2022, vol. 9, issue 1, 107-119

RESEARCH ARTICLE https://doi.org/10.5281/zenodo.6794748

Factors Affecting the Use of Performance Information for Decision-Making

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Abstract

The use of performance information is central to the realization of performance management outcomes; consequently, it is useful to learn what factors influence the use of performance information in the process of performance management. This study aimed at investigation of the influence of participation in performance target setting, performance indicator quality, performance information processing capacity, and training on the use of performance information in the decision-making in the public sector organizations. The research bases on primary data collected from randomly selected 184 respondents from public organizations. The result of regression analysis indicates training on performance management, performance information processing capacity and the performance indicator quality positively influences performance information use, but the influence of participation in target setting on the use of performance information was not statistically significant. The finding indicates the connections among the components of performance management process and highlights policy options that can enhance the use of performance information.

Keywords: Performance Management, Use of Performance Information, Performance Target, Performance Indicator, Performance Information Processing Capacity, Training on Performance Management

1 Introduction

The use of performance information is central to the performance management process. In the context of administrative reforms, a focus on performance management has been an important trend and public managers are required to use performance information in decision-making (Allegrini et al., 2021). Indeed, Van Dooren et al. (2015) define performance management as a type of management that incorporates and uses performance information for decision-making. In result-oriented performance management, performance information is purposefully used to achieve and demonstrate measurable progress toward agency and program goals (Wholey, 1999).

Since performance management is a key aspect of public administration and management (Muriu, 2017), it is practically useful to explore how organizations set goals, measure performance, and use performance information in decision making (Hodgkinson et al., 2017). Some earlier studies reported strong correlation between performance management and organizational performance while others reported existence of only a weak positive correlation of performance management with organizational performance. However, certain performance management techniques generate larger positive effects, such as the use of performance information (Han & Moynihan, 2022).

There are plausible reasons to assume that the managerial use of performance information improves outcomes. It contributes to setting clear, challenging but feasible goals that guide and inform

decision-making (Han & Moynihan, 2022). However, Kloot and Martin (2000) indicate, the literature on performance management disproportionately focuses on measurement. The focus of the researches is on the organizational routines in performance measurement, as revealed by Liu and Dooren (2013) despite the fact that the relevance of performance measurement highly depends on the use of performance information. Moynihan (2005) correctly states, 'if performance data is not actively used, the intended effects of the performance management system are unlikely to be realized'. Moreover, Moynihan and Pandey (2010) argue performance information serves managers as an instrument of management control and mechanism to improve the organizational performance. For this reason, Liu and Dooren (2013) suggest for practitioners, to pay more attention to daily performance information use, which plays a vital role in organizational performance improvement, organizational behavior modification, and organizational cultural construction. As use of performance information is critical for organizations, it suggests that the performance management researches should focus both on performance measurement as well as on performance information use.

Despite its key role, the use of performance information is the most challenging aspect of performance management. With this regard, Saxena (2013) argues organizations in many countries collect and submit information to a higher level, but such information is not used for taking corrective and remedial action or for analysis. Similarly, a study by Mboera et al. (2021) indicates that poor data utilization was common in public sector organizations in developing countries. Though public organizations increasingly produce performance information, they often put little effort to use performance information (Grøn & Kristiansen 2022). Likewise, a study by Mboera et al. (2021) indicate that data is collected for reporting purposes, and there is minimal utilization of the information to inform decisions. One of the most persisting critiques on performance management has been that performance management is rhetoric and disconnected from reality. Sometimes, performance information can also be used for symbolic reasons, to be seen as modern and sometimes measurement becomes a goal in itself (Van Dooren et al., 2015).

Moynihan (2008) remarks government leaders have scarcely considered the question of how to foster better information use. Besides, Moynihan and Pandey (2010) argue that it is difficult to make clear which factor contributes more to the use of performance information. Consequently, Taylor (2011) recommends a research on the factors influencing use of information obtained from performance measurement by taking evidences from diverse countries. Moreover, Liu and Dooren (2013) observed that performance measurement research even ignored defining the use of performance information in public organizations. It is clear that using performance information is central in the performance management and therefore, researchers must identify factors affecting use of performance information. Thus, it is useful to learn what factors influence the use of performance information.

