

# Effects of Monitoring and Evaluation on Implementation of Infrastructural Projects Funded by Vihiga County Government, Kenya

Atemo Dishon Opolu\*, Dr. Serah Kimaru- Muchai\*\*

\* Post Graduate Student, Department of Social and Development Studies, Mount Kenya University, Kenya

\*\*Lecturer, Department of Social and Development Studies, Mount Kenya University

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**ABSTRACT:** Monitoring and Evaluation is an integral part of project performance. Devolution of development agenda in Kenya has faced challenges and tests of accountability. Efficiency and performance of county governments are under scrutiny which has necessitated need for counties to adopt and intensify M&E systems in their project cycles. However, cases of project failures increasingly witnessed across counties rise concerns to whether such occurrences are attributable to low monitoring and evaluation systems. A study was carried out on infrastructural projects funded by the county government of Vihiga, Kenya to establish effect of monitoring and evaluation on implementation of these projects. The study established positive relationships between study variables and M&E performance. Stakeholder engagement, budgetary allocation, technical capacity and technology were found to have significant effects on the performance of M&E systems of Vihiga county, the variables contributed to an aggregate of 74.5% variation change in M&E performance. Regression statistics revealed that by holding all other independent variables at constant zero, a unit increase in stakeholder engagement, budgetary allocation, technical capacity and technology would lead to a corresponding increase in M&E performance by 0.482, 0.422, 0.415, 0.407 respectively. The findings also revealed insufficient M&E budgetary provisions, imprudent use of M&E funds outside planned schedules, low levels of stakeholder engagement, inadequate feedback absorption particularly in decision making, low staff motivation and technological literacy depicted by mean averages 2.16,1.16,2.12,1.99 and 2.03 respectively. These contributed to low M&E systems consequently impacting on the overall efficiency of project implementation.

**Unique Contribution to Theory, Practice and Policy:** The study recommends strengthening of Public Finance Management Regulations and Guidelines of 2015 (PFM 2015) and other accountability frameworks to ensure prudent use of M&E funds. The study iterates the critical role of stakeholders in enhancing prosperity of M&E systems and the need to strengthen and increase participation at all critical levels of decisions making. Project institutions to investments substantially in technological literacy to enhance usability and experience in M&E technology approaches.

**Index Terms:** Monitoring and Evaluation, Infrastructural Projects, Technical Capacity, Vihiga County Government

## I. INTRODUCTION

**Background to the Study:** Infrastructural development is a key economic pillar for sustainable development of a nation. Realization of infrastructural projects occur as a consequence of a well-coordinated monitoring and evaluation process during project implementation cycle. According to the UNDP (2011) M&E enhances performance and realization of the objectives of a project. Its goal is therefore to enhance the management of the prevailing and intended outcomes, outputs and impacts (UNDP, 2011). Scholars Meredith and Mantel (2013) observe that monitoring is core to project management and is aimed at assessing whether projects are being/have been implemented as planned. The authors further assert that through monitoring challenges arising out of the implementation process are able to be identified and corrected on time to evade future catastrophes.

World Bank (2011) strongly supports the vital role M&E play in project implementation and abilities to stage rapid action mechanism for identifying project problems and provision of internal communication to relevant stakeholders. M&E helps planners to initiate new projects and also assess the need for strengthening existing interventions to achieve a continuous project improvement in addition to assessing the general effectiveness and efficiency of projects.

Nations across the world, particularly the developed ones, the pursuit of development initiatives that are result oriented has been spearheaded by the adoption of highly effective M&E practices. To be specific, governments of countries like Sri-Lanka, USA and Canada have put up measures to ensure the institutionalization of the MfDR. Key success measure has been the adoption of specific

measures aimed at strengthening the Results-based M&E at National level (Meredith, 2014). The Results Based M&E system in these nations enjoys immense political support from the top-levels of government. Moreover, a quarterly review is undertaken to assess and troubleshoot the progress of programs, sectors and institutions in such Nations. Further, the institutionalization of M&E in programme cycle and policy development has greatly enhanced performance accountability.

In Canada, the government has heavily invested in the system of M&E aimed at supporting the Country's performance and accountability. The central designers recognizing the long-term and iterative nature of implementation of the M&E system have put more emphasis on the implementation phase as a tool in inculcating the culture of evaluation or results by organizations as well as the entire public sector (Belington & Moore, 2011).

