EFFECTS OF MONITORING AND EVALUATION SYSTEMS ON MANAGERIAL DECISION-MAKING AMONG NON-GOVERNMENTAL ORGANIZATIONS IN NAIROBI COUNTY, KENYA

BY

ROHIN OTIENO ONYANGO

MDSNRB614518

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ROHIN OTIENO ONYANGO
MDSNRB614518

A dissertation submitted in partial fulfillment of the requirements for the award of the degree of Master of Development Studies of St. Paul's University

Supervisors:
Dr. Wanjugu Wachira, PhD
Dr. Petronilla Otuya, PhD

August, 2019

DECLARATION

This dissertation is my original work and to the best of my knowledge has not been presented for the ward of a degree in any other university.

Signature …...……... ……..

Name: Rohin Otieno Onyango **Date**

Reg. No.: MDSNRB614518

Word Count: 18,292

We confirm that the work reported in this dissertation was carried out by the student under our supervision as the university supervisors.

Signature ….……... ……..

Supervisor Name: Dr. Wanjugu Wachira, PhD **Date**

Department: Social Sciences, Limuru Campus

University: St. Paul's University

Signature ….……... ……..

Supervisor Name: Dr. Petronila Otuya, PhD **Date**

Department: Social Sciences, Limuru Campus

University: St. Paul's University

DEDICATION

I dedicate this study to my loving wife, Terry Kabura Otieno for her support and inspiration during this study, my father Lucas Ayieko, who grounded me in values of hard work and perseverance, my mother Benter Nyandiba, who encouraged me to do my best in pursuit of knowledge and academic excellence.

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ABSTRACT

Concerns arise as to whether Non-governmental Organizations, make optimal program decisions based on information and evidence generated from Monitoring and Evaluation systems, as they spend millions of Kenya Shillings on development interventions. This study sought to find the effects of M&E systems; specifically, M&E information availability and accessibility, M&E system responsiveness and sustainability on managerial decision-making among NGOs in Nairobi. The study adopted a stratified and simple random sampling approach. A partially mixed concurrent equal status design was adopted. Primary quantitative data using survey questionnaire and qualitative data using key informant interviews was collected to address the research questions. 254 NGOs participated in the questionnaire survey while 17 NGOs responded to KIIs. Basic descriptive, correlation analysis, and regression were used to analyze quantitative feedback while thematic content analysis was adopted for analysis of qualitative feedback. The study revealed that the four sub-dimensions of M&E namely information availability, information accessibility, system responsiveness, and system sustainability were positively linked and contributed 54 percent to improved managerial decision-making in NGOs. M&E information availability accounted for 57 percent improved NGO managerial decision making. Accessibility of M&E information was found to positively influence and contributed 59 percent of NGO's capability to make informed managerial decisions. The level of M&E system responsiveness influenced 65 percent of NGO's decision-making capabilities. Sustainability of M&E systems was positively linked and contributed 65 percent of improved NGO managerial decision-making. A three-fold conclusion was made. Firstly, that if M&E information is readily available and accessible, then M&E systems can supply timely and reliable information demanded by various program decision makers. Secondly, if M&E systems are sustainable, then NGOs can seamlessly benefit from M&E information and remain fully functional despite significant project changes. Thirdly, if M&E systems are responsive to user's needs, then NGOs can at any time provide necessary information to support decision making.

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LIST OF ABBREVIATIONS AND ACRONYMS

AMELPS: – Activity Monitoring and Evaluation and Learning Plans

BTF: – Behavioural theory of the firm

DFID: – Department for International Development

EBD: – Evidence-Based Decisions

ICF: – Informed Consent Form

IS: – Information System

KII: – Key Informant Interview

M&E: – Monitoring and Evaluation

MDGs: – Millennium Development Goals

NACOSTI: – National Commission for Science Technology and Innovation

NGO: – Non-Governmental Organization

OECD: – Organization for Economic Co-operation and Development

RA: – Research Assistant

SDGs: – Sustainable Development Goals

UN: – United Nations

UNDP: – United Nations Development Programme

WB: – World Bank

CHAPTER ONE
INTRODUCTION

1.1 Background

Monitoring and Evaluation (M&E) has become an integral component in program management and leading priority for many development and humanitarian organizations. This increased demand for effective M&E systems is primarily driven by the promotion of informed decision-making, learning, and increased need for accountability among development organizations (Baba & HakemZadeh, 2012). A vital dimension of an effective M&E system lays in its capability to effectively generate timely, rigorous and meaningful information to feed decision-making processes through learning, knowledgebase, and evidence. However, concerns arise as to whether Non-governmental Organizations (NGOs), most of whom have M&E systems in place, make optimal program decisions based on M&E data, information and evidence (Yıldız, 2015) as they spend millions of Kenya Shillings on development interventions (Barends, 2016). Decisions can be looked at as effective if they include: adequate information; clear thoughts about the available information; flexibility and creativity in the process of decision making; and sufficient participation of relevant stakeholders (Baar, Deligianni, & Stettina, 2016).