This study aimed at investigation of the factors that determine the use of performance information for decision-making in the performance management process of public organizations. Specifically it assumes elements of performance management positively affect the degree of use of performance information in decision-making. The contribution of the current research to performance management literature is pointing out how to enhance the use of information obtained from performance measurement in public organizations by identifying the components of performance management that have link with use of performance information. The next subsection presents the review of literature that focuses on the use of performance measurement information and factors affecting performance measurement information based on which the stud formulated hypotheses. Following hypotheses formulation, the paper describes the measurement of concepts, data used and methods applied; analyze the data and discusses major findings. The final section of the paper concludes the major findings of the study and indicates the way for further research.

2 Use of Performance Measurement Information

Performance information reporting is the immediate output of performance management, and it is useful for evidence-based decisions. Performance information is information that shows the progress toward achieving organizational goals. Performance information can focus on performance metrics such as quality, timeliness, customer satisfaction, or efficiency. The purpose of using performance information is to improve management decisions, program outcomes, delivery of public services, and public confidence in government (Wholey & Newcomer, 1997; Heinrich, 2002; Pidd, 2005; De Lancer, 2006). Bird et al. (2003) identify three reasons for measuring performance; these are to establish what works, to identify functional competencies, and to support accountability. Henri (2004) on his part identifies five different uses of performance information; these are decision-making, control, signaling, education and learning, and external communication. Similarly, Sorber (1996) distinguishes four functions of performance measurement; which are providing early warning on developments especially output and outcome, improving the allocation of resources, improving the efficiency and effectiveness of production and policy processes, and improving accountability, especially in the case of contract management. The current research assesses the factor for use of performance information for management decisions such as setting program priorities, allocating resources, or identifying program problems and taking corrective action to solve those problems.

Making use of performance information is an important criterion of result-oriented performance management. Moynihan (2008) indicates management-by-objective, strategic management, performance budgeting, managing for results, results-based management share a common logic that public organizations should produce performance information and use this information to inform decision-making. According to Kamensky and Fountain (2008), the fundamentals of result-oriented performance management system include among others performance review, feedback and use of performance information. Performance review is conducted regularly for determining the level of goal achievement. The resulting performance information is used to modify strategies or activities that improve the achievement of results. Performance information is vital to link all organizational activities with the organization-wide goal. Similarly, in result-oriented performance management budget is directly linked to the goals of the program. As indicated in the research by Bhattarai (2020), a result-oriented approach is characterized by a need for information and a capacity to collect, process and analyze this information over time and a mechanism by which policy, planning and decision-making can be influenced by performance information.

Wholey (1999) identified criteria for implementation of result-oriented performance management, which are all related to using performance information. Accordingly, one of the criteria is using performance information to achieve effective performance in terms of agreed-on agency or program goals (e.g., creating intangible or tangible incentives for improved program performance, reallocating resources to improve performance, redirecting program activities to improve performance). The other criterion of implementation of result-oriented performance management is accountability, which is ensured by using performance information to document the extent of progress toward agency or program goals and to communicate the value of agency or program activities to key stakeholders and the public. Likewise, Binnendijk (2000) argues the key use of performance information is for performance reporting and accountability. As described by Day and Klein (1987), the information inherent in performance indicators is the lifeblood of accountability. Furthermore, in the result-oriented performance management system, performance information is used to demonstrate the achievement of agency or program goals and performance information supports resource allocation or other policy decisions.

