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UTILIZATION OF DATA MANAGEMENT AND PERFORMANCE OF MICROFINANCE INSTITUTIONS FUNDING ENTREPRENEURIAL PROJECTS KISUMU COUNTY, KENYA.

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Abstract

Data management is the development and execution of architecture, policies, practices and procedures in order to manage the information lifecycle needs of microfinance institutions funding entrepreneurial projects in an effective manner. The aim of the study was to provide evidence on processes relative to respective targets and outcomes. Descriptive survey research design was adopted and pragmatism paradigm. All the ten Central bank licensed microfinance institutions funding entrepreneurial projects in Kisumu County Kenya, were targeted. A total of 354 respondents derived from managers, Heads of departments and entrepreneurs of microfinance institutions were selected for the study. Quantitative and qualitative data was collected using questionnaires and interview guide after pilot testing of the instruments. Data was analyzed using descriptive statistics to describe the indicators of data management and use and their influence on performance of microfinance institutions in Kisumu County. The study found a strong positive relationship (R = .643; p = 0.000<0.05) and concluded that there exists a significant relationship between Data management and performance of Microfinance Institutions.

Keywords: Microfinance Institutions funding entrepreneurial projects, data management.

Onsarigo et al

Introduction

Data management is the development and execution of architectures, policies, Practices and procedures in order to manage the information lifecycle needs of microfinance institutions funding entrepreneurial projects in an effective manner. Data management according to Margret Rous (1940) is the effective advancement and enactment of policies, practices, architectures and procedures so as to preside over the lifecycle information requirements of an enterprise. USA and UK have used Monitoring and Evaluation system for the accountability purposes, however, the extent to which the indicators are well developed will determine the quality of the data management system in place. The resulting system, could serve as an indicator that exhibits progress towards the stipulated objectives. The system output reports could provide a wide range of measuring what happens versus what was designed in terms of quality, quantity and timeliness. Indicators can be either qualitative or quantitative variables which supply an easy and reliable basis for determining accomplishments, changes or performance (Igbo, 2006). In developing countries, utilization of monitoring and evaluation systems have been slow and varied. (World Bank, 2004; Vos, 2006); Lahey, 2005). Designers are not sure what to do to speculate whether to build on the existing work or introduce a dislodge in policies and programs targeting specific indicators to provide information that programme management and stakeholders could use for various purposes including data management (WorldBank,2004; UNESCO, 2007). Therefore, there is need to examine institutional capacity in MFIs funding entrepreneurial projects.

Data management and performance of microfinance Institutions funding entrepreneurial projects

Microfinance institutions around the world embrace and maintain extensive amounts of important business data which range from basic client information to detailed analyses of portfolio statistics. This data must be reserved, processed and clearly presented so that the managers and board members are able to make sound decisions. A sound system should act as an avenue through which raw data could be transferred into useful information. As noted by Lahey (2005), data management systems require technical knowledge in developing credible and relevant information gathering systems, which could enhance skills for data analysis and reporting.

A study carried out by Abdelkrim et al,(2011) on Using context to improve the Evaluation of Information Retrieval systems, which was purely experimental, was conducted on 24 students from the university. They were each assigned 4 topics and instructed to choose 5 questions which were submitted to different engines under study. The study identified limits and shortcomings encountered during the research process three classes of problems were defined as; the absence of user during evaluation, relevance judgment and limits related to the corpus of documents and questions. This confirms Lahey (2005) concern that Monitoring and Evaluation systems require credible and relevant information gathering systems and skills regarding programme performance. The study however does not explain the massive user preference for particular search engines like Google and yahoo which have equal performance.

Effective utilization of technology can reduce costs, increase outreach and improve

Onsarigo et al

efficiency, although, many Microfinance Institutions funding entrepreneurial projects still find it challenging to tackle the imminent potential while avoiding the pitfalls. Many Institutions lack Monitoring and Evaluation systems and the management is not involved in collecting data that could be reported to the ministry. Some managers even provide information which is exaggerated or is either skewed on the performance of microfinance institutions. This is due to lack of skills in Monitoring and Evaluation and some deficiency in ethical principles (GoK,2012a; Lahey,2005).It is apparent that there exist empirical studies which have directly determined the relationship between data management and Microfinance institutions funding entrepreneurial projects service delivery.

