

# Influence of Integrated Financial Management Information Systems on Service Delivery: A Case of Bomet County

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**Abstract:** The need for reform of the public finance management system in Kenya was emphasized in the Economic Recovery Strategy for the Wealth and Employment Creation, the ERS for 2003-2007, as a crucial element in order to achieve sustainable economic growth, alleviate poverty, and improve public sector performance. Consequently, the Government of Kenya implemented the Integrated Financial Management and Information System (IFMIS) as part of public finance management system reform. The study found out that staffs understand the different modules under IFMIS, the staffs are computer literate, IFMIS system has minimal down time, IFMIS system allows staff to share financial information, the agency has adequate hardware to support IFMIS, IFMIS hardware use latest state of technology, the use of IFMIS has improved the timeliness in submitting financial reports and the use of IFMIS has brought about easy record storage. The study concludes that 58% changes in dependent variable is contributed by the independent variables of the study (IFMIS system reliability, Staff Competency, ICT Infrastructure) while 42% is explained by other factors, ICT infrastructure has a largest effect, then staff competency and lastly IFMIS system reliability. The study recommends that all the accountants and other officers in Bomet county should ensure that their staffs understand the different modules under the departments in the county should be aware that IFMIS system has minimal down time, they should ensure that there is adequate hardware to support IFMIS, ICT departments in these departments should ensure that their IFMIS hardware use latest state of technology, the heads of the departments in the county government should realize that the use of IFMIS improves the timeliness in submitting financial reports, there is also need for county government of Bomet to ensure that records are easily stored and retrieved from the data bases using IFMIS and the county government ought to enhance financial efficiency in their respective departments by the use of IFMIS.

**Keywords:** Influence, Financial Management Information, Service Delivery.

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## 1. BACKGROUND OF THE STUDY

Developing countries have invested investing heavily in information management systems in order to benefit from advances in information technology which enables firms or organization to redefine business processes and develop new business models (Ssemaluulu, 2012). Public institutions whose major aim is to provide services to the public are also major investors in information management systems to improve on service delivery. The main objective of implementing information management system is to improve on operational efficiency and effectiveness. Information and Communication Technology (ICT) adoption and other emerging technologies have made it a reality to most of the organizations in the 20<sup>th</sup> century.

As the information systems grow in organizations they become complex and sometimes hard to measure the success in their implementation and use and their effectiveness to an organization. Ifninedo (2006) noted that assessing the success

of ERP in adopting organization is difficult because of their complex in nature and that adopting organizations have given up hope of evaluating the benefits of success due to lack of knowledge of that exercise.

Financial management information system (FIMS) refers to computerization of public expenditure management process including budget formulation, execution and accounting with the help of a fully integrated system (Diamond and Khemani, 2005).

With the creation of Kenya e –Government strategy (2004) which led to the establishment of Information Communication Technology Department across the Government Ministries and Departments, the financial management system has undergone major transformations from manual systems such as ledger, vote book and cash management. Integrated Financial Management System (IFMIS Kenya) system development started in the year 1998 but full deployment in the year 2003 as contained in the IFMIS re-engineering strategic plan 2011-2013. The infrastructural growth in terms of Local Area Networks, Wide Area Networks, and the Government Common Core networks plays a key role towards the implementation. Capacity building among staff has led to a tremendous achievement on the way Government conducts its financial operations and speedy implementation of the system and is key driver for any reform (Ministry of Finance, 2011). An academy of Integrated Financial Management System (IFMIS) has been set to carry out regular training on all emerging issues and to address the upcoming technologies (Ministry of Finance, 2011, Kenya).

Public financial management system was one of the key areas under the Economic Recovery Strategy (ERS) 2003-2007 to achieve fiscal sustainability and balance, restructuring and re-allocations among others. According to Heidenhof, Grandvounnet, Kianpour and Rezaian (2001), the use of information technology is considered as a key financial reform agenda whose benefits include improved public transparency, expediting of transactions, improved efficiency of financial controls and expenditure management and improved consistency of information on checks and balances.

The introduction of integrated financial management system (IFMIS) has been promoted as the core driver to public financial reforms in the developing countries and that factors behind successful implementation include clear commitment by the relevant authorities on financial objective reforms, ICT readiness, project phased implementation as well as adequate resources and human capacity (Chene, 2009). The Government of Kenya through the Ministry of Finance has undertaken a number of reforms on budget formulation and execution, public procurement, revenue collection, payroll and pension, accounting and reporting and macro fiscal framework (Ministry of Finance, 2011).