In a results-oriented management system, performance information is not collected for its own sake, but for continuous feedback into management, learning and decision-making processes that will further improve projects and programs and accelerate the achievement of results. The principles of best practice in the result-oriented approach include measuring sensibly and developing user-friendly information systems, using performance information for learning and managing, as well as for reporting and accountability, and building an adaptive regime through regular review and update

(Knox, 2019). Performance measurement provides information that helps managers to make appropriate decisions almost in all management functions. Van Dooren et al. (2015) identified 42 different uses of performance information, from which the only ultimate purpose of performance measurement is indeed to improve performance. As such, all the remaining uses of performance information such as learning, reward and accountability are intermediate objectives of performance management. They are simply means for achieving this ultimate purpose of performance management (Behn, 2003).

3 Performance Management and the Use of Performance Information

The daunting challenge that remains in performance management is the difficulty to make performance measurement work in a broader context (Gao, 2015). As performance report is often not verified or collected through independent sources, organizations are prone to reporting inflated data and render monitoring be ineffective. Public officials are thus able to escape from any sense of accountability (Saxena, 2013). In modern society, there is no lack of information, but there may be a shortage of time and the capacity to find relevant information. Organizations should design effective information-processing systems to help decision-makers to select useful information (Allegrini et al., 2021).

Allegrini et al. (2021) distinguish factors that influence performance information as environmental, organizational context and individual characteristics. Furthermore, they argued that organizational variables have the most significant influence on the use of performance information in decision-making by public managers. This indicates that performance information use is influenced by the other elements of the performance management process. Moreover, Fasiello et al. (2022) find that the factors of quantifiable objectives and employee training increase the likelihood of report on service delivery outcomes. Moreover, Fryer et. al. (2009) assume none use of performance information may arise due to problems with data, specifically quality, choice of indicators, collection, organization, interpretation, validation, reporting, usage, analysis and interpretation of data.

Based on the structural approach to organizational learning theory, Taylor (2011) argues routines of performance measurement invariably be followed by routines of performance information use for decision-making. He concludes that the quality of an agency's performance measurement system is significantly related to its officials' use of performance information for decision-making. Furthermore, Taylor (2011) notes that if an agency establishes a close link between its goals and performance information, sets high but realistic performance targets, and undertakes regular performance audits on its performance information, then it is likely to yield a significant impact on the agency's decision-making process. Furthermore, a review of factors of performance information by Moynihan and Pandey (2010) indicates the presence of basic bureaucratic competence and expertise in performance management is associated with the use of performance information. Similarly, the inclusion of organizational members in performance management processes is positively associated with performance information use. Involvement factors describe how multiple stakeholders including the employees interact with the performance management process (Suppa & Webb, 2016).

Ammons and Rivenbark (2008) find that the quality of performance data matters for performance information use. Likewise, Taylor (2011) argues that the higher the quality of a performance information system, the more likely the information derived from this system will be used to make decisions. Furthermore, a research finding by Taylor (2011) shows the organizational performance information system, and the officials' attitudes on the impact of performance information were individually significantly related to the use of performance information for decision-making. It is because how things are viewed and understood holds more salience than the accuracy of claims. The more the participants perceive that performance measurement would benefit their agency, the more likely they would integrate the performance information into the decision making process.

In developing countries, public sector organizations poorly utilize performance information due to lack of data management skills, inadequate supervision and feedback, inadequate resources, and inadequate capacity building, lack of training, low motivation combined with lack of incentives and tools (Mboera et al., (2021). As the concluding remark from the research findings discussed above, this study remarks the components of performance management process influence the use of performance information. Thus, this research developed the following hypotheses.

1. Participation in setting performance targets positively influences the extent to which organizations use performance information for decision-making.
2. The performance indicators quality of organization significantly influences the extent to which organizations use performance information for decision-making.
3. The provision of training on performance management positively influences the extent to which organizations use performance information for decision-making.
4. Performance information processing capacity determines the extent to which organizations use performance information for decision-making.
5.