For any institution struggling with specific data inconsistencies emerging from sub-reporting, it is challenging to explain how these inconsistences could be resolved. Effective data management According to HRSA (2006) plays a fundamental role in enhancing the performance of an organization's health care system. The Collection, analysis, interpretation of data for specific performance measures allows various healthcare professionals to identify the shortfalls in order to correct, make adjustments and even track the outcomes. Henderson et al (1996) affirms that, a well guided and objective data processing system is vital not only in depositing or withdrawing information but, is also useful in communicating electronic data either among individual or networked computers. This will facilitate the processing electronic data for safe electronic storage within the organization. Such measures should be adhered to by the Microfinance institutions funding entrepreneurial projects.

A good backup system according to Creighton (2001), applies appropriate software configured to store data. There is need however to operate a pre-backup check, before running the actual backup schedule. In doing so, any faults which may have been detected could be remedied. According to the UNESCO (2013), the report on the use of technology in microfinance states that Chief Executive Officer(CEO) and senior managers, all staff of Microfinance institutions funding entrepreneurial projects depend so much on timely acquisition of information to enable them make appropriate decisions or to benefit the business. Selection and implementation of a sound backup office system, could present relevant information for processing its management information.

It is the mandate of Microfinance institutions' funding entrepreneurial projects business to establishing systems on performance indicators which is closely associated with the government success of Monitoring and Evaluation systems in Austria, USA and UK that focuses on a broader suite of Monitoring and Evaluation tools and methods, UNESCO (2013). Monitoring and Evaluation systems in developing countries are constrained by generic challenges which include weak indicator framework, under-funding, understaffing and limited utilization of Monitoring and Evaluation information to support decision making. On the contrary, strong Monitoring and Evaluation systems in microfinance institutions funding entrepreneurial projects programs should be developed through participatory approaches and be funded adequately with a clear system for information use. In Kenya, the effectiveness of M&E systems in microfinance institutions is affected by the same generic issues (GoK, 2012a).

Onsarigo et al

Studies conducted in Swaziland, Manual 2 Rome (2007) reported some of the spotted talents may be seen in stakeholders of microfinance institutions funding entrepreneurial projects but, not necessarily in all of them. They further stated that, skills such as progressive data analysis, organizing focus group discussion, qualitative signals setting are very scanty amidst microfinance institutions funding entrepreneurial projects. Gilliam *et al.* (2006), contemplates that this leads to shortage of worthwhile data contributing to decision making on projects to be made on the basis of intuition instead of solid data.

The success of any microfinance institution funding entrepreneurial project relies on the potential of the managers who have obligations to make informed decisions and take appropriate action in time (Ricks, 2006). It is upon the management to monitor and evaluate, plan properly; the procedures in implementation, analyze data received from monitoring and evaluation systems, draw a list of preferences for action to sort out effects, get understanding from stakeholders on what should be done and mandated on action to take, circulate modifications and arrangements with the other stakeholders, implement endeavors to amend the situation, monitor and evaluate the methods of implementation for meaningful change (Merrified *et al.,* 2012). The above procedures translate to effectiveness in the utilization of monitoring and evaluation systems and institution capacity. However, World Bank (2008) states that, in Sub-Saharan Countries, the role of administrators in microfinance institutions funding entrepreneurial projects, is to provide a conducive surrounding for working which entails all provisions relating to service delivery processes.

Methodology of the study

The study adopted pragmatism paradigm and descriptive survey design. A sample of 318 respondents were selected for the study including 36 managers,144 heads of departments and 174 entrepreneurs from all the licensed microfinance institutions funding entrepreneurial projects in Kisumu county, Kenya. The instruments used were two well-structured questionnaires for heads of departments and microfinance entrepreneurs and an interview guide for the managers. The instruments were pilot tested to check their validity and reliability, before being used.