In the case of Ghana, efforts of implementing a national system of M&E has borne significant progress over the years (Clear, 2012). The efforts by the Ghanaian government are however fraught by a myriad of challenges especially at the sectorial level, including major financial constraints, technical capacity and operational constraints, information that is uncoordinated and fragmented. Measures therefore have however been recommended by the clear reports to curb the challenges including, reinforcement of the existing institutional arrangements with capacity that can adequately sustain and support efficient M&E. Secondly, the report suggests that the current M&E mechanisms need to be harmonized, strengthened and coordinated effectively.

In Botswana and Rwanda, governments have played a big role in committing resources for its projects (Brett, 2003). Consequently, Donors have demanded accountability and performance reports which has necessitated the need to intensify M&E to demonstrate performance results and accountability (Danson & Amok, 2010). In Botswana NGOs are incorporated in government working sub-sectors to play watchdog roles (Kinsen & Noble, 2015).

In Kenya, public sector agencies are required to work and adhere to Result- Based Management which demand meeting beneficiaries' needs, transparency reporting and incorporate the use of M&E tools in their workings (Muigah, 2015). The Public Benefits Organization Act, 2013 highlights requirements by public sector on monitoring, evaluation and reporting. County Governments emerged following the devolution agenda in Kenya in 2010. Since then most of the resources have been devolved in Counties. Subsequently, efficiency and performance of these County Governments has been under scrutiny with strict demand of accountability.

Vihiga County Government has an established monitoring and evaluation policy framework, a unique leadership and prioritized infrastructural development agenda. The existence of strong trade ties with its neighboring counties have accelerated the need to invest and broaden infrastructural networks to support the increased economic affluence. This necessitated the need for quality and timely implementation of infrastructural projects braced by effective M&E policy practices to maximize on outcomes (UNDP 2011).

**Statement of the Problem:** M&E is critical in achieving performance targets during project implementation cycles. Vihiga County has experienced exceptional occurrences of project failures despite presence of integrated M&E policy framework, which has run the County into unexpected cost overruns and time delays beyond the planned completion schedules. This has raised questions as to whether such occurrences are attributable to low M&E systems in Vihiga or whether the county is unique in any specific way regarding M&E and project performance.

## II. RESEARCH ELABORATIONS

### *Theoretical Framework*

**Stakeholder Theory:** Many scholars and researchers have until recently consented that success of projects entails both sufficient and effective stakeholders' management and satisfaction (Bourn & Walker, 2007). The main arguments behind the stakeholder theory in the success of a project depends on the manner in which the relationship between the key groups are managed for instance, employees, customers, suppliers, financiers, communities or any other individual with an influence on the objectives of a project (Freeman, 2000). For all government projects, management of stakeholder relationships is a key factor for decision making and the success of any project making the process of stakeholder identification crucial during the project planning phase (Bourne & Walker, 2007). In light of the above review, the stakeholder theory offered the researcher essential insights on stakeholders' influence in monitoring of projects funded by Vihiga county so as to enhance the M&E structure of reporting and tracing the project delivery progress. Such insights will include but not limited to frequency and levels of participation, feedback mechanisms, decision making, selection and documentation, capability development and stakeholder feedback mechanisms.

### *Public Participation Theory:*

Arnstein (1999) offers a general synopsis of the various ways of involving the public in decision making processes occurring at different public participation levels. In his model, it is expected that individuals will be responsible and should as a result actively participate in the process of public decision-making. Brett (2003) on his part asserts that the process of public participation is increasingly advocated as the need for higher levels of community and individual control over government activities increases. Brett (2003) further observes that the involvement of the people through public participation in the process of decision making is possible for particular projects if specific circumstances are met. However, this technique of public participation may fail in circumstances

