internal Audit | 5 | $\frac{5}{1 + (0.05)^2(5)}$ | 5 |
| Procurement | 15 | $\frac{15}{1 + (0.05)^2(15)}$ | 14 |
| Revenue | 135 | $\frac{135}{1 + (0.05)^2(135)}$ | 129 |
| Total | 185 | | 177 |

Table 2: Sample Size Distribution Matrix 1

4. Data Presentation, Interpretation and Discussion

4.1. Descriptive Analysis for Cash Management

The study also demanded to establish what cash management in this context meant. This was achieved by requesting respondents to give their opinions to what extent had been the efficiency in Cash Management with the statements on a Likert scale of 1 to 5 where 1= To a small extent, 2= To some extent, 3= To a moderate extent, 4= To a great extent, 5= To a very great extent. Table 6 shows the results.

| Statement | 1 | 2 | 3 | 4 | 5 | Mean | Std. Dev. |
|---|-----|-----|-----|-----|----|------------|-----------|
| Our current revenue collection has grown due to use of IFMIS technology to plan, procure and record | 1% | 28% | 30% | 38% | 3% | 3.13 (63%) | .899 |
| We have seen improved management of assets due to use of IFMIS technology to plan, procure and record | 2% | 17% | 32% | 47% | 1% | 3.28 (66%) | .842 |
| We have seen increased Cash absorption rate for the projects implemented due to use of IFMIS technology to plan, procure and record | 1% | 18% | 42% | 38% | 1% | 3.20 (64%) | .783 |
| There is enhanced access to money through plan to budget | 5% | 10% | 43% | 40% | 2% | 3.25 (65%) | .861 |
| There is value for money in completed projects | 1% | 5% | 43% | 49% | 2% | 3.46 (69%) | .668 |
| Efficiency and management of cash is enhanced | 3% | 3% | 26% | 67% | 1% | 3.59 (72%) | .722 |
| Automation has improved financial operations | 25% | 13% | 56% | 2% | 3% | 2.43 (49%) | .982 |

Table 3: Descriptive Statistics for Cash Management 1

Overall Cash Management

Mean = 3.19 (64%), Std. Dev. = .49567, test value = -3.79, P-value = 0.00

As indicated in Table 6, most of the respondents, 38% and 30% agreed that current revenue collection of county Government had grown to a great and moderate extent respectively due to use of IFMIS technology to plan, procure and record. The mean of 3.13 indicated that the level of growth of revenue collection was moderate at 63% [mean = 3.13, Std. Dev. = 0.899]. Further, 47% of respondents concurred to a great extent that use of IFMIS system led to improved management of county government assets. Mean of 3.28 indicated that the improvement in asset management was at 66%. [mean = 3.28 Std. Dev. = 0.842]. The findings also disclosed that 42% of respondents agreed to moderate extent that cash absorption rate to projects implemented by county government of Bungoma had increased due to influence of IFMIS [mean = 3.20 Std. Dev. = 0.783].

On access to money, 43% of the responses agree to moderate extent that access to money in Bungoma county government had increased because of using IFMIS [mean = 3.25 Std. Dev. = 0.861]. Similarly, 49% of the responses agree to great extent that value for money had increased in projects implemented by county government of Bungoma since the introduction of IFMIS [mean = 3.46 Std. Dev. = 0.668]. On enhanced cash management, 67% of the responses agreed to some extent that cash management had increased because of IFMIS technology with a mean of 3.59 and standard deviation of 0.722. Finally, 56% of the responses agree by moderate extent that automation of financial operations in Bungoma county government had improved through adoption of IFMIS technology [mean = 2.43 Std. Dev. = 0.982].

On average, mean score for the Efficiency of cash management was 3.19 (64%). The research demanded to find out if cash management was significant above average in Bungoma county government. The null hypothesis H_0 was;

Efficiency of cash management is above average (there is growth above average in cash management in Bungoma county government). Since $t = -3.79$, $p\text{-value} = 0.000 < 0.05$, null hypothesis was rejected and concluded hence there was no growth above average in cash management in Bungoma county government; that is, the growth in cash management was relatively constant.