Data Analysis Techniques

Both qualitative and quantitative data approaches were applied in the procedures of analyzing and interpreting data. Quantitative data involving closed ended data was coded, entered, cleaned, transformed, analyzed and interpreted (Obure, 2002). Statistical Package for Social Science (SPSS) Programme was adopted to run analyses to provide frequency distributions, percentages and measure central tendency where applicable. Qualitative data was analyzed using Constant comparison analysis to identify underlying themes presented through the data (Leech, 2002 & Onwuegbuzie, 2007). The data generated through the questionnaires and interview guide were edited to detect errors and omissions and to correct this if possible. The data was labeled with a descriptive title or a code. Similar coding was done to the other data, assigning numerical or other symbols to ensure the data is put into a limited number of categories or classes.

Onsarigo et al

Questionnaire Return Rate

Out of the 354 questionnaires administered to the participants (entrepreneurs and HODs) from the ten MFIs funding entrepreneurial projects, licensed by Central Bank to operate within Kisumu County. 354 questionnaires were dully filled giving a return rate of 100%. The high rate was attained because the researcher visited all the sampled respondents during data collection and administered the instruments to each respondent in person. The high return rate of 100% facilitated collection of sufficient data that could be generalized to determine the influence of M&E systems and performance of MFIs funding entrepreneurial projects in Kisumu County. The Questionnaire return rate was considered adequate as per Saunders (2003) and Gay (2003) who claim that a Questionnaire return rate that is beyond 50% is acceptable in research. Similarly, Mugenda and Mugenda (2003) and Kothari (2004) recommend that a questionnaire return rate of more than 50% to be satisfactory and should be adopted for the purpose of collecting sufficient data that could be generalized to represent opinions of participants about the study problem in the target population. Table 1,1 shows the Questionnaire Return Rate for the participants (entrepreneurs, HODs and managers) from the ten MFIs funding entrepreneurial projects licensed to operate within Kisumu County.

Table 1.1: Response Rate

Category	Sampled	Returned	Return Rate%
HODs	144	144	100.0
Entrepreneurs	174	174	100.0
Managers	36	36	100.0
Total	**354**	**354**	**100.0**

The findings from Table 1.1 imply that the study achieved 100%. The high rate was attained because researcher visited all the sampled respondents during data collection and administered the instruments to each respondent in person. This encouraged respondents to fill and return questionnaires.

Findings

The study sought to examine the relationship between utilization of Data Management and Performance of MFIs funding entrepreneurial projects. Pearson correlation coefficient was used to test the relationship between Data Management and Performance of MFIs funding entrepreneurial projects, this was done at 95% level of confidence. The correlations results obtained are shown in Table 1.2

Onsarigo et al

Table 1.2: Correlations of Utilization of Data Management and Performance of MFIs funding entrepreneurial projects; (n=318); *Correlation is significant at 0.05 level (2-tailed)

Data Management statements		Performance in funding Entrepreneurial Projects
1. Data is collected frequently in my organization	Pearson correlation	0.341^{*}
	sig. (2-tailed)	0.000
	n	318
2. Collected data is utilized to make decisions	Pearson correlation	0.396^{*}
	sig. (2-tailed)	0.000
	n	318
3. Data collected is availed to everyone	Pearson correlation	0.362^{*}
	sig. (2-tailed)	0.000
	n	318
4. Reports on data collection are disseminated regularly	Pearson correlation	0.441^{*}
	sig. (2-tailed)	0.000
	n	318
5. There is adequate facilities and equipment for M&E data backup systems	Pearson correlation	0.360^{*}
	sig. (2-tailed)	0.000
	n	318
6. My organization has put in place data storage gadgets	Pearson correlation	0.412^{*}
	sig. (2-tailed)	0.000
	n	318
7. M&E Data management gadgets are regularly serviced	Pearson correlation	0.353^{*}
	sig. (2-tailed)	0.000
	n	318
8. M&E Data management gadgets are updated regularly	Pearson correlation	0.358^{*}
	sig. (2-tailed)	0.000
	n	318
9. M&E Data generated is used to make periodic reports for making decisions	Pearson correlation	0.430^{*}
	sig. (2-tailed)	0.000
	n	318
10. There are established M&E systems for sharing data in my organization	Pearson correlation	0.410^{*}
	sig. (2-tailed)	0.000
	n	318
Data Management (overall correlation)	**Pearson correlation**	$\mathbf{0.643^{*}}$
	Sig.(2-tailed)	**0.000**
	n	**318**