The Government not only focuses on efficiency and effectiveness but also ensuring accountability and interactive access of information on public expenditure by the public and improvement to service delivery to internal customers (employees). According to Hendriks (2012), IFMIS forms part of the financial management reform practices of developing countries globally and holds benefits such as effective control over public finance, enhance transparency and accountability and serves as a deterrent to corruption and fraud.

Initially the IFMIS system was skewed to a few areas of operation but with the technology advancement and county internet connectivity, it has undergone re-engineering to improve on public expenditure management and address some of the gaps that were realized in the first phase of the roll out. The system has grown to include the latest technologies of electronic payments, e –budgeting and procure to pay among others.

Public finance management practices had been characterized by challenges in revenue mobilization and lack of transparency in its use and accountability. The aspect of misappropriation of funds and corruption had been rampant in many developing countries. This led to governments of these countries be unable to achieve their intended outputs as well as partial delivery of the objectives due to funds misuse, wastage and inefficiency in managing resources. In the County and other agencies institutions, IFMIS is known as the computerization of financial management activities in the public sector, from revenue collection, budget automation, to accounting, reporting and auditing, with the assistance of an integrated financial management system for all public sector operations. A more detailed and integrated financial management system would give accurate, timely and consistent and relevant financial information for the purpose of management and decision-making functions. Additionally, such a system supports government-wide as well as county and government agencies policy decisions, integrated preparation and execution of budgets, efficient financial monitoring and reduce cases of misuse of public funds, provided financial information for planning, analysis and timely reporting. The system also gives a detailed audit trail to facilitate financial audits to meet legal and statutory requirements (Mobegei, 2009).

The Kenyan Government has been improving on its financial management function way back from 1997. It has undertaken a numerous Financial Management reforms targeting at creating transparency and accountability. These reforms have focused more on the core functions of PFM systems which include budget preparation and management, revenue mobilization, public procurement, internal and external audits, public debt management, parliamentary oversight, accounting activities, payroll and pensions and financial reporting. The introduction of the Integrated Financial Management system, Public debt management systems, the Pension system, and Electronic Funds Transfer among others, have been based on the findings that the government can considerably improve efficiency in financial management through the use of advanced technology and speed up reforms (IFMIS strategic plan, 2011-2013).

Annastacia 2016 studied on Factors affecting failure of IFMIS Implementations in the Counties, a survey that was done in Bomet, Kericho, Narok, Nyamira and Kisii. respectively The findings of this study revealed that most counties did not manage change to IFMIS effectively; the technological infrastructure for the roll out to the sub counties has not been availed; some aspects of human capital development have not been addressed; the political class is not supportive of IFMIS and the counties have not allocated enough resources towards of IFMIS. This study recommended that for IFMIS implementation to be effective in the counties: change management should be handled better; the National Treasury and counties should organize regular skills upgrading courses on IFMIS; the technological infrastructure required to roll out IFMIS to the sub counties availed; and the counties should allocate more resources towards IFMIS.

Most of the researchers have dwelt more on the process of IFMIS implementation and the level of adoption of the system, especially in Kenya, Therefore, this research seeks to expand the knowledge by establishing the influence of IFMIS accounting operations on services delivery in Bomet County.

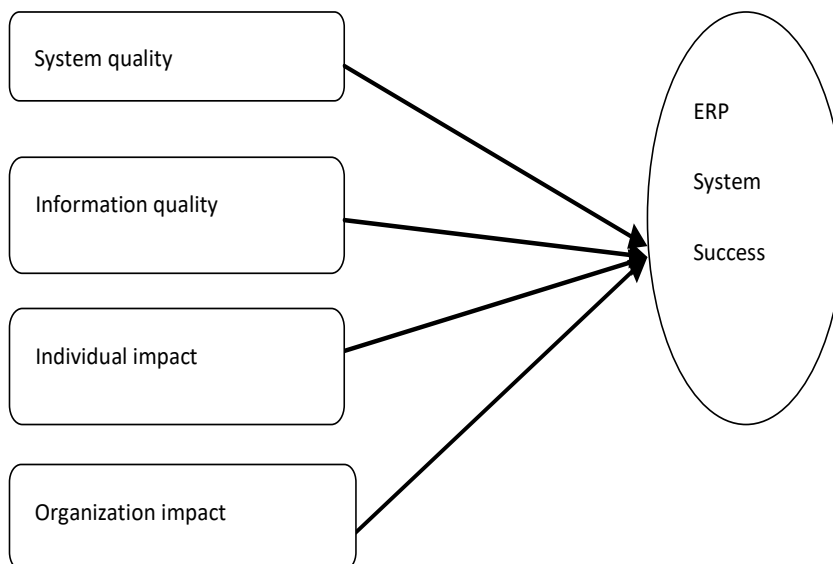
This study therefore sought to establish the influence of IFMIS on services delivery, a case of Bomet County