4.2. Reliability Analysis for Cash Management

The reliability of the scale was checked using Cronbach's Alpha Coefficient. The standard Cronbach's coefficient threshold was adopted from Nunnally and Bernstein (1994), who suggested that in the early stages of research on hypothesised measures of a construct, reliabilities of .70 or higher will be sufficient.

| Constructs | Number of Items | Cronbach's Alpha score |
|-----------------|-----------------|------------------------|
| Cash Management | 7 | 0.701 |

Table 4: Reliability Analysis for Cash Management 1

Findings of Table 4 show that Cronbach's alpha coefficient for Cash Management construct was 0.701; which exceeded the 0.6 lower levels of acceptability (Hair *et al.*, 2006) and hence is acceptable and can be relied on for further analysis.

4.3. Factor Analysis for Cash Management

Factor communalities and loadings relying on a principal component's analysis with Varimax rotation for seven items was conducted to provide best-defined factor structure for the Cash Management construct as a measure of construct validity. Sampling adequacy of the items used to make Cash Management construct was measured using Kaiser-Meyer-Olkin (KMO) test. To check if these items were coming from a population with equal variance Bartlett's Test of Sphericity was used. The findings were as shown in table 4.6 and 4.7 below

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .594 |
|---|--------------------|---------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 201.895 |
| | Df | 21 |
| | Sig. | .000 |

Table 5: KMO and Bartlett's Test for Cash Management Construct 1

KMO test results for sampling adequacy in table 5 indicates that the scale of the Cash Management factor had value 0.594 which was more than the threshold of 0.5 according to Williams *et al.* (2012), hence indicating acceptable degree for Sampling adequacy. Bartlett's Test of Sphericity findings in table 4.6 show that the samples of the factor are from populations with same variances [$\chi^2_{(21)} = 201.895$, $p = 0.000 < 0.05$]. Thus, the results of our constructs were verified to be valid.

| Item | Factor Loading | Communality |
|---|----------------|-------------|
| Our current revenue collection has grown due to use of technology to plan, procure and record | .614 | .581 |
| We have seen improved management of assets due to use of technology to plan, procure and record | .511 | .565 |
| We have seen increased Cash absorption rate for the projects implemented due to use of technology to plan, procure and record | .569 | .877 |
| There is enhanced access to money | .726 | .656 |
| There is value for money | .797 | .638 |
| Efficiency of management of cash is enhanced | .825 | .683 |
| Automation has improved operations | .575 | .314 |

Table 6: Factor Loadings and Communalities for Seven Items That Make Up Cash Management Construct 1

The communalities were all above 0.3 thresholds (Frydenberg, 1993); this affirmed that every item shared some common variance with other items. All the seven items in this analysis had primary loadings over .5 thresholds (Frydenberg, 1993). Thus, our dataset was acceptable for further analysis.

4.4. Regression Analysis

The study adopted Simple Linear Regression model to establish the effect of financial reporting on cash management in Bungoma County Government. The following null hypothesis was tested by this model;

4.5. Descriptive Analysis of Record to Report and Cash Management

The third goal of the study sought to determine the extent to which 'the record to report' module of IFMIS influences cash management. To achieve this, researcher asked respondents to give their opinions on level of agreement or

disagreement with the statements on a Likert scale of 1 to 5 where; 1= To a small extent, 2= To some extent, 3= To a moderate extent, 4= To a great extent, 5= To a very great extent. The results are presented in table 4.23.