To test the extent of the relationship between Data Management and Performance of MFIs funding entrepreneurial projects; several characteristics of Data Management and Performance of MFIs funding entrepreneurial projects were analyzed based on the following hypothesis; There was no significant relationship between utilization of Data Management and Performance of MFIs funding entrepreneurial projects. The

Onsarigo et al

corresponding mathematical model for the hypothesis was identified as follows: Performance of MFIs funding entrepreneurial projects = f (Data Management). The correlation results presented in Table 4.21 indicated that all the P-values under significant 2-tailed were found to be significant since the P-values <0.05. Data is collected frequently in my organization (Statement 1;r=0.341, P-value=0.000<0.05), Collected data was utilized to make decisions (Statement 2;r=0.396, P-value=0.000<0.05), Data collected was availed to everyone (Statement 3;r=0.362, P-value=0.000<0.05), Reports on data collection are disseminated regularly (Statement 4;r=0.441, P-value=0.000<0.05), There was adequate facilities and equipment for M&E data backup systems (Statement 5;r=0.360, P-value=0.000<0.05), My organization has put in place data storage gadgets (Statement 6;r=0.412, P-value=0.000<0.05), M&E Data management gadgets are regularly serviced (Statement 7; r=0.353, P-value=0.000<0.05), M&E Data management gadgets are updated regularly (Statement 8;r=0.358, P-value=0.000<0.05), M&E Data generated is used to make periodic reports for making decisions (Statement 9;r=0.430, P-value=0.000<0.05) and There are established M&E systems for sharing data in organization (Statement 10; r=0.410, P-value=0.000<0.05). Similarly the overall correlation coefficient for M&E Communication and Performance of MFIs funding entrepreneurial projects was found to be 0.643 with a P-value of 0.000 < 0.05,implying that there was a significant relationship between Data Management and Performance of MFIs funding entrepreneurial projects leading to rejection of the null hypothesis, There was no significant relationship between utilization of Data Management and Performance of MFIs funding entrepreneurial projects) and acceptance of the alternative hypothesis, and hence the research findings conclude that there was a significant relationship between utilization of Data Management and Performance of MFIs funding entrepreneurial projects.

Regression Analysis of Utilization of Data Management on Performance of MFIs funding entrepreneurial projects

Simple linear regression was adopted to investigate how Utilization of Data Management influence the Performance of MFIs funding entrepreneurial projects. It was necessary to get the views of the participants on the influence of Utilization of Data Management on the Performance of MFIs funding entrepreneurial projects. The rational of using the simple regression model was to establish how Data Management as a predictor significantly or insignificantly predicted the Performance of MFIs funding entrepreneurial projects.

Model Summary of utilization of Data Management and Performance of MFIs funding entrepreneurial projects

The model summary sought to establish how Data Management as a predictor significantly or insignificantly predicted performance of MFIs funding entrepreneurial projects. The regression model summary is presented in Table 1.3

Onsarigo et al

Table 1.3: Regression Model Summary table of Utilization of Data Management and Performance of MFIs funding entrepreneurial projects

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.643[a]	0.414	0.412	0.47131

a. Predictors: (Constant), Data Management

The model summary table suggest that there is a positive correlation(R=0.643) between Routine Program Monitoring and the Performance of MFIs funding entrepreneurial projects and those predicted by the regression model. In addition, 41.4% of the variation in the Performance of MFIs funding entrepreneurial projects was explained by Data Management.