## 2. LITERATURE REVIEW

### Gable et al.'s., 2003 Model:

Gable et al., 2003 were among the first authors to specify the dimensions of information systems success in an ERP context. They developed a model that redefined the model developed by Delone and McLean (1992) where they eliminated user and user satisfaction in their model. The dimensions retained are information quality, ERP system quality, individual impact and organization impact.

Both Delone and McLea's, 1992 and Gable et al., 2003 have ignored the contextual influences Ifinedo, 2006. They recommended focusing not only on information systems success and but providing of information success external factors such as the organization structure. IFMIS Kenya is an accounting ERP system and hence qualify also be evaluated using the Gable et al., 2003 model. To consider factors such IFMIS system quality and information quality and other organization factors. However the model was used in the private organizations and not in the public sector.

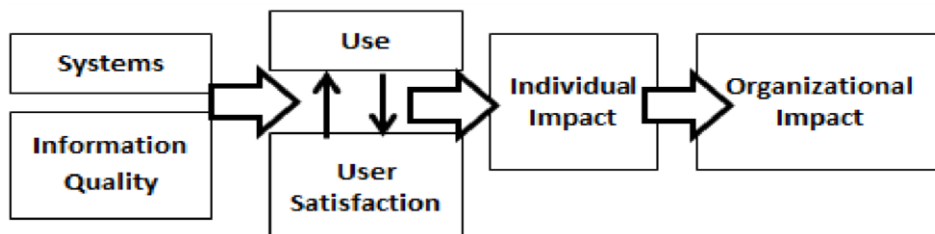


Gable et al., (2003) ERP system success measurement model

**Delone and Mclean’s Model of IS Success:**

The model is interpreted as follows: both system quality (technical quality) and information quality (output quality) affect both use and user satisfaction. Amount of use can affect user satisfaction and vice versa either positively or negatively. Use and user satisfaction are antecedent to individual impact which impact on organization of organization impact. Daoud and Triki, 2013 cited in Mushyat 2000 and Ismail 2009 in their literature review identified Delone and McLea’s model is used in accounting information systems. He went further and showed that this model is valid in one dimensional and can be applied in any accounting information systems context.

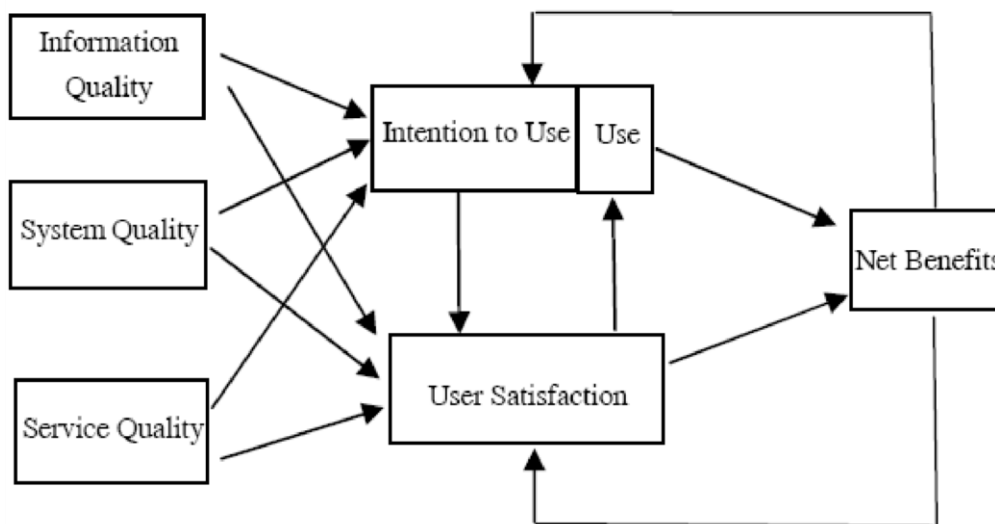
The D&M Model of IS success has informed a number of previous studies such as Garrity & Sanders, 1998. The 1992 model has been criticized because of mixing the variances and processes models in one package.