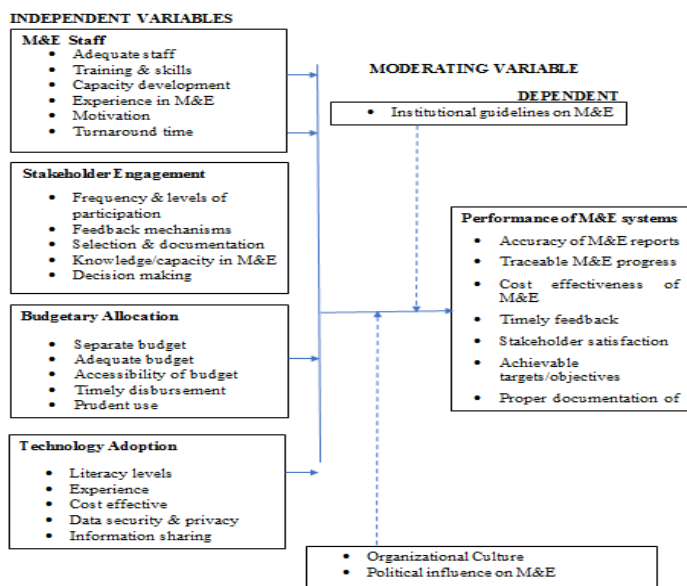
where the local conditions are unfavorable for collective action or in a case where collective action maybe interfered with by the authorities in charge of implementing a project for selfish reasons or in sabotage of project performance.

While reviewing literature, Muhange (2008) notes that the justification for peoples’ involvement includes; a requisite tool for enhancing empowerment, a response to the societal needs, enhance local ownership of a project as well as reducing project cost through local resources mobilization. Based on this, public participation theory is seen as promoting and sharing the gains in a more equitable manner and in line with the intended objectives. Chambers (1997) supports this argument by stating that citizens are empowered through participation in order to secure their continued direction and support of developments implemented in future.

Recommendations have also been made by Brett (2003) that development should be more people driven laying emphasis on strengthening of institutions, enhancing the capacity of the local population as well as ensuring high levels of accountability for project sustainability. Brett (2003) further observes that citizenship is characterized by active engagement in decision making of public activities. He adds that the main indicators of civic duty are interest and devotion to public issues and causes respectively. The above claims therefore justify the relevance of participation theory since M & E is aligned to most of the mentioned claims.

Moreover, participation theory offers a solid foundation and framework for basing the current study because when the beneficiaries of a project participate in its activities, they are able to demand for excellent services, they are able to own and develop sense of belonging towards such projects. In addition to ensuring efficient resource utilization by the government, tracking the progress of development project and ensuring sustainability and timely completion of projects public participation is also founded on the core elements of the Constitution of 2010 which serves as a guide for the County governments.

**Conceptual Framework:** Figure 1 shows the conceptual framework and illustrates how study variables relate.



**Figure 1: Conceptual Framework**

### III. METHODOLOGY

The study used descriptive survey approach and confined its findings on a target population and sample size of 70 comprised of key players involved in M&E activities of project cycle. Census was used and a complete study of all individuals in the target population conducted. Data was gathered using questionnaires, interview guide for key informants and focus group discussions for purposively selected project beneficiaries. Reliability and validity tests of the research tool were conducted using a pilot sample of 10 respondents. The data collected was run through SPSS statistics version 25.0. The findings were analyzed using descriptive statistics and inferential analysis and presented using tables.

### IV. RESULTS AND DISCUSSION

#### Descriptive Analysis

#### Stakeholder Engagement and its Effects on Monitoring and Evaluation

##### a.) Effects of Stakeholder Engagement on M&E Performance

Respondents indicated the impact of stakeholder engagement on the performance of M&E activities:

**Table 8 : Effect of Stakeholder Engagement on M&E Performance**

| <b>Impact</b> | <b>Frequency</b> | <b>Percentage</b> |
|---------------|------------------|-------------------|
| High          | 52               | 80                |
| Moderate      | 11               | 17                |
| Low           | 2                | 3                 |
| <b>Total</b>  | <b>65</b>        | <b>100</b>        |

Source: Research Data (2020)

The study observed that stakeholder engagement was significant and determined the success of M&E activities in Vihiga County as indicated by majority of respondents; 3% opposed citing emergence of vested interest groups that compromised project outcomes.

