Monitoring and Evaluation Skills, Performance Contracting System and Organizational Performance in Government Ministries in Kenya

Dr. Jacob Nganga Kinyanjui, Prof. Christopher M. Gakuu and Prof. Harriet K. Kidombo

Abstract- This paper presents results of the influence of Monitoring and Evaluation (M&E) skills on the relationship between Performance Contracting (PC) system and organizational performance in government ministries in Kenya. Descriptive survey design and correlational research designs were used in a mixed methods research approach. Quantitative data was collected through a questionnaire while qualitative data was collected through an interview guide. Research instruments were pilot tested for validity through content related method and reliability through test-retest criterion. A sample size of 310 respondents was selected by use of Sekaran’s (2003) sampling size criterion from a population of 103,010 employees in government ministries through multi-stage sampling technique. Arithmetic mean and standard deviation were used for analyzing descriptive data while Pearson Product Moment Correlation (r) and Stepwise Regression (R²) analysis were used for analyzing inferential data. F-tests were used to test the hypothesis in the study. Tests of statistical assumptions were carried out before data analysis to avoid invalidation of statistical analysis. With R² = 0.14, F (3,177) = 9.588 at p < 0.05, the null hypothesis was rejected and it was concluded that the strength of the relationship between PC system and organizational performance depends on M&E skills. Monitoring and Evaluation skills, therefore, moderate the relationship between PC system and organizational performance in government ministries in Kenya. It is recommended that implementers of PC system in government ministries in Kenya should be equipped with M&E skills.

Index Terms- Monitoring and Evaluation, Performance Contracting System, Organizational Performance

I. BACKGROUND TO THE STUDY

Performance management systems have been introduced in public sectors by various governments to enhance performance (Cheung, 1997). The performance management system adopted in the public sector in Kenya is Performance Contracts (PCs). Performance Contracts were introduced in the public sector in Kenya in 2003 as tools for monitoring and evaluating performance to hold officials in public service accountable for delegated authority. Nuguti (2009) suggests that the PC system in Kenya compares favourably with the Monitoring and Evaluation (M&E) system advanced by Kusek and Rist (2004).

While many scholars such as Kusek and Rist (2004), Crawford and Bryce (2003), Joley (2003), Mohan (2001) and Marsh and David (1999) argue that M&E skills are essential requirements for organizational performance, previous literature reviewed has not examined the moderating role played by M&E skills on the relationship between a performance management system and organizational performance. The purpose of this paper, therefore, is to examine the moderating influence of M&E skills on the relationship between PC system and organizational performance in government ministries in Kenya. Findings from this study are expected to help policy makers in government ministries in Kenya to enhance performance in the public sector through critical evaluation and implementation of the role played by M&E in the PC system.

The research objective of this paper is to establish the extent to which M&E skills influence the relationship between PC system and organizational performance in government ministries in Kenya. The research question in this paper is: To what extent do M&E skills influence the relationship between PC system and organizational performance in government ministries in Kenya? The hypothesis that was formulated and tested is:

H₀: The strength of the relationship between PC system and organizational performance does not depend on M&E skills.

H₁: The strength of the relationship between PC system and organizational performance depends on M&E skills.

II. LITERATURE REVIEW

This study is grounded on Results Theory. This is because studies such as Hatry (2006) and Nuguti (2009) suggest that Performance Contracts are monitoring and evaluation (M&E) tools designed for measuring organizational results. In addition, Nuguti (2009) indicates that the tools that were designed in the PC system in Kenya complied in many aspects with the M&E system proposed by Kusek and Rist (2004). The M&E system proposed by Kusek and Rist (2004) is also grounded on Results Technology. Further, Dobbin (2012) portrays Results Technology as a participatory management approach which is the grounding principle of PCs. Derived from Results Theory, Eltville Results Model illustrates attainment of results in three levels whereby attainment of third level results (outputs) leads to attainment of second level results (objectives) which in turn lead to the ultimate project result (project goal) (Balogun, 2008).