4 Data and Methods

The independent variables are elements of performance management that comprise performance target setting, performance indicator quality, performance information processing capacity, and training on performance management. Participation in performance target was measured by the extent of employees' participation in target setting, negotiation between top management and organizational unit in performance target setting, and communication of performance targets to enable employees to clearly understand performance targets of their work units. Likewise, performance indicator quality is an index derived from three variables: trustworthiness of results from performance measurement, the accuracy of performance measurement in reflecting the quality of management, and reliability of performance indicators. The third factor is performance information processing capacity, which refers to easy accessibility of performance information to the stakeholders, availability of the performance information in a usable format, availability of analytical tools for collecting, analyzing, and using performance information, and availability of capable manpower to analyze performance information. Lastly, provision of training for accomplishing performance management tasks refers to organization's dedication to provide, to arrange or pay for training that would improve accomplishment of the performance management tasks.

The dependent variable is performance information use, which refers to the extent to which organizations use the information obtained from performance measurement in decisions. Performance information is useful in decisions related to developing organizational plan, budgeting, changing work process, identifying performance problems, taking corrective actions to solve low performance problem, setting or revising performance goals, and refining performance measure. Many authors consider the use of performance information by public managers as a multidimensional construct (Allegrini et al., 2021).

This study employed a multi-stage sampling technique to collect perceptual data through questionnaire survey. Considering the Ethiopian federal government structure, the study involved one organization each from the Federal Government, from two national regional states and one City administration. The sample was randomly drawn from each organization independently. In order to overcome the chance of occurrence of sample bias in surveying informants from only one organizational level, the study included in the survey employees at the rank of three levels: director, team leaders and experts. The composite values for every organization were derived from the mean score of respondents, which together can represent their organizations. The Cochran formula was used to determine sample size, as it is capable of giving a mathematical solution to the problem of determining sample size. Accordingly, the appropriate sample size was 208 respondents, from which 184 questionnaires were filled and returned, making response rate 88 percent.

This research followed the steps necessary to ensure the reliability of the measurement of concepts. The questionnaire was carefully prepared, reviewed and tested using pilot questionnaires before the final survey to ensure content validity. Moreover, the survey items associated with each construct were developed after an extensive review of the literatures. After the data collection instrument was developed the reliability of the constructs were tested using coefficients of Cronbach's Alpha. In situations where research involves several constructs, Kassahun (2012) recommends calculating Cronbach's Alpha for each construct separately. Accordingly, the Cronbach's Alpha for each construct was computed and the result shows the Cronbach's Alpha values range between 0.79 and 0.95. The Cronbach's Alpha values meet the criterion of $\alpha \geq 0.7$ and attested the reliability of the measurement.

Table 1: Reliability Statistics

Variables	Cronbach's Alpha	No. of Items
Target setting	.793	6
Performance Indicator quality	.907	3
Performance information processing capacity	.887	4
Provision of Training on Performance Management	.928	6
Use of Performance Information for decision making	.936	7

Source: reliability test on pilot survey 2020

Construct validity refers to the extent to which the measurement score reflects the latent construct to be measured (Sujati & Akhyar, 2020). According to Hair et al. (2006), construct validity is ensured where a set of variables represents the theoretical latent construct that is being measured. Igbaria et al., (1997) demonstrate that a variable is good if the latent variable shows the factor loading of ≥ 0.50. In addition to the loadings above 0.5 on one construct, Zhang, and Xiang (2019) suggest cross-loadings less than 0.5. As there is seldom a perfect measure of a concept, these study measures each latent variable using more than one survey item to improve the "goodness" of the measurement scale (see Table 1). The several survey items were combined into a single index for the analysis of data pertaining to each construct. Such an overall index would provide a better measurement tool than a single indicator (Kothari, 2004). This research combined scores on several items to represent one construct (so-called latent variables); consequently, factor analysis was found important to provide evidence that the items truly represent the same construct.

As a step to test assumptions of factor analysis, multicollinearity and singularity were checked via the determinant of the correlation matrix and by using Bartlett's test of Sphericity respectively. The test results indicated Bartlett's test of Sphericity was significant (Sig. 0.000) for each factor analysis model, which means that the correlation matrix is not an identity matrix in each model. Multi-collinearity was tested via the determinant of the correlation matrix, which is greater than 0.00001 in each case as indicated in Table 2. The KMO values that range between 0.738 and 0.897 confirm the adequacy of the sample size to perform factor analysis. In each model, Bartlett's test of Sphericity was significant (<.001), which suggests the data are normally distributed.