*Delone and Mclean’s Model of IS Success source: (Delone & Mclean, 1992)*

**The Updated Delone and McLean’s 2003 Model:**

The 1992 updated model was enhanced to support multi-dimensional aspects that are integrated an IS success. Delone and McLean updated there IS successful models to include another dependent variable known as service quality



*The Updated Delone and McLean’s 2003 Model*

Many empirical studies done by the information researchers have supported the updated Delone and Mclean updated model .The same realized and encouraged the Government and Private Authorities to include measures for information quality, system quality, service quality, system use, user satisfaction and perceived net benefits in their techniques of information system success, Zaied, 2012.

The Government and corporate organizations are investing heavily in e-commerce applications which are internet based platform but faced with a situation on how to evaluate their success. The updated IS success model has been adapted to come up with e-commerce IS success model Zaied (2012).IFMIS system is an online system and hence qualify to be an e-commerce application. A lot of information can be borrowed from this where the primary system users are external customers or suppliers or the government employees. They use the system to make buying or selling and execute business transactions. The decisions made will impact the individual users, organizations and even the economy at large.

The only difference is that the system quality and information quality in the Delone and McLean Model have been replaced by e-commerce and content respectively. User satisfaction is also replaced with customer e-commerce satisfaction. System quality measures the desired characteristics of an e-commerce system such as usability, availability, reliability, adaptability and online response time. The content issue refers to the web content which should be complete, relevant, easy to use and secure. In our proposed framework for IFMIS this can be IFMIS website.

Service quality refers to the support given by the service provider whether delivered by the IS unit, organization or outsourced from an internet provider. In our proposed framework this can be the ICT unit of IFMIS department at Treasury and services provided by Oracle Corporation. Usage may refer to navigation to the site to look for information or executing a transaction. User satisfaction or customer e-commerce satisfaction refers to the customer experience through information retrieval, purchase, payment and other services available. Net benefit which captures the impacts of e-commerce on customers, suppliers, employees and organizations.

### **Technology Acceptance Model (TAM):**

Technology Acceptance Model (TAM) is originally proposed by Davis in 1986. The theory models how users come to accept and use technology. The model suggests that when users of an information system are presented with a new technology a number of factors influence how and when they will use it notably the perceived usefulness and perceived ease of use (Kim et al., 2009)

Technical Acceptance Model demonstrates on how the information system is determined by the behavioral pattern intention and the behavioral pattern determined by person's attitude towards using the system. According to Davis the attitude of an individual is not only the factor that determines his use of a system but is also based on the impact on the performance. For example if a user who may be an employee does not welcome an information system the probability that he or she will use it is high if he or she perceives that it will improve his performance at work.

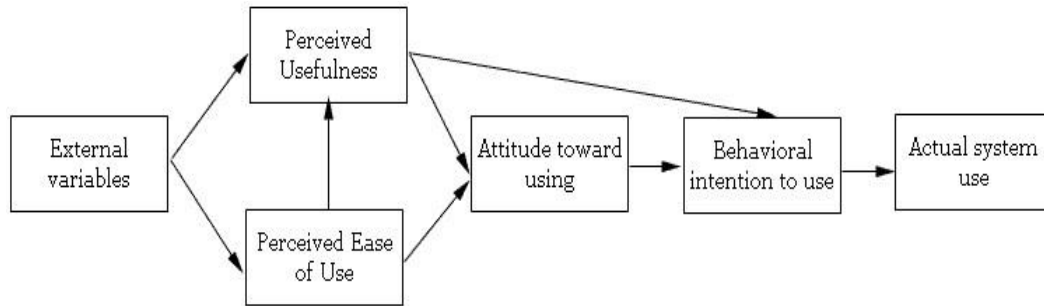
Davis (2001) illustrated that the technology acceptance model consisted of two independent components. These were the ease of use and perceived use and perceived usefulness. These two components determined the dependent component which is the user's intention to use. Venkatesh (2003) noted that TAM was developed specifically to project acceptance of information technology and use in the workplace. The perceived usefulness refers to extent to which a user feels that the new technology or innovation will assist him or her in making his or her work more efficient and effective. Perceived ease of use determines the required effort that a user needs to apply when using the technology or innovation (Chuttur, 2009). Both perceived usefulness and perceived ease of use are affected by external factors. Venkatesh and Davis (2000) developed the model further by explaining what influences perceived usefulness and perceived ease of use. The new model included the factors that affect perceived usefulness and perceived ease of use (Moore, 2010).