ANOVA of Regression of Data Management and Performance of MFIs funding entrepreneurial projects

The study sought to establish if the regression model is best fit for predicting Performance of MFIs funding entrepreneurial projects after use of Data Management. The regression ANOVA output statistics results are shown in Table 1.4

Table 1.4: An ANOVA of the Regression of Utilization of Data Management and Performance of MFIs funding entrepreneurial projects

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.493	1	49.493	222.804	0.000[b]
	Residual		316			
		70.195		0.222		
	Total	119.688	317			

a. Dependent Variable: Performance of MFIs funding entrepreneurial projects

b. Predictors: (Constant), Data Management

The ANOVA results indicated that (F-statistics (1,316) =222.804 is significant at P value 0.000< 0.05 implying that the predictor co-efficient is at least not equal to zero and hence the regression model results in significantly better prediction of Performance of MFIs funding entrepreneurial projects.

Coefficient for Regression of M&E Data Management and Performance of MFIs funding entrepreneurial projects

The study sought to establish whether there was influence of utilization of Data Management on Performance of MFIs funding entrepreneurial projects. The regression coefficients results are presented in Table 1.5

Onsarigo et al

Table 1.5: **Coefficients for the Regression of Utilization of Data Management and Performance of MFIs funding entrepreneurial projects**

Coefficients[a] Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.657	0.125		13.236	0.000
	Data Management	0.502	0.034	0.643	14.927	0.000

The simple linear regression coefficients result indicated that there was significant influence of utilization of Data Management on Performance of MFIs funding entrepreneurial projects. The coefficient of the constant term (β_0 = 1.657; P-value= 0.000< 0.05) and Data Management (β_1 = 0.502; P-value= 0.000< 0.05) were statistically significant. The regression model for Routine Program Monitoring was y=1.657 + 0.502X_3 implying that for each unit of Data Management, Performance of MFIs funding entrepreneurial projects marginally changed by 0.502-unit S. It was therefore concluded that Utilization of Data Management and Performance of MFIs funding entrepreneurial projects were positively and linearly related.

Conclusion

The composite mean and composite deviation for Data Management were 3.65 and 0.863 respectively; implying that using the Likert scale, the respondents agreed that of Data Management Influence Performance of MFIs funding Entrepreneurial projects. The overall correlation coefficient for Data Management and Performance of MFIs funding Entrepreneurial projects was established to be 0.643 with a p-value of 0.000 < α=0.05 implying that from the views of participants in the study the results indicated that there was a significant relationship between Data Management and Performance of MFIs funding Entrepreneurial projects leading to rejection of the null hypothesis, there was no significant relationship between Data Management and Performance of MFIs funding Entrepreneurial projects) and acceptance of the alternative hypothesis. The ANOVA results from the study participants views indicated that the regression model for Data Management results in significantly better prediction of Performance of MFIs funding Entrepreneurial projects'(1,316)=22.804 and *p-value*=0.00<0.05). The simple linear regression coefficients result indicated that the test of $\beta_{3=}$0.502 (coefficient of Data Management) statistics revealed that there was sufficient evidence that Data Management was linearly related to Performance of MFIs funding Entrepreneurial projects (Value of test statistics: t=14.927; *p-value* =0.000). The research objective was to determine the extent to which Data Management influence performance of MFIs funding entrepreneurial projects. The simple linear regression coefficients as well as the Pearson correlation results implied that there was a significant influence of Data Management on performance of MFIs funding entrepreneurial projects.; contributing to rejection of the null

Onsarigo et al

hypothesis that there was no significance influence of Data Management on performance of MFIs funding entrepreneurial projects and so it was concluded that there was significance influence of Data Management on performance of MFIs funding entrepreneurial projects. The study deduced that most of the MFIs funding entrepreneurial projects had M&E systems for sharing data among different departments in the organization. Data management gadgets were regularly serviced and updated and that M&E Data generated was used to make periodic reports for making decisions.

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Onsarigo et al