Table 2. Summarized Results of Factor Analysis Assumption Tests

Construct	No. of items	Determinant	KMO	Bartlett's test of Sphericity Sig.
Target setting	6	.085	.800	.000
Performance indicator Quality	3	.191	.738	.000
Performance information processing capacity	4	.113	.820	.000
Training on performance management	6	.005	.879	.000

Extent of use of Performance information	7	.003	.885	.000

As the requirement for identifying the number of factors stated by selected variables, we applied the Guttman-Kaiser rule of thumb, which suggests retaining only those factors with an eigenvalue larger than 1. Applying this rule, the Factor Analysis on each model extracted one factor. The factor analysis indicated six variables represent target setting, three variables represent performance indicator quality, four variables represent performance information processing capacity, six variables represent training on performance management and seven variables represent the extent of performance information use. In each case, the loadings of each variable on a factor were greater than 0.5, which fulfilled the thresholds suggested by (Igbaria et al., 1997; Zhang, and Xiang, 2019). The value of factor loading for each variable was above 0.50 with no cross loading, which implies the satisfaction of construct validity of the measurement.

5 Results

The descriptive statistics show only two variables: participative target setting and degree of use of performance information were rated above the midpoint (greater than 3 in scale ranges from 1 t0 5); indicating that performance indicator quality, training and capacity were unimpressive. The correlation matrix shows each independent variable had a positive linear relationship with the extent of use of performance information and the associations are statistically significant at a significance level of 0.01. The Pearson Correlation coefficients were 0.596 for provision of training, 0.502 for performance indicators quality, 0.468 for participative target setting, and 0.603 for performance information processing capacity, with Sig. 0.00 for all correlations. The Pearson Correlation test shows the relationships between each of the independent variables and the dependent variable were positive and moderately strong. The Sig. values 0.00 indicate the relationships were statistically significant, at 0.01 level.

Table 3 Descriptive Statistics and Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Degree of use of performance information	3.0144	.89286	178
Participative target setting	3.0693	.86187	178
Performance indicators quality	2.8020	.81158	178
Performance information processing capacity	2.9031	.90359	178
Provision of training for accomplishing performance management	2.8221	.93421	178