Table 4.23: Descriptive Statistics for Record to Report module of IFMIS 1

| Statement | 1 | 2 | 3 | 4 | 5 | Mean | Std. Dev. |
|---|------|-------|-------|-------|-------|------------|-----------|
| Record to report has enabled provision of accurate and timely financial information from General Ledger | 1.1% | 1.7% | 72.4% | 19.5% | 5.2% | 3.26 (65%) | .633 |
| Record to report has improved recording of operational transactions of the county government | 1.7% | 17.8% | 19.0% | 60.3% | 1.1% | 3.41 (68%) | .854 |
| Record to report has enabled training of county staffs on Standard Chart of Accounts | 2.9% | 13.2% | 58.6% | 20.7% | 4.6% | 3.11 (62%) | .793 |
| Record to report has enabled successful uploading of Fixed Asset data of Bungoma County Government | 1.1% | 13.8% | 58.6% | 24.7% | 1.7% | 3.12 (62%) | .699 |
| Record to report has enabled provision of accurate and timely financial information on Fixed Assets | 3.4% | 12.6% | 65.5% | 17.2% | 1.1% | 3.00 (60%) | .697 |
| Record to report has improved Standard Chart of Accounts for county government | 1.1% | 6.9% | 67.8% | 17.2% | 6.9% | 3.22 (64%) | .720 |
| Record to report has facilitated logging of issues into help desk and issues resolved | 0.6% | 1.1% | 23.0% | 61.5% | 13.8% | 3.87 (77%) | .671 |

Table 7: Descriptive Statistics for Record to Report module of IFMIS

Overall Record to Report

Mean = 3.284 (66%), Std. Dev. = .3877, test vale= 66.7% $t = -1.665$, $P\text{-value} = 0.098$

Table 7 shows that majority of the respondents, 72.4% agreed that Record to report module of IFMIS has enabled provision of accurate and timely financial information from General Ledger to a great extent. The mean of 3.26 indicated that provision of accurate and timely financial information from General Ledger has improved to a moderate extent at 65% [mean = 3.26, Std. Dev. = 0.633].

On average, mean score for the Record to Report was 3.284 (66%). The research demanded to find out if level of 'Record to Report' in Bungoma county government was significantly above average ($> 66.67\%$). The null hypothesis was that; the level of Record to Report was average at 66.67%. Since $t = -1.665$, $p\text{-value} = 0.098 > 0.05$, thus, the null hypothesis was not rejected and concluded that the level of 'Record to Report' in the County Government of Bungoma was average.

4.6. Reliability Analysis for Record to Report

Cronbach's Alpha Coefficient was adopted to check the reliability. The standard Cronbach's coefficient threshold was adopted from Nunnally and Bernstein (1994), who suggested that in the initial stages of research on hypothesised measures of a construct, reliabilities of .70 or higher will be adequate.

Table 4.24: Reliability Analysis for Record to Report 1

| Construct | No. of Items | Cronbach's Alpha |
|-----------------|--------------|------------------|
| Cash management | 7 | 0.780 |

Table 8: Reliability Analysis for Record to Report

Findings of Table 8 show that Cronbach's alpha coefficient Record to Report construct was 0.780; which exceeded the 0.6 lower levels of acceptability (Hair *et al.*, 2006) and hence is acceptable and can be relied on for further analysis.

4.7. Factor Analysis for Record to Report

Factor communalities and loadings relying on a principal component's analysis with Varimax rotation for seven items was conducted to provide best-defined factor structure for record to report construct as a measure of construct validity. Sampling adequacy of the items used to make record to report construct was measured using Kaiser-Meyer-Olkin (KMO) test. To check if these items were coming from a population with equal variance Bartlett's Test of Sphericity was used. The findings were as shown in table 4.25 and 4.26 below.

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .510 |
|--|--------------------|-------------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 253.736 |
| | Df | 21 |
| | Sig. | .000 |

Table 9: KMO and Bartlett's Test for Record to Report Construct 1

KMO test results for sampling adequacy in table 9 indicates that the scale of Record to Report factor had value 0.510 which was more than the threshold of 0.5 according to Williams *et al*, (2012), hence indicating acceptable degree for Sampling adequacy. Bartlett's Test of Sphericity findings in table 4.25 show that the samples of the factor are from populations with same variances [$\chi^2_{(21)} = 253.736$, $p = 0.000 < 0.05$]. Thus, the results of our constructs were verified to be valid.

| Item | Factor Loading | Communality |
|---|-----------------------|--------------------|
| Record to report has enabled provision of accurate and timely financial information from General Ledger | .753 | .688 |
| Record to report has improved recording of operational transactions of the county government | .576 | .604 |
| Record to report has enabled training of county staffs on Standard Chart of Accounts | .620 | .386 |
| Record to report has enabled successful uploading of Fixed Asset data of Bungoma County Government | .732 | .720 |
| Record to report has enabled provision of accurate and timely financial information on Fixed Assets | .815 | .681 |
| Record to report has improved Standard Chart of Accounts for county government | .690 | .677 |
| Record to report has facilitated logging of issues into help desk and issues resolved | .850 | .956 |