*b.) Statements on Stakeholder Engagement and its effects on M&E Performance*

The study requested the respondents to indicate the extent to which they agreed with various statements concerning stakeholder engagement. The results were tabulated as below:

**Table 9 : Statements on Stakeholder Engagement**

| <b>Statement</b>   | <b>Mean</b> | <b>Std. Dev</b> |
|--|-------------|-----------------|
| Stakeholders are known and documented                            | 3.94        | 0.897           |
| Stakeholders are fairly selected                                 | 4.05        | 0.921           |
| Stakeholder are adequately involved in M&E activities            | 1.12        | 1.065           |
| Stakeholders have basic knowledge in M&E practices               | 3.52        | 0.632           |
| Stakeholders undergo capacity development to enhance their roles | 3.66        | 0.621           |
| Stakeholders feedback is sought at all stages                    | 1.99        | 0.399           |
| Stakeholders contributions inform decisions of M&E               | 1.38        | 0.410           |
| Involving stakeholders enhances the success of M&E               | 4.60        | 1.307           |

Source: Research Data (2020)

From the findings as denoted by derived weighted mean scores, project stakeholders are known and documented as hinted by majority respondents. Kenon, Howden & Hartley (2013) observed that stakeholder aspect is crucial in project success, some of the stakeholders have higher stakes in the projects while others have significant influence over deliverables accrued to the project. Stakeholder documentation enables the project team to prioritize and assess the capabilities and significance of individual stakeholders. The study also noted low involvement of stakeholders in M&E activities despite fair selection. Adan (2012) alluded to the importance of a fair selection and involvement of project stakeholders necessary to minimize friction and resistance that could slow down and impact negatively on project performance.

Further, majority of respondents agreed that there existed various capacity development opportunities designed to enhance the roles of stakeholders and provide a level ground for clarity and understanding of project cycle activities (Velma, 2008).

The study established that stakeholders' feedback and contributions were minimally sought on crucial stages of M&E processes particularly those involving critical decision making and M&E reporting. In practices worldwide, project feedback and stakeholders' contributions are significant as they tend to promote project acceptability by the community. Further, respondents consented to stakeholder participatory as crucial to the prosperity of M&E performance, which was also echoed by project beneficiaries during the focus group discussion citing low involvement. Key informants elicited contrary opinion citing maximum participation by external stakeholders. Njuki, Kaaria, Chetsike & Sanginga (2013) observed the role of participatory monitoring and evaluation in strengthening learning and change at both community and institutional levels. Participation in M&E facilitates assessment of projects from multiple perspectives other than promoting negotiations of outcomes that stakeholders expect from the project.

**Budgetary Allocation and its effect on Monitoring and Evaluation**

The researcher sought to establish the effects of budgetary allocations in relation to M&E activities of the County Government of Vihiga.

*a.) Effects of Budgetary Allocations on M&E Performance*

Respondents were requested to indicate the level budgetary allocations impacted on the performance of M&E activities. The responses are tabulated in table 10.

**Table 10: Effect of Budgetary Allocations on M&E Performance**

| <b>Impact</b> | <b>Frequency</b> | <b>Percentage</b> |
|---------------|------------------|-------------------|
| High          | 47               | 72.3              |
| Moderate      | 10               | 15.3              |

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|              |           |            |
|--------------|-----------|------------|
| Low          | 8         | 12.4       |
| <b>Total</b> | <b>65</b> | <b>100</b> |

Source: Research Data (2020)

The study noted that budgetary allocation had considerable effects in determining the prosperity of M&E activities as hinted by majority of respondents depicted in table 10. 12.4% reported low impact citing that too much budget resulted in competing forces and interests to incur M&E expenditures which could delay project outcomes.

*b.) Statements on Budgetary Allocation and its effects on M&E Performance*

Respondents were requested to indicate the extent they agreed with various statements concerning budgetary allocation on M&E activities. The results were tabulated as follows:

**Table 11: Statements on Budgetary Allocation**

| Statement  | Mean | Std. Dev |
|--|------|----------|
| Budget is adequate to sustain M&E activities (5-10% of overall project budget) | 2.16 | 0.611    |
| Budget is separate and independent from the overall project budget             | 4.28 | 0.459    |
| Budget is easily accessible whenever M&E activities arises                     | 3.93 | 0.477    |
| Timely disbursement of funds for M&E activities on need basis                  | 3.84 | 0.802    |
| Funds are prudently used for indented purpose                                  | 1.16 | 0.386    |

Source: Research Data (2020)

The study observed the County Government of Vihiga had a separate and independent budget allocation for M&E activities though it was insufficient to adequately cater for M&E programs. According to IFRC (2001), the standard budget for M&E activities should 5-10% of the overall project budget. M&E budget should not be too little to affect the credibility and accuracy of the outcomes.