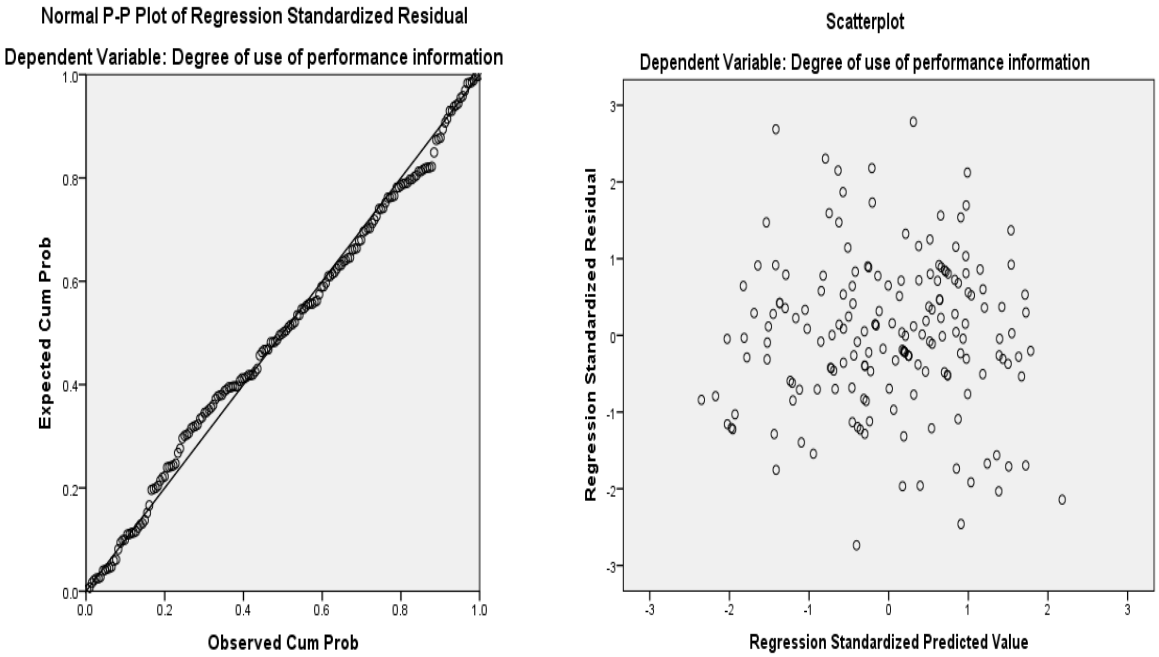
Correlations

		1	2	3	4	5
Pearson Correlation	Degree of use of performance information	1.00				
	Participative target setting	.468	1.00			
	Performance indicators quality	.502	.554	1.00		
	Performance information processing capacity	.603	.579	.600	1.00	
	Provision of training for accomplishing performance management	.596	.465	.419	.511	1.00
Sig. (1-tailed)	Degree of use of performance information	.	.000	.000	.000	.000
	Participative target setting	.000	.	.000	.000	.000
	Performance indicators quality	.000	.000	.	.000	.000
	Performance information processing capacity	.000	.000	.000	.	.000
	Provision of training for accomplishing performance management	.000	.000	.000	.000	.

Diagnosis of Regression Assumptions

Regression analysis was conducted to determine how significant the influence of four factors in affecting performance information use. The fulfillments of regression assumptions were checked to assure that the results from the regression analysis are valid. The diagnosis of data verifies the linearity in the relationships between the predictors and the outcome variable, homogeneity of variance (homoscedasticity), independence, model specification, and absence of multicollinearity assumptions. The data examination verifies the absence of significant outliers, high leverage points, or highly influential points.

The dependent variable in the regression model is measured on a continuous measurement scale. The existence of a linear relationship between the dependent variable and each of the independent variables, and between the



dependent variable and the independent variables collectively were checked by creating scatter plots and partial regression plots using SPSS Statistics, and then these scatter plots and partial regression plots were visually inspected. The bivariate plot of the predicted value against residuals appears that the relationship of standardized predicted to residuals is roughly linear around zero.

Homoscedasticity was checked using a scatter plot. As shown in the scatter plot, the residual plots are centered around zero, and also that the variance around zero is scattered uniformly and randomly. Since the error variances are constant, it is concluded that the Homoscedasticity assumption is satisfied. In order to make valid inferences from regression, the residuals of the regression should follow a normal distribution, which was checked using a normal Predicted Probability (P-P) plot. The normal P-P Plot indicates the errors are normally distributed.

As the degree of multicollinearity increases, the coefficient estimates become unstable and the standard errors for the coefficients can get wildly inflated. The regression coefficients table shows under the Collinearity Statistics column, 'Tolerance' and 'VIF'. The tolerance is an indication of the percent of the variance in the independent variable that cannot be accounted for by the other independent variables; whereas, very small tolerance values indicate redundancy of an independent variable as a factor of the dependent variable. More specifically, tolerance values less than 0.10 are considered worrisome. The VIF, which stands for variance inflation factor, is (1/tolerance) and as a rule of thumb, a variable whose VIF value is greater than 10 is problematic. Multicollinearity was checked in two ways: correlation coefficients and variance inflation factor (VIF) values. Correlation Coefficients between each pair were below 0.80 and variance inflation factors (VIF) were below 10.00.

The regression coefficient table shows, the highest VIF value is 1.958 and the smallest tolerance value is 0.511, both of which show the satisfaction of multicollinearity assumption in the regression model.