Although Rapp et al. (2013) studied the influence of time management skill on the curvilinear relationship between organizational citizenship behavior (OCB) and task performance, type of M&E skills and level of M&E skills as indicators of implementers’ M&E skills and the role of M&E skills on the relationship between PC system and organizational performance were not examined. While Sylvia (2008) attempted to bridge the gap in M&E on organizational performance, the study did not
examine the moderating influence of M&E skills on the relationship between PC system and organizational performance. Since results from matching survey data collected from 212 employees and 41 supervisors and from task performance metrics collected several months later in the study carried out by Rapp et al. (2013) indicated that the curvilinear association between OCB and task performance is significantly moderated by employees' time management skill; the study can be enriched by testing the moderating influence of M&E skills on the relationship between a performance management system and organizational performance.

Similarly, while clear measurement of multidimensional constructs such as managerial performance and technical skills is essential, limitations in the work carried out by Sylvia (2008) which include self-selection bias and availability of objective technical skills measures can be minimized by developing component-based measures of these constructs. In particular, the said knowledge gaps have been eliminated in the current study by identifying the type of M&E skills and level of M&E skills as indicators of M&E skills among PC implementers.

III. RESEARCH METHODOLOGY

Descriptive survey design and correlational research design were used. The choice of these two research designs was informed by the descriptive and inferential data analysis required in this study. While descriptive survey helped the researcher to describe phenomena, correlational research design helped the researcher to identify predictive relationships by using correlations and stepwise regression modelling. Mixed mode research approach was used. By use of mixed mode research approach, qualitative and quantitative data analyses were carried out simultaneously in a cross-sectional manner. This means that descriptive, inferential and qualitative data analysis were carried out in the study with the research freedom to make use of both descriptive and inferential data analysis techniques as advanced by pragmatism research paradigm, the philosophy that guided this study.

The research population was 103,010 public service employees in the 18 Government Ministries in Kenya (GOK, 2013) who are employed on permanent terms basis and are involved in performance contracts. Multi-stage sampling technique was used because the research context comprised government ministries which are large and complex organizations in respect to departmentalization. Huber (2004) argues that multi-stage sampling technique would be the most preferred sampling technique for large organizations with various departments in research situations whereby it is desired every sub-population to be presented in the sample.

At the first stage of the sampling procedure, 50% of the government ministries were selected. In selecting 50% of the government ministries, the 18 ministries were arranged alphabetically and every even number ministry was selected for study. The 9 selected ministries formed the research sub-population. At the second stage of the sampling procedure, departments (research categories) were randomly selected for study from the ministries (sub-populations). For ministries with less than 30 departments, only one department was selected at random. For ministries with more than 30 departments, 2 departments were selected at random. In total, therefore, 10 departments were selected.

At the third and last stage of the sampling procedure, individual respondents were randomly sampled from the selected 10 departments. This is because by selecting respondents from each strata (research category) in the research population, the sample was more representative. For acquisition of the qualitative data, the ten departmental heads for the selected departments were interviewed. The sample size was 310 respondents. Three hundred (300) of the respondents were selected from ordinary employees while 10 of the respondents were heads of the selected departments. In the determination of the sample size, Sekaran’s (2003) criterion on selection of sample size was considered.

Secondary data was used to acquire information on the performances of the ministries of government. This information was obtained from previous evaluation reports carried out as well as the performance contracting documents. Raw data was gathered directly from the respondents and was used to analyze the relationships that were being investigated in the study. To obtain sufficient information, triangulation of research instruments was done. The research instruments that were used in this study for data collection were a self-administered structured questionnaire and an interview guide. A self-administered structured questionnaire was used to collect the quantitative strands while the interview guide was used to collect the qualitative strands of the research.