Table 10: Factor Loadings and Communalities for Seven Items That Make up Record to Report Construct1

The communalities as shown in table 10 were all above 0.3 thresholds (Frydenberg, 1993); hence confirming that item shares some common variance with others. All the seven items in this analysis had primary loadings over .5 thresholds (Frydenberg, 1993). Thus, our dataset was acceptable for further analysis.

4.8. Tests for Normality, Linearity, Homoscedasticity and Presence of Outliers in the Scores of Records to Report and Cash Management Constructs

The study also endeavored to ascertain the assumption of normal distribution of the Record to Report construct. The null hypothesis to be tested was that, the Record to Report scores were not significantly different from a normal distribution. The study adopted Shapiro Wilk test to test for the normal distribution of the data and the outcome was as shown in table 11.

| | Shapiro-Wilk test | | |
|-------------------------|--------------------------|-----------|----------------|
| | Statistic | df | p-value |
| Record to Report | .923 | 174 | .844 |

Table 11: Shapiro-Wilk Test for Normal Distribution of Records to Report scores 1

As indicated by the Shapiro Wilk test results, p-value = 0.844 is greater than 0.05 level of significant; thus, the null hypothesis was rejected and the conclusion was that Record to Report scores were significantly normally distributed.

To test for the assumptions of linearity, Homoscedasticity and presence of outliers in the scores of Records to Report and Cash Management constructs, Normal p-p plot & Scatter plot of the standardized residuals were adopted.

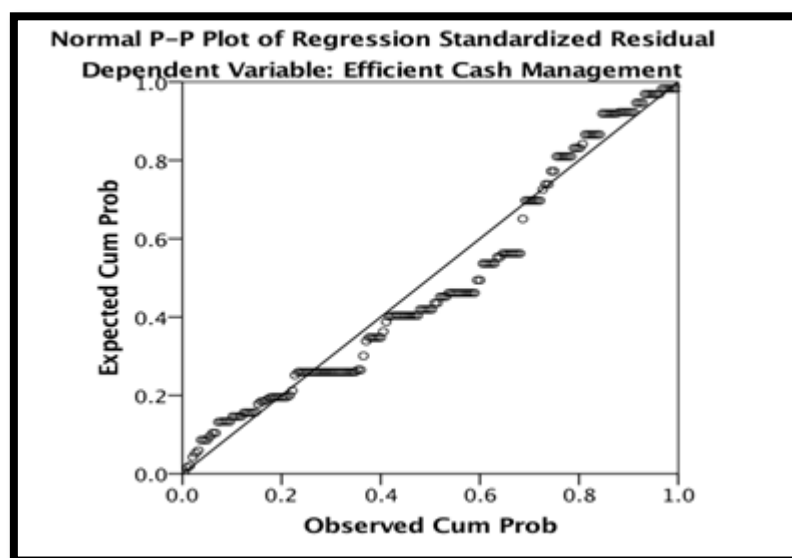


Figure 2: Normal P-P Plot of Regression Standardized Residual for Record to Report 1