The study noted the independency of budget provisions ensued ease accessibility and timely disbursement of funds. Respondents and key informants revealed that decisions are executed within the M&E unit to minimize delays in disbursement. The study also established that M&E funds were not used for indented purpose. Majority of respondents felt the provisions of the budget were misused and that funds were used to support activities outside M&E schedules. This was also the general group feeling from the beneficiaries.

Budget allocation is an important recipe for a successful M&E system and ought to be clear and adequate to sustain activities as planned. Therefore, it is crucial for M&E experts to critically evaluate the needs of a project at the design phase so as to ensure sufficient allocation and provision of funds for M&E tasks. Consequently, County Governments should design frameworks for accountability to ensure funds allocated for M&E are used for indented purposes.

**Technical Capacity and its effect on Monitoring and Evaluation**

*a.) Effect of Technical Capacity on M&E Performance*

Respondents indicated the level they felt technical capacity impacted on the performance of M&E activities.

**Table 12: Effect of Technical Capacity on M&E Performance**

| Impact       | Frequency | Percentage |
|--------------|-----------|------------|
| High         | 43        | 66         |
| Moderate     | 9         | 14         |
| Low          | 13        | 20         |
| <b>Total</b> | <b>65</b> | <b>100</b> |

Source: Researcher Data (2020)

Based on the findings in table 12, respondents hinted that technical capacity was relative to the success of M&E activities. However, 20% who felt contrary indicated that aspects such as trainings was a waste of Government resources as most staff concentrate on remuneration packages that came with such opportunities at the expense of gaining the needed expertise in M&E. Findings from the key informants revealed commitment to the training needs of M&E workforce of the County.

*b.) Statements on Technical Capacity and its effect on M&E Performance*

Respondents indicated the extent they agreed with various statements on Technical capacity and how they affected the performance of M&E project activities funded by the County Government of Vihiga:

**Table 13: Statements on Technical Capacity**

| Statement | Mean | Std. Dev |
|-----------|------|----------|
|-----------|------|----------|

|  |      |       |
|--|------|-------|
| Staffing is adequate to carry out M&E activities                                     | 3.89 | 1.104 |
| Trained and possess requisite skills in M&E  | 3.50 | 0.985 |
| Access to capacity development to gain insight in M&E trends and enhance their roles | 4.11 | 0.476 |
| Experienced in M&E practices   | 3.76 | 1.013 |
| Staff exhibit sufficient levels of accuracy and turnaround times                     | 3.01 | 1.317 |
| Highly motivated   | 2.03 | 1.462 |
| External influence in appointment of technical expertise                             | 1.27 | 1.251 |

Source: Research Data (2020)

From the findings in table 13, the County Government of Vihiga had adequate staff in the M&E unit to carry out activities without being run down by shortages in its workforce. Kent (2011) observed that the number of staff of an organization should be adequate in relation to the size, volume and territory under which a project is undertaken. The study noted that the workforce possessed requisite skills in M&E practices and were accessible to varied capacity development programs aimed at gaining insights on new trends in M&E. Venessa and Gala (2011) found out that technical capacity and expertise of staff involved in conducting M&E activities hugely impacted on the overall performance of M&E. Training needs enable staff acquire knowledge of the principles, methodology and tools applied in M&E. Gardner (2003) while supporting the need for project staff possessing relevant skills necessary for execution of M&E systems cites the case of UNDP who have ensured each of their Country office has a dedicated M&E specialist. Moreover, he notes that UNDP is involved in augmentation of their staff's skills level, through capacity development, when necessary to ensure current project needs are met. The study also observed the staff's ability to exhibit sufficient levels of accuracy and turnaround time in M&E reporting. According to Cambridge (2000), the effectiveness of M&E processes is deeply embedded in the staff working for it to deliver the services it offers in a timely and satisfactory manner.

However, motivational aspects of workforce cited by low incentives, promotions, delays in staff's salaries and limited environment for growth were depicted as greatest impediments to effective service delivery. Findings from focus group discussion faulted the County M&E workforce citing bribery and corruption. Beneficiaries revealed claims of extortions between contactors and M&E County workforce. Lowly motivated workforce tends to compromise work ethics and service delivery with diverse effects on project outcomes (Cambridge,2000).