Reliability of research instruments was done through test-retest method using Cronbach. In the pilot test, the composite Cronbach’s Ω (Alpha) Reliability Coefficient for the research instrument was 0.705222. This method involved administering the same test twice to the same group after a time interval of two weeks between the first and the second administration of the research instruments. The test re-test criterion was selected because the respondents were expected to understand the significance of the research and were, therefore, expected to willingly fill the questionnaires for the second time. In addition, ministries of government in Kenya, being public entities, were easily accessible and hence the practicality of re-testing the research instruments.

While collecting data from heads of the selected departments from the 9 ministries of government under study, interviews were conducted by the researcher. Data collection from the ordinary employees in government ministries was done with the aid of nine research assistants trained in research; each assigned one ministry to enhance the rate of return of questionnaires.

Mixed methods data analysis techniques were employed in this study incorporating both descriptive and inferential data analysis. Non-parametric data was analyzed descriptively by use of measures of central tendency and measures of dispersion as the tools of data analysis. The arithmetic mean was the measure of central tendency statistical tool that was used for data analysis while the standard deviation was the measure of dispersion statistical tool of data analysis that was used. In data analysis, measures of central tendency are used when the set of data values are finite and the data is expected to cluster around some central value (Weisberg, 1992).

To analyze the influence of the moderating variable on the relationship between the independent variable and the dependent
variable, Stepwise Regression ($R^2$) analysis was used. Larry (2013) indicates that Stepwise Regression ($R^2$) involves mathematical modeling whereby the predictor variables are deliberately chosen without necessary being backed by theory. Although literature has been cited in this study on the influence of M&E skills on the dependent variable, no previous literature has been identified that directly indicates the influence of the moderating variable on the relationship between the main predictor variable and the dependent variable. Since the influence of the moderating variable on the relationship between the main predictor variable and the dependent variable was deliberately chosen in this study, then the requirement for the use of Stepwise Regression ($R^2$) for parametric data analysis was satisfied. The regression model that guided the inferential analysis in this study was:

$$\text{Organizational Performance} = f(\text{PC System, Organizational Structure})$$

$$y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_{14}X_1X_4 + \beta_{24}X_2X_4 + \beta_{34}X_3X_4 + \epsilon$$

Where

- $y$ - Organizational Performance
- $X_1$ - PC Targets
- $X_2$ - PC Tools
- $X_3$ - PC Implementer Participation
- $X_4$ - M&E Skills
- $\beta_0, \beta_1, \beta_2, \beta_3, \ldots$ - Beta Values
- $\epsilon$ - Error Term

Although various tests are used to test hypotheses for Stepwise Regression ($R^2$), Moriya (2008) argues that in practice, F-Tests are the most commonly used to test confidence intervals and hypotheses. If for a given sample, $F(r)$ is the Fisher transformation of $r$, and $n$ is the sample size, then $F(r)$ approximately follows a normal distribution given the assumption that the sample pairs are independent and identically distributed and follow a bivariate normal distribution. Thus an approximate $r$-value can be obtained from a normal probability table. For a large enough sample where $n > 30$ as was the case in this study, then $F$-values can be obtained using Fisher transformation and the hypotheses tested normally by use of F-Tests (Moriya, 2008). In stepwise regression modelling, if the moderating variable under consideration was excluded from the final regression model, $H_0$ was accepted. Where $H_0$ was rejected, $R^2$ values were considered in determination of the strength of the relationship.

IV. FINDINGS

Out of the 300 questionnaires that were administered, 184 questionnaires were duly filled and returned and, therefore, regarded as the responsive instruments, and, formed the basis for data analysis. This formed a response rate of 61.3%. Forty two percent (42.1%) of the respondents were females while 57.9% were males and they were normally distributed in respect to government ministries, age group, level of education and tenure of service in public service. Kolmogorov-Smirnov test statistic (KS-test) and Shapiro-Wilk test (SW-test) were carried out to ascertain that the research data was collected from a normal population.

Existence of singularity and multicollinearity between predictor variables were also checked before undertaking regression analysis through correlations and residual tables generated by SPSS by analyzing the tolerance values under collinearity to ensure that the linear assumptions were not violated. Scatter diagrams were plotted prior to undertaking correlation analysis among the independent variables to check existence of homoscedasticity while existence of heteroscedasticity was checked through the correlation and residual tables generated by SPSS that were used to test for existence of collinearity.