The components that affect perceived usefulness included quality of output, subjective norms, relevance of the task and result demonstrability. Further, subjective norm is affected by experience and the capacity to volunteer. Consequently, image can be seen as essential to an individual feeling when they adopt a new type of technology (Feuerlicht, 2010).

Government policy on information technology has recently focused on establishing electronic systems which give administrators and employees online access to various learning materials and government publications. The move is informed by changes in demographic factors, service delivery market factors and innovation in technology (Geels, 2002). However, many challenges have to be overcome in the process of integration of technology that is instrumental to improving accounting operations. These challenges range from staff competencies, technology satisfaction, faculty effort and technology infrastructure (Surry, Ensminger & Haab, 2005).

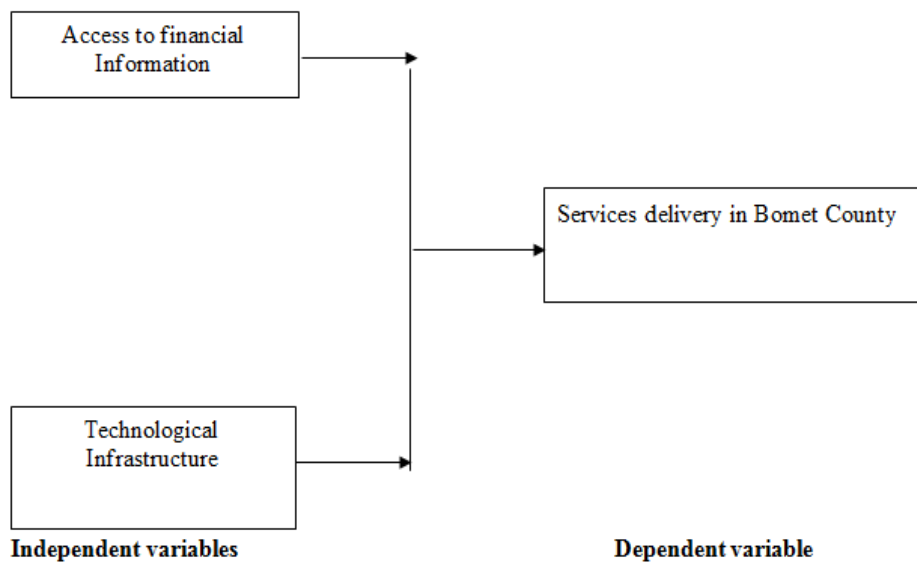
Many government institutions and especially in the county have failed in delivering services primarily due to poor decisions, high cost of technology, lack of a serious business strategy and competition (Elloumi, 2004). Most of the universities have been facing enormous difficulties in trying to implement strategies, these including effectiveness, delivery, and acceptance of the courses (Saadé, 2003). Simply by replicating classroom experience online and offering any conceivable course cannot meet the students' requirements and may cause unexpected problems (Kilmurray, 2003).

Public satisfaction due to continuous frustration in web-based online remittances of taxes more so in sub-Saharan countries has gone down due to users' inability to make their payments. This theory is relevant for this research because it helped elaborate how perceived ease of use and perceived usefulness determine the intention to use and ultimately the usage behavior of Government departments and County offices



**Technology Acceptance Model**

**Conceptual Framework:**



**3. RESEARCH FINDINGS AND DISCUSSIONS**

**Response Rate:**

228 officers from the County Government of Bomet that use IFMIS were targeted. Out of the 228 questionnaires that were issued to respondents, 166 of them were fully filled and successfully returned to the researcher. A response rate of 73% was achieved. This response rate concurred with the stipulation of Babbie (2004) who stated that return rates above 50% are acceptable for analyzed and publish, 60% is a good responds and 70% is very good. Above 80% is considered excellent. The research findings are summarized in Table below.

**Table1: Response Rate**

Response Rate	Frequency	Percentage
Response	166	73
Non Response	62	27
<b>Total</b>	<b>228</b>	<b>100</b>

**Staff Competency:**

Several statements on the effects of staff competency in IFMIS on service delivery were carefully identified. Respondents were then requested to indicate the extent of their agreement with each statement in regard to their agency. A type of scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree was applied.