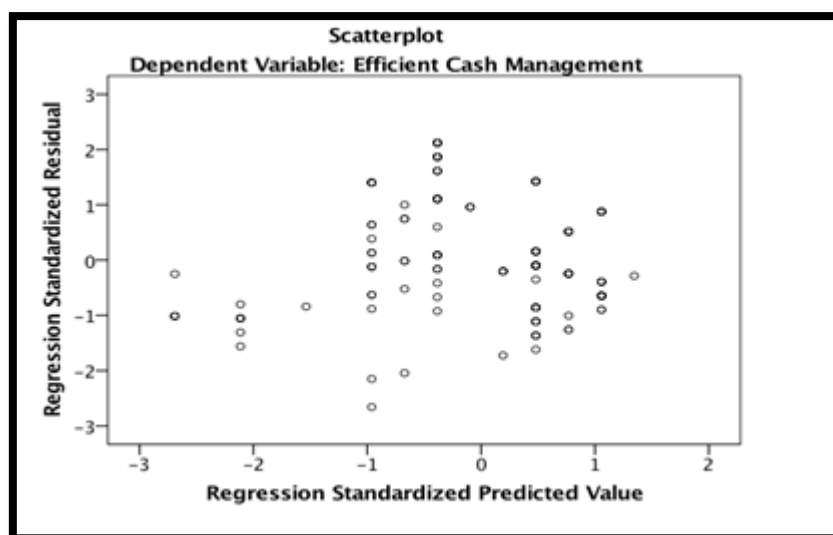


Figure 3: Scatter Plot of the Standardized Residuals for Record to Report 1

4.8.1. Linearity Test

Linear regression involves checking if the association between the independent and dependent variables is linear. Linearity assumption in this study was tested with Normal p-p plot of regression standardized residual as shown in Figure 2. The points lie in a reasonably straight diagonal line from bottom left to top right as shown in the Normal Probability Plot; an indication of linear relationship between Record to Report and Cash Management thus assumption for linearity was achieved.

4.8.2. Homoscedasticity Test

Homoscedasticity assumes that the dependent variable shows similar amounts of variance across the range of values for an independent variable. For homoscedasticity, the variance of the residuals about predicted dependent variable scores should be the same for all predicted scores. From Figure 3 on Scatterplot of the standard residuals, the residuals are roughly rectangular distributed, with many scores concentrated in the Centre (along the point). The standardized residuals are randomly distributed and are not organized in any systematic manner. Lack of the deviations of the residuals from a centralized rectangle suggest that we did not violate the assumption of homoscedasticity.

4.8.3. Outliers

According to Tabachnick and Fidell (2001, p. 122) outliers are scores with standardized residual values above about 3.3 (or less than -3.3). Linear Regressions analysis is very sensitive to outliers (very high or very low scores). From Figure 3, none of the standardized residuals is more than 3.3 or less than -3.3, indicating absence of outliers in our dataset.

4.9. Correlation between Record to Report and Cash Management in Bungoma County Government

Pearson Moment Correlation coefficient was used to determine the strength and direction of the relationship between Record to Report and Cash Management in the County Government Bungoma. The results of the study were captured in table 4.28.

| Cash Management | Record to Report | |
|-----------------|---------------------|--------|
| | Pearson Correlation | .616** |
| | Sig. (2-tailed) | .000 |
| | N | 174 |

Table 12: Correlation between Record to Report and Cash Management 1

It's evident from the findings of table 12 that Record to Report had a significant strong positive relationship with Cash Management in Bungoma County Government ($R = 0.616$, $p = 0.000$). Lyndsay (2009) indicated that a coefficient between +1.0 and +0.5 or -1.0 and -0.5 indicates a strong relationship. We can therefore conclude that Record to Report had a significantly strong positive relationship with the Cash Management in Bungoma County Government.

4.10. Regression Analysis Financial Reporting

The study adopted Simple Linear Regression model to determine the effect of Record to Report on cash management in Bungoma County Government. The model endeavored to test the following null hypothesis:

- H_{01} : Record to Report module of IFMIS has no significant influence on cash management in Bungoma County Government.

| Model Summary | | | | | | |
|---|----------------------------------|-----------------------------|------------|---------------------------|----------------------------|-------------------|
| Model | | R | R Square | Adjusted R Square | Std. Error of the Estimate | |
| 1 | | .616 ^a | .380 | .376 | .39153 | |
| a. Predictors: (Constant), Record to Report module of IFMIS | | | | | | |
| ANOVA ^a | | | | | | |
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 16.137 | 1 | 16.137 | 105.268 | .000 ^b |
| | Residual | 26.366 | 172 | .153 | | |
| | Total | 42.503 | 173 | | | |
| a. Dependent Variable: Cash Management | | | | | | |
| b. Predictors: (Constant), Record to Report module of IFMIS | | | | | | |
| Coefficients ^a | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | | β | Std. Error | Beta | | |
| 1 | (Constant) | .603 | .254 | | 2.376 | .019 |
| | Record to Report module of IFMIS | .788 | .077 | .616 | 10.260 | .000 |
| a. Dependent Variable: Cash Management | | | | | | |