**Technology Adoption and its effect on Monitoring and Evaluation**

The study sought to establish the impact of technology on performance of M&E activities of projects in Vihiga County.

*a.) Effect of Technology Adoption on M&E Performance*

Respondents were requested to indicate the impact levels as shown in table 14:

**Table 14 : Effect of Technology Adoption on M&E Performance**

| Impact       | Frequency | Percentage |
|--------------|-----------|------------|
| High         | 40        | 62         |
| Moderate     | 20        | 31         |
| Low          | 5         | 7          |
| <b>Total</b> | <b>65</b> | <b>100</b> |

Source: Research Data (2020)

Respondents reported that technology had a considerable impact on performance of M&E activities while 7% opposed citing complexity, privacy concerns and social disconnect that comes with such technology. Based on these findings, the study inferred that technology is key in facilitating the functions of M&E which range from collection of data, dissemination of information among other activities.

*b.) Statements on Technology Adoption and its effect on M&E Performance*

Participants reported the extent to which they felt technology had affected the performance of M&E activities in the County. According to the findings in table 15, respondents felt experience and literacy in technological applications had a direct effect on the prosperity of M&E activities. This was consistent with the findings obtained from focus group discussion that indicated majority of project players in the County had little experience and literacy in ICT usability. Additionally, security concern and privacy of M&E information is fundamental especially in guaranteeing confidentiality of data. Respondents felt technology enhanced information sharing hence scaling down on time and costs related to running M&E activities. It gives a digital promise of achieving better results and outcomes. Nurthe & Volkov (2006) in their policy on ICT observed that evolution of technology has changed how individuals learn, work, engage and recreate themselves. However, technology demands experience and capacity of using technological tools and approaches.

**Table 15: Statements on Technology Adoption**

| Statement   | Mean | Std. Dev |
|---|------|----------|
| Experience in technological application is critical           | 4.53 | 1.331    |
| Level of literacy is a basic determinant                      | 4.67 | 1.224    |
| Technology minimizes costs related to M&E activities          | 3.21 | 0.619    |
| Security and privacy of M&E information is guaranteed         | 4.32 | 1.411    |
| Technology has enhanced information sharing minimizing delays | 3.76 | 0.724    |

Source: Research Data (2020)

Internet connectivity and access to mobile networks makes it easy to collect and share information related to M&E and feedback sought real-time without delays leading to lesser operational costs. This finding is consistent to World Bank Report (2011) which hinted that associated technologies have enhanced collection of information, decreased costs and time taken to execute project activities, enhanced validity of data produced as well as increased utilization and absorption of reports. Therefore, the study can infer that technology has fundamentally influenced the way M&E functions are conducted in Vihiga County.

### **Monitoring and Evaluation Performance**

The researcher sought to understand how each of the independent variables determined the performance of M&E of project activities in the County. Respondents were requested to choose what they considered as the highest determinant with regard to performance of M&E systems and the findings were tabulated as shown in table 16.

**Table 16: Determinants of M&E Performance**

| Variable               | Frequency | Percentage |
|------------------------|-----------|------------|
| Stakeholder Engagement | 24        | 37         |
| Budgetary Allocation   | 16        | 25         |
| Technical capacity     | 13        | 20         |
| Technology             | 12        | 18         |
| <b>Total</b>           | <b>65</b> | <b>100</b> |

Source: Research Data (2020)

Research findings revealed that stakeholder engagement was the greatest determinant of M&E success followed by budgetary allocation, Technical capacity and technology in descending order.