**Table2: Staff Competency**

Staff Competency	Mean	Std. Dev
Our IFMIS staff are conversant with the way the system works	2.0698	1.05549
Our staff understand the different modules under IFMIS	4.3488	.71991
Our staff are computer literate	4.2326	.42746
Our staff are given prerequisite IFMIS training from time to time	2.5581	1.46876

The findings of the study revealed that IFMIS staffs are conversant with the way the system works as supported by a mean of 2.0698 of the results and standard deviation of 1.05549. The research study further found that offices understand the different modules under IFMIS as the mean was 4.3488 and standard deviation was 0.71991. The study also established that the staffs are computer literate for the mean on the statement was 4.2326 and standard deviation was 0.42746. It was also established that staffs are given prerequisite IFMIS training from time to time for the mean was 2.5581 and standard deviation was 1.46876.

**Extent of Effect of Staff Competency on service delivery in the county:**

The study sought to investigate how staff competency affects IFMIS on services delivery in the county.

**Table3: Extent of Effect of Staff Competency on services delivery in the county**

	Frequency	Percentage
Moderate extent	44	26
Great extent	61	37
Very great extent	61	37
<b>Total</b>	<b>166</b>	<b>100</b>

The findings of the study from Table 4.3 showed that 26% of the respondents agreed that staff competency on the services delivery in the county by a moderate extent while 37% established a great extent or very great extent effect. These findings indicate that staff competency as a variable affects services delivery in the county.

**ICT Infrastructure:**

Several statements on ICT Infrastructure in support of IFMIS in services delivery were carefully selected and respondents were requested to tick the level of extent of their agreement with each of the statement in regard to their agency. In a scale of 1-5 point, where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree was applied.

**Table4 ICT Infrastructure**

ICT Infrastructure	Mean	Std. Dev
The agency has adequate hardware to support IFMIS	4.2558	.65803
The IFMIS hardware are well maintained	2.3953	1.11568
The IFMIS hardware use latest state of technology	4.2791	.66639

The study revealed that the departments has adequate hardware to support IFMIS for the mean on the statement was 4.2558 and standard deviation was 0.65803. It was also established that IFMIS hardware are well maintained as the mean was 2.3953 and standard deviation was 1.11568. The study further revealed that IFMIS hardware use latest state of technology as supported by a mean of 4.2791 and standard deviation of 0.66639.

#### **4. SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

##### **Staff Competency:**

The study found out that staffs understand the different modules under IFMIS. The study also established that the staffs are computer literate. The study further showed that 26% of the respondents is in agreement that staff competency affects services delivery in Bomet County by a moderate extent while 37% found a great extent/ very great extent effect.

##### **ICT Infrastructure:**

The study revealed that the agency has adequate hardware to support IFMIS. The study further revealed that IFMIS hardware use latest state of technology. The findings of the study further established that 63% of the respondents indicated a great extent of effect between ICT Infrastructure and services delivery in Kenya and 37% indicated a very great extent of effect.

##### **Conclusion:**

The study found out that staffs understand the different modules under IFMIS. The study also established that the staffs are computer literate. The finding concurs with EIPA (2005) that found out that basic ICT skills include the skills such as use of mobile devices, PCs, standard programs; and Specialist IT skills which include the skills for example system development, database design, web-design, the use of specialized programs and others. In addition, other skills include the ability of maintenance of hardware and software systems; resolving challenges reported by the users and the providing technical solutions; and user training to make an appropriate use of technology as well as developing a continuous computer skills policy. It was also established that staff competency affects services delivery in Bomet County.

##### **Recommendations:**

The study recommends that all the accountants and other officers in the county of Bomet Government should ensure that their staffs understand the different modules under IFMIS. Computer literacy skills and training should be offered to all staffs in their department allocated to work in.

The study further recommends that the department concern Heads in county should be aware that IFMIS system has minimal down time. Staff in government agencies should also be aware that IFMIS system allows them to share financial information. Furthermore, management of government agencies should ensure that their IFMIS systems have rights limitations for staffs depending on their job descriptions.

##### **Recommendations for further studies:**

Further studies should also be conducted to other counties government on factors/ inhibiting efficiency of ifmis linkage with the national government against the local government.

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