Table 13: Simple Linear Regression between Record to Report and Cash Management in Bungoma County Government¹

From the ANOVA results shown in table 13, it is evident that the Simple Linear Regression model well fitted the dataset [$F(1, 172) = 105.268$, $P = 0.000 < 0.05$]. Note that the model (Record to Report module of IFMIS) explained 37.6% of the variation in cash management in Bungoma County Government (Adjusted R Square = 0.376). The results of coefficients in Table 13 show that Record to Report module of IFMIS had a statistically significant contribution in the prediction of cash management in Bungoma County Government, ($\beta = 0.788$, $t = 10.260$, $p = 0.000 < 0.05$); thus, we reject the null hypothesis and conclude that Record to Report module of IFMIS has a significant influence on cash management in Bungoma County Government. Procure to Pay had a positive standardized beta coefficient = 0.616 in the coefficients results of table 13; an indication that a Unit change in the Record to Report module of IFMIS is likely to result to an improvement in cash management in Bungoma County Government by 61.6%. The Simple Linear Regression model to predict cash management in Bungoma County Government using Record to Report module of IFMIS was as follows:

4.10.1. Cash Management = 0.603 + 0.788Record to Report module of IFMIS

Similarly, Mburu and Ngahu (2016) did a study on the influence of IFMIS on financial management in the Treasury department of County Government of Nakuru. The study established that financial reporting had a strong positive significant relationship with financial management. Omokonga (2014) also sought to determine the effect of Integrated Financial Management Information System (IFMIS) on financial reporting in public sector organizations. He found that there was a statistically significant positive correlation between IFMIS and improved financial reporting.

5. Summary of Findings, Conclusion & Recommendations

5.1. Summary of the Findings

This study was on the effect of IFMIS (Plan to budget, procure to pay and record to report) on cash management in Bungoma County Government. It had four objectives which were developed into the following null hypotheses; there is no significant effect between plan to budget and cash management, there is no significant effect between procure to pay and cash management, there is no significant effect between record to report and cash management and lastly government policy has no moderating influence on IFMIS and cash management.

The null hypotheses were statistically tested using both linear and multiple regression analysis. In summary, the findings revealed that IFMIS had statistical significant effect on the cash management in Bungoma County Government and it explained up to 63.2% of the variation in the Cash Management ($R^2=0.632$) leaving 36.8% to be accounted by factors not captured in the model. The key findings of each independent variable in the study based on the hypotheses is discussed in the following sub-sections.

5.2. Financial Reporting and Cash Management

The main objective of the study sought to determine the extent to which 'the record to report' module of IFMIS influences cash management. The following null hypothesis; H_{03} was set: There is no significant relationship between record to report and cash management. From the regression results, Record to Report module of IFMIS explained 37.6% of the variation in cash management in Bungoma County Government (Adjusted R Square = 0.376). The results of coefficients in table 4.22 show that Record to Report module of IFMIS had a statistically significant contribution in the prediction of cash management in Bungoma County Government, ($\beta = 0.788$, $t = 10.260$, $p=0.000<0.05$); thus, the rejected the null hypothesis since Record to Report module of IFMIS had a significant influence on cash management in Bungoma County Government.

5.3. Conclusions

The main objective of the study was to determine the effect of IFMIS on cash management in Bungoma County, Kenya.

The null hypothesis was rejected as record to report had a significant positive relationship with cash management. Majority of the employees agreed that Record to report has facilitated logging IFMIS issues into help desk and issues resolved timely.

5.4. Recommendations

Based on this study findings, it is suggested that for effective management of cash in the county government of Bungoma through IFMIS;

- Clear records should be kept and periodic reports developed and disseminated for improved decision making

5.5. Suggestions for Further Research

The study suggests further research in the following areas;

- The study incorporated 3 modules of IFMIS, a study on focusing on Influence of Financial government policies on cash management is encouraged.

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