### **Statements on Measures of M&E Performance**

Additionally, respondents reported on the measures of M&E performance of project activities in table 17:

**Table 17: Measures of M&E Performance**

| Statement  | Mean | Std. Dev |
|--|------|----------|
| Accuracy and quality of M&E reports achieved         | 2.23 | 1.305    |
| Objectives and targets are met as planned            | 2.08 | 1.133    |
| Timely feedback from M&E activities is achieved      | 2.24 | 0.978    |
| M&E activities are conducted on schedule             | 2.11 | 0.826    |
| Proper documentation of M&E information is achieved  | 1.12 | 1.100    |
| Traceable M&E progress                               | 2.85 | 0.944    |
| Cost effective budget (cost of M&E is within budget) | 1.98 | 0.882    |
| Stakeholder satisfaction is achieved                 | 2.64 | 1.114    |

Source: Research Data (2020)

The study noted inconsistencies in documentation, accuracy and quality of M&E reports impeded the performance of M&E project activities funded by County Government of Vihiga. Poorly coordinated feedback mechanism from field stations consequently caused delays in the synthesis of reports and scheduling of M&E activities. As a result, project objectives and outcomes were not met as designed during the preliminary stages. Untimely and uncoordinated responses intricately traceability of project progress at various stages of project execution leading to delays as hinted by majority of the respondents. Activities were insufficiently funded; some activities fell outside budget projections as stipulated in table 11 which alludes to imprudent use of M&E budget. Subsequently, the study noted dissatisfaction amongst stakeholders as captured in the findings of table 9 which notes that stakeholders' contributions on M&E processes were disregarded particularly on crucial decision making. These findings cumulatively had adverse effects on the overall performance of M&E project activities in Vihiga County.

**Challenges facing M&E Performance**

The study sought to establish prevailing barriers to the performance of M&E system in the County. Respondents views were solicited and findings tabulated in table 18:

**Table 18: Challenges Facing M&E performance**

| Statement   | Mean  | Std. Dev |
|---|-------|----------|
| Organizational culture                                  | 4.741 | 0.967    |
| Interference from the political class                   | 4.618 | 0.613    |
| Institutional guidelines on M&E                         | 4.642 | 0.507    |
| Lack of accountability on M&E performance and reporting | 3.992 | 1.004    |
| Unrealistic targets                                     | 3.843 | 0.938    |
| Corruption between contractors and M&E officers         | 4.101 | 0.812    |

Source: Research Data (2020)

The study learnt that proper accountability especially on M&E performance and reporting, setting of unrealistic targets and corruption between contractors and officers involved in the M&E activities were the greatest challenges affecting the performance of M&E systems. Additionally, interference from the political class, organizational culture and institutional guidelines on M&E were cited as other accessories of non performing M&E systems.

**Multiple Regression Analysis**

The study conducted multiple regression analysis to determine the relationship and effects of stakeholder engagement, budgetary allocation, technical capacity and technology on performance of M&E activities, results are presented in the model summary table 19:

**Table 19: Model Summary**

| Model | R    | R Square | Adjusted Square | R    | Std. Error of the Estimate |
|-------|------|----------|-----------------|------|----------------------------|
| 1     | .918 | 0.843    | 0.745           | .223 |                            |

Source: Research Data (2020)

In this computations, adjusted R squared is the coefficient of determination which informs the variation in M&E performance as a result of changes in variables namely stakeholder engagement, budgetary allocations, technical capacity and technology. From the results in table 19, the value of adjusted R squared was 0.745 indicating a variation of 74.5% on performance of M&E systems in Vihiga County. This implies that 74.5% variation change in the performance of M&E systems is attributable to stakeholder engagement, budgetary allocation, technical capacity and technology. The remaining 25.5% is unexplained and need further research to explore.

**Table 20: ANOVA Test**

| Model      | Sum of Squares | df | Mean Square | F     | Sig.              |
|------------|----------------|----|-------------|-------|-------------------|
| Regression | 6.587          | 4  | 1.646       | 7.731 | .001 <sup>b</sup> |
| Residual   | 8.51           | 40 | 0.212       |       |                   |
| Total      | 15.097         | 44 |             |       |                   |

Critical Value= 2.49

Source: Research Data (2020)

From ANOVA computations, the study established the regression model had a significance level (p-value) of 0.001 which is less than 0.05 an indication that data was ideal for making a conclusion on the population parameters. It also confirms strong relationships between independent variables and the dependent variable in this case M&E performance. Additionally, the calculated value(F) is greater than the critical value (7.731 > 2.49) an indication that independent variables namely stakeholder engagement, budgetary allocation, staff and technology all have a significant effect on M&E performance of projects funded by Vihiga County.