Type I error was minimized by using a confidence level of 95% implying that the standard variate was 1.96 and the sample proportion ($p$) was less than or equal to 0.05 while Type II error was minimized by taking a large enough sample of 310 respondents. The weighting criteria of responses of Likert-type data assumed an equidistance of 0.8 whereby Strongly Disagree (SD) $1 < SD < 1.8$; Disagree (D) $1.8 < D < 2.6$; Neutral (N) $2.6 < N < 3.4$; Agree (A) $3.4 < A < 4.2$, and Strongly Agree (SA) $4.2 < SA < 5.0$.

Theoretical literature links M&E skills with organizational performance. Empirical review indicates that M&E skills influence organizational performance. Ten items were developed to measure the extent of this relationship. In the descriptive analysis, the composite mean score for these items was $3.7115$ while the composite standard deviation was $0.56682$. This result indicates that respondents agreed that M&E skills positively influenced the relationship between the PC system and organizational performance.

To analyze inferential data, stepwise multiple regressions were used. The regression results for the moderating influence of
M&E skills on the relationship between PC system and organizational performance are presented in Table 1.

Table 1: Regression Results for the Influence of Implementer M&E Skills on the Relationship between PC System and Organizational Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>r</th>
<th>R^2</th>
<th>Adjusted R^2</th>
<th>F</th>
<th>Beta</th>
<th>Predictor Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.268a</td>
<td>.072</td>
<td>.067</td>
<td>13.841</td>
<td>3.007</td>
<td>Constant Term</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.234</td>
<td>M&amp;E Skills</td>
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<tr>
<td>2</td>
<td>.331b</td>
<td>.110</td>
<td>.100</td>
<td>10.973</td>
<td>3.007</td>
<td>Constant Term</td>
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<td></td>
<td></td>
<td></td>
<td>1.042</td>
<td>M&amp;E Skills</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.199</td>
<td>(PC Targets + M&amp;E Skills)</td>
</tr>
<tr>
<td>3</td>
<td>.374c</td>
<td>.140</td>
<td>.125</td>
<td>9.588</td>
<td>2.527</td>
<td>Constant Term</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>1.288</td>
<td>M&amp;E Skills</td>
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<td>-.278</td>
<td>(PC Targets + M&amp;E Skills)</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>.145</td>
<td>PC Tools</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant); X4
b. Predictors: (Constant); X4; X1X4
c. Predictors: (Constant); X4; X1X4; X3
Model 1: F(1,179) = 13.841 at p < 0.05 level of significance
Model 2: F(2,178) = 10.973 at p < 0.05 level of significance
Model 3: F(3,177) = 9.588 at p < 0.05 level of significance

Since the components of PC system are PC targets, PC tools, and implementer participation; stepwise multiple regressions were performed to determine the best linear combination of PC targets, PC tools, PC implementer participation and implementer monitoring and evaluation (M&E) skills for predicting organizational performance.

At the first step in stepwise regression modelling; PC targets, PC tools and PC implementer participation were excluded leaving implementer M&E skills as the only predictor variable of organizational performance. By substituting the beta values as well as the constant term, model 1 emanating from step one in regression modelling is as follows:

\[ y = 3.007 + 0.234X_4 \]

Based on the beta values of model 1, it can be argued that implementer M&E skills \((X_4)\) contribute to 23.4% of the model. Since \(F(1,179) = 13.841\) at \(p < 0.05\) level of significance, it can 95% confidently be concluded that implementer M&E skills predict organizational performance \((y)\). The \(R^2\) values of the model indicate that implementer M&E skills explain 7.2% of organizational performance. Although implementer M&E skills are identified as predictors of organizational performance; at 7.2%, they are weak predictors at the first step in the regression modelling.