The independence of observations was checked by using the Durbin-Watson statistic. If there is no autocorrelation (where subsequent observations are related) and observations are independent, the Durbin-Watson statistic falls between 1.5 and 2.5 (Karadimitriou et al., 2018). In the current case, the Durbin-Watson statistic was 2.076 (see model summary table). Since the Durbin-Watson statistic falls exactly within the range between 1.5 and 2.5, we concluded, the data is not auto correlated and observations are independent.

The Goodness of Model Fit

The model summary table shows the values of R, R Square, and adjusted R Square. R is a measure of the correlation between the observed value and the predicted value of the dependent variable, whereas R Square is the square of this measure of correlation and indicates the proportion of the variance of the degree of use of performance information with the changes of the independent variables. In this regression model, the value of R is 0.701, which implies a strong correlation between the observed value and the predicted value of the use of performance information. The value of R square was 0.492, which implies 49.2 percent of the degree of use of performance information is explained by factors included in the model and the remaining 50.8 percent variation in the degree of use of performance information is due to factors other than those in the model. The small difference between the R square and the adjusted R square shows the low random variation of the dependent variable as the independent variables change. The model summary indicates how good prediction of the degree of use of performance information can be made, by knowing the independent variables. The researchers certainly assumes the regression model well predicts the degree of use of performance information as the model explains 49.2 percent of changes in the degree of use of performance information.

Table 4 Regression Model Summary, ANOVA and Coefficients

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.701[a]	.492	.480	.64371	2.076

a. Predictors: (Constant), Provision of Training for accomplishing performance management, Performance Indicators Quality, Participative Target Setting, Performance information processing capacity

b. Dependent Variable: Degree of use of performance information

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.420	4	17.355	41.883	.000[b]
	Residual	71.686	173	.414		
	Total	141.106	177			

a. Dependent Variable: Degree of use of performance information

b. Predictors: (Constant), Provision of Training for accomplishing performance management, Performance Indicators Quality, Participative Target Setting, Performance information processing capacity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.585	.208		2.816	.005		
	Participative Target Setting	.044	.074	.043	.594	.553	.573	1.744
	Performance Indicators Quality	.156	.079	.142	1.982	.049	.571	1.752
	Performance information processing capacity	.307	.075	.310	4.091	.000	.511	1.958
	Provision of Training for accomplishing performance management	.342	.062	.358	5.490	.000	.689	1.451

a. Dependent Variable: Degree of use of performance information

Regression Test

The F-ratio and sig. in the ANOVA table describe whether the result of this regression model could have occurred by chance. As shown in the ANOVA table, the Sig value 0.00 is less than $\alpha = 0.05$; which implies the independent variables reliably predict the dependent variable. In other words, the change in the use of performance information as with changes in the independent variables is not due to random chance. Hence, the researchers can be confident that the regression model adopted in this study has not occurred by chance and is considered highly significant. Moreover, from this ANOVA test result, we can infer that at least some explanatory variables have an impact on the degree of use of performance information for decision-making.

The inferences drawn based on information provided in the ANOVA table is an overall significance test assessing whether the participative target setting, performance indicator quality, performance information processing capacity and provision of training on performance management together reliably predict the degree of use of performance information. However, the ANOVA table does not address the ability of any of the particular independent variables to predict the degree of use of performance information. Therefore, it is important to interpret the coefficient table that shows the ability of each independent variable to predict the degree of use of performance information.

The coefficient table lists the individual variables and indicates which of the four explanatory variables have a significant influence on the degree of use of performance information for decision-making. Sig. values objectively determine whether the independent variable is significant to explain the dependent variable or not. The Sig values greater than $\alpha = 0.05$ indicates the variable is not significant in explaining the dependent variable, while the independent variables with a p-value less than 0.05 significantly explain the dependent variable. In line with this rule, the coefficient table of the regression analysis indicates participative target setting did not significantly explain the degree of use of performance information as Sig value 0.553 is greater than $\alpha = 0.05$. It implies that the participation of employees in target setting, negotiation between top management and work units on targets, and communicating targets to create a clear understanding is not statistically significant in explaining the degree of performance information use. Except participative target setting, all the rest independent variables explain the degree of use of performance information; since their Coefficients have p-values less than alpha ($\alpha = 0.05$) are statistically significant. The Sig value 0.049 for Performance Indicators Quality, Sig 0.000 for Performance information processing capacity, and Sig 0.000 for Provision of training for accomplishing performance management are less than $\alpha = 0.05$, implying these variables explain the degree of use of performance information significantly.