**Table 21: Regression Coefficients**

| Model                  | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|------------------------|-----------------------------|------------|---------------------------|-------|------|
|                        | β                           | Std. Error | Beta                      |       |      |
| (Constant)             | 1.642                       | 1.032      |                           | 1.592 | .001 |
| Stakeholder Engagement | .482                        | .107       | .204                      | 4.453 | .012 |
| Budgetary Allocation   | .422                        | .098       | .226                      | 4.341 | .003 |
| Staff                  | .415                        | .084       | .215                      | 4.893 | .002 |
| Technology             | .407                        | .112       | .250                      | 3.606 | .023 |



Source: Research Data (2020)

Based on the above data in table 20, regression equation can be deduced as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

After substitution;

$$Y = 1.642 + 0.482X_1 + 0.422X_2 + 0.415X_3 + 0.407X_4$$

From the regression equation, it's revealed that by holding all the independent variables at constant zero then M&E performance of projects funded by County government of Vihiga was 1.642. The findings also established that by holding all other independent variables at zero, a unit increase in stakeholder engagement would lead to an increase in M&E performance by 0.482. This implies a positive relationship between stakeholder engagement and M&E performance hence any increase in stakeholder engagement results in a corresponding increase in M&E performance and vice versa.

Additionally, by holding other independent variables at zero, a unit increase in budgetary allocation, technical capacity or technology would result in a positive increase in M&E performance by 0.422, 0.415 and 0.407 respectively implying a positive relationship between variables and M&E performance. Therefore, it's evident that any increase in independent variable would generate an increase in M&E performance of projects funded by the County Government of Vihiga and vice-versa. All variables had significant values less than 0.05, ( $p < 0.05$ ) implying existence of a positive relationship between independent and dependent variables was not by chance. The study noted that stakeholder engagement had the greatest effect on M&E performance of projects funded by County Government of Vihiga followed by budgetary allocation, staff and technology respectively.

### Correlation between Study Variables

The study conducted correlation analysis between M&E performance of projects funded by County Government of Vihiga and all the four independent variables namely stakeholder engagement, budgetary allocation, staff and technology. The results supported the ANOVA tests analysis as shown in table 22:

**Table 22: Correlation between Study Variables**

|                                | M&E Performance | Stakeholder Engagement | Budgetary Allocation | M&E Staff | Technology |
|--------------------------------|-----------------|------------------------|----------------------|-----------|------------|
| Pearson correlation            | 1               | 0.531                  | 0.448                | 0.317     | 0.296      |
| M&E Performance Sig. (2tailed) |                 | .001                   | .006                 | .003      | .009       |
| N                              | 65              | 65                     | 65                   | 65        | 65         |

Correlation is significant at the 0.05 level (2- tailed)

## V. CONCLUSIONS

The cross cutting deficiencies observed in the study variables as depicted by this study cumulatively had adverse and attributable effects on the contentious low M&E systems during project execution. This had fundamental impacts on the overall efficiency of projects consequently causing project failures and retarded outcomes.

The study has unique contributions to theory, practice and policy. First, it advocates for strengthening of existing accountability frameworks like the Public Finance Management Regulations and guidelines of 2015 (PFM 2015) to ensure prudent use of M&E funds and secondly, it emphasizes the critical role of stakeholders in the prosperity of M&E systems and the need to increase participation at all levels of decisions making and lastly, high investments in technological literacy to enhance usability and experiences in M&E technology approaches.

The study noted the substantial influence of stakeholder participation and its significance in the prosperity of M&E project systems and therefore recommends further research to explore aspects that would increase stakeholder participation in order to maximize on project outcomes.

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## AUTHORS

**First Author:** Atemo Dishon Opolu, BSc. Engineering (University of Nairobi), Postgraduate student of Monitoring & Evaluation (Mount Kenya University), Email: [atemodfo@gmail.com](mailto:atemodfo@gmail.com)

**Second Author:** Dr. Serah Kimaru- Muchai, PhD, Lecturer, Department of Social and Development Studies, Mount Kenya University, E-mail: [Swkimaru@mku.ac.ke](mailto:Swkimaru@mku.ac.ke)

**Corresponding Author:** Atemo Dishon Opolu, [atemodfo@gmail.com](mailto:atemodfo@gmail.com), Postal Address: 50601-00100, NAIROBI (KENYA), Tel: +254 20 2348203. Mobile: +254 7204120129