At the second step of stepwise regression modelling in this research objective; PC tools and PC implementer participation were excluded in stepwise modelling leaving implementer M&E skills; a combination of PC targets and M&E skills as the predictor variables of organizational performance. By substituting the beta values as well as the constant term, model 2 emanating from the second step in regression modelling is as follows:

\[ y = 3.007 + 1.042X_4 - 0.199X_1X_4 \]

Based on the beta values of model 2, it can be argued that implementer M&E skills \((X_4)\) contribute to 104.2% of the model while PC targets negatively influence organizational performance by 19.9% in the model. Since \(F(2,178) = 10.973\) at \(p < 0.05\) level of significance; it can 95% confidently be concluded that the interaction between M&E skills \((X_4)\) and PC targets \((X_1)\) negatively influence organizational performance \((y)\) at this step of the regression modelling. The \(R^2\) values of the model indicate the combination of implementer M&E skills and PC targets explain 11.0% of organizational performance.

At the third and final step of stepwise regression modelling in this research objective; implementer participation was excluded in stepwise modelling leaving implementer M&E skills; a combination of PC targets and M&E skills; and PC tools as the predictor variables of organizational performance. By substituting the beta values as well as the constant term, model 3 emanating from the third step in regression modelling is as follows:

\[ y = 2.527 + 0.145X_2 + 1.288X_4 - 0.278X_1X_4 \]

Based on the beta values of model 3, it can be concluded that implementer M&E skills \((X_4)\) contribute to 128.8% of the model while PC tools contribute to 14.5% of the model. The interaction between M&E skills and PC targets negatively influence organizational performance by 27.8% in the model. Since \(F(2,177) = 9.588\) at \(p < 0.05\) level of significance; it can 95% confidently be concluded that the interaction between M&E skills \((X_4)\) and PC targets \((X_1)\) negatively influence organizational performance \((y)\). Since model 3 is the last step in stepwise regression modelling, the \(R^2\) values of the model
indicate that the interaction between implementer M&E skills and PC system explain 14.0% of organizational performance.

Therefore, it can be concluded that, implementer M&E skills moderate the relationship between PC system and organizational performance. The null hypothesis is, therefore, rejected and it is concluded that the strength of the relationship between performance contracting system and organizational performance depends on implementer M&E skills. The implication of these findings in the context of Government Ministries in Kenya is that organizational performance is influenced by the type and level of implementers’ M&E skills. Therefore, for Ministries of Government in Kenya to enhance performance, implementers of the PC system need to be equipped with M&E skills.

Although descriptive statistics indicate that respondents had monitoring and evaluation skills, interviews conducted indicate respondents were inadequately equipped with Monitoring and Evaluation (M&E) skills for continual improvement of the PC system. For instance, although descriptive statistics indicated that respondents were neutral on whether Government Ministries had an Integrated Performance Management System (IPMS), interviews conducted indicate that there is no IPMS implementer in Government Ministries. That descriptive statistics indicate that implementers were neutral on whether IPMS existed in Government Ministries suggests that PC implementers may not have been knowledgeable on Integrated Performance Management System. Another possibility for the findings from the descriptive statistics is that respondents did not want to look ignorant in as far as monitoring and evaluation skills were concerned. This is because interviews conducted indicated that respondents did not have most of the skills required in performance measurement like development of clearly stated performance indicators, conducting and writing evaluation reports and generation of performance based quarterly reports based on objectively verifiable indicators.

V. DISCUSSIONS OF FINDINGS

The research objective in this study is to determine the extent to which implementer Monitoring and Evaluation (M&E) skills influence the relationship between performance contracting system and organizational performance in government ministries in Kenya. The PC system implemented in government ministries in Kenya is regarded in the current study as a monitoring and evaluation system. Studies carried out by Nuguti (2009) indicate that the PC system in Kenya compares favourably with the monitoring and evaluation (M&E) system proposed by Kusek and Rist (2004). Ability to identify and develop performance indicators, conduct and write evaluation reports and generate quarterly reports based on objectively verifiable indicators are pointers of M&E skills. Marsh and David (1999) indicate that ability to undertake performance evaluation, develop performance indicators, undertake project appraisals, produce quarterly reports, develop work breakdown structures and develop M&E frameworks are indicators of M&E skills.