The information in column B in the coefficient table indicates the extent to which the dependent variable varies for a unit change of the given independent variable. Accordingly, for a one unit increase in Performance Indicators Quality, the degree of use of performance information increases by 15.6 points, keeping other factors constant. Likewise, for one unit increase in Performance information processing capacity, the degree of use of performance information increases by 30.7 points and for one unit increase in Provision of training for accomplishing performance management, the degree of use of performance information increases by 34.2 points, keeping other factors constant. Standardized Coefficient put all of the variables on the same scale so that we can compare the magnitude of the coefficients of the independent variables to see which one has more effect on the dependent variable. The larger Betas are associated with the larger t-values and larger effect. From the comparison of Beta coefficients of the model, it is seen that Provision of training for accomplishing performance management has the highest effect on the use of performance information for decision-making followed by Performance information processing capacity and Performance indicators quality. The inferences drawn from this regression analysis revealed that organizations can increase the use of performance information for decision making, primarily by facilitating the provision of training on performance management to employees and secondly by improving performance information processing capacity, and lastly by improving the performance indicator quality.

6 Discussions, Conclusions and the Way Forward

This study revealed employees participate in setting performance targets of their work units to a moderate extent. Moreover, the finding of this study revealed the majority of respondents disagreed with the trustworthiness, reliability and accuracy of performance measures of public sector organizations, implying that the quality of performance indicators of organizations was not convincing. The descriptive statistics also revealed the existence of gaps in Performance information processing capacity, which was indicated by low accessibility of performance information to stakeholders, low availability of performance information in a format easy to use, and the lack of sufficient analytical tools to collect, analyze, and use performance information. The data analysis illustrated the inadequacy of attention given to the provision of performance management training has constrained capacity to conduct strategic plans, to set program performance goals, to develop program performance measures, to assess the quality of performance data, to use performance information in decision-making, and to link the performance of work process to the achievement of organizational strategic goals. The descriptive analysis indicated organizations use performance information to a moderate extent for developing the organizational plan, identifying performance problems, budgeting, adopting new approaches or changing work processes, refining performance measures and in setting new goals or revising existing performance goals and to take corrective action to solve low performance problems.

This paper hypothesizes participation in performance target setting, performance indicator quality, performance information processing capacity, and provision of training on performance management positively affect the extent to which the organizations use performance information in decision making. The result from the regression analysis conformed all the independent variables together reliably predict the degree of use of performance information. Furthermore, the coefficients of regression analysis indicated the individual relationship of performance indicator quality, performance information processing capacity, and provision of training on performance management with the use of performance information in decision-making is statically significant. In other words, except participative target setting, all the rest independent variables explain the degree of use of performance information.

The study supports previous research (such as Mboera et al., 2021) that concludes finds linkage of performance information use with the performance management components such as data management skills, inadequate supervision and feedback, inadequate capacity, lack of training, combined with lack of incentives and tools. Lack of staff with core competence in data management

and analysis is one of the core weaknesses identified to affect use performance information several studies (Mboera et al., 2021).

This study concluded the public sector organizations had limitations in using performance information for decision-making. The regression analysis result suggests that organizations can increase the use of performance information, by facilitating the provision of training on performance management to employees, improving performance information processing capacity, and improving the performance indicator quality. This research contributes to the literature by showing the relationships between performance management components, taking the public sector organizations in developing country as a case. However, the factors included in the regression model explain only 0.49 percent variation in performance information use, there is an avenue for further research on other factors that may have a link with the extent of use of performance information.

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