Research hypothesis in this study is, therefore, developed to test whether the strength of the relationship between performance contracting system and organizational performance depend on implementer M&E skills. This hypothesis was formulated because although other studies link M&E skills with organizational performance in a performance management system, no previous study was found that examine the moderating role played by implementer M&E skills on the relationship between a performance management system and organizational performance. Findings from this study indicate that M&E skills moderate the relationship between performance contracting system and organizational performance in government ministries in Kenya. This implies that despite having an effective performance management system in the form of PC system, implementer M&E skills were required to achieve desired organizational performance.

Descriptive statistics indicate that respondents had the requisite M&E skills needed for effective implementation of the PC system. However, interviews conducted indicate that respondents did not have the necessary M&E skills required at their performance level of operation in respect to implementation of the PC system. For instance, at the lowest level of management, unit/section heads, respondents are expected to be in position to identify and develop objectively verifiable indicators and produce quarterly reports. At higher levels of management, departmental heads, respondents are expected to be in position to conduct performance evaluations and produce commensurate reports. For the M&E units in Ministries, respondents, being the M&E specialists, are expected to be in position to develop integrated M&E systems.

Without the required M&E skills for performance measurement, even though government ministries may outsource the services of external consultants, it will be difficult to objectively appraise reports submitted or systems implemented through outsourcing. Interviews conducted indicate that there is hardly any formal M&E training undertaken by M&E experts in government ministries, and, even most of the implementers charged with the specialized responsibility of the M&E units had not undertaken comprehensive M&E training at University level standards, but rather, they had a few days or weeks of rushed trainings through seminars. There is, therefore, need for government ministries to equip PC implementers with comprehensive M&E skills to enhance organizational performance.

VI. CONCLUSIONS

The research objective in this study is to determine the extent to which implementer monitoring and evaluation (M&E) skills influence the relationship between performance contracting system and organizational performance in government ministries in Kenya. The indicators of M&E skills are the type of M&E skills and level of M&E skills. The indicators for organizational performance are the rate of customer satisfaction, rate of employee satisfaction and level of participation in corporate social responsibilities. Regression modelling indicates that M&E skills moderate the relationship between performance contracting system and organizational performance.

It is, therefore, concluded that M&E skills significantly influence the relationship between performance contracting system and organizational performance in government ministries in Kenya. Based on the descriptive findings, it is concluded that an integrated performance management system across all Ministries should be developed to enhance organizational
performance. In addition, it is concluded that all employees in government ministries should be trained on M&E skills geared towards equipping employees with skills to develop performance indicators, performance evaluation, performance personal work breakdown structures, project appraisals and generation of quarterly reports.

VII. RECOMMENDATIONS

It is recommended that PC implementers in government ministries in Kenya should be trained with relevant M&E skills. Specifically, PC implementers should be equipped with skills to develop performance indicators, development of work breakdown structures, development of M&E systems, conducting project evaluations and production of evaluation reports.

It is also recommended that practical M&E skills be incorporated in University lecturing. This implies that besides teaching students on monitoring and evaluation, learners should be exposed to industrial attachments where M&E is practiced to acquire practical skills that will equip and prepare them to effectively implement the PC system in government ministries.

In addition, it is recommended that policies be enacted to ensure that implementers of the PC system in government ministries in Kenya are skilled in M&E. As such, policies should be enacted to ensure that public officials deployed in the M&E units in government ministries have the requisite M&E skills and are continually enhancing their skills through regular trainings and publications as well as participating in professional conferences. This will enhance organizational performance in government ministries in Kenya.

REFERENCES


AUTHORS

First Author – Dr. Jacob Nganga Kinyanjui
Second Author – Prof. Christopher M. Gakuu
Third Author – Prof. Harriet K. Kidombo