While appreciating the complexity, fast-paced, and ever dynamic contexts within which NGOs operate (Rousseau & Barends, 2011), NGOs encounter aggravated challenges of limited M&E system capabilities as well as uncertainty in selecting the most appropriate approaches and techniques to employ as they make day-to-day (recurring) and long-term (consequential) decisions. Decision making is not only an organizational endeavor but also a managerial function. The fact that the results of most decisions exceed the individual manager's control to become a product of other stakeholders makes it an organizational process, whereas it is a managerial function because it is a core responsibility of every manager (Reddy, 2013).

Globally, the demand for reliable information for decision making is rooted in a performance culture which requires M&E systems to collect reliable data

(Wongtschowski, Oonk, & Mur, 2016). Bearing in mind that decision-making entails a process of thinking, making a judgment, and taking deliberate action in the allocation of limited resources (Haidar, 2016), program managers are often caught between choosing among many alternative strategies, tools and methods as they seek to achieve desired program objectives (Ahmed & Omotunde, 2012). According to Baar, Deligianni, and Stettina (2016), the effective use of M&E system products (data, information, and evidence) contributes to improved managerial decisions on resource allocation or prioritization (Langer, Stewart, Erasmus, & Wet, 2015), with an overall effect of enhancing achievement of desired program results.

Decisions or judgments made by NGO managers ultimately affect the viability and net-value of development programs and organizations (Marchisotti, Domingos, & Almeida, 2018). Inefficient decisions lead to ineffective development interventions which ultimately fail to meet the highest goal of improving the welfare of target populations in communities (Barr, Dekker, & Fafchamps, 2015). According to Yıldız (2015) and Barend (2016), most decision-makers in NGOs ignore relevant and reliable evidence and end up making decisions based on subjective (opinion based) methods in the absence of a critical mindset. Additionally, Pfeffer and Sutton, 2006 as cited in Baba & HakemZadeh, (2012) also observe that most managers depend on out-of-date information, individual experience, and observation or intuition instead of basing their choices on evidence. To emphasize the function of evidence in decision making, Rousseau and Barrends (2011) posit that there is no place for blind faith in development management.

Managerial decisions made during program design, formulation, appraisal, implementation, and control are often made under pressure and with incomplete information (Baba & HakemZadeh, 2012). While informed managerial decision-making practice relies on the availability and accessibility of high-quality information and evidence as well as a transparent and systematic process of feeding evidence into decision-making procedures (Langer, Stewart, Erasmus, & Wet, 2015), most NGOs in Sub-Saharan Africa grapple with weak M&E systems with limited capabilities to generate timely and reliable data, information and evidence to facilitate improved decision-making capabilities (Mthethwa & Jili, 2016). Effective management and execution of any project

depends on its ability to define and measure success at several levels (Moreland & Curran, 2018) by providing evidence to improve the quality of managerial decisions (Liang, Howard, Leggat, & Murphy, 2012).

Effective M&E systems yields products (data, information, and evidence) upon which informed decisions are made. Additionally, M&E systems provide the evidence base upon which to compare and improve programs, share best practices, secure donor and community support, advocate for services or funding, and ultimately meet program goals and objectives (Moreland & Curran, 2018). By providing a basis for appropriate intervention design, measurable performance for precise and accurate reporting on the results achieved by community development interventions, M&E systems are essential not only so the project or program knows it is on track but also because funders and other stakeholders want to know about the project progress and results (Moreland & Curran, 2018).

Given that the uptake of evidence is dependent on organizational incentives, personal beliefs (professional ideologies or experiences), power and vested interest, (Booth, 2012) it is crucial to generate demand for M&E system products. To take full advantage of M&E system products at global, regional, national, sub-national and local level, program managers and stakeholders must incorporate rigorous review processes, and evaluations that examine program implementation efficiency, effectiveness, and sustainability and build evidence for claims of progress (Schwandt, Ofir, Lucks, El-Saddick, & D'Errico, 2016).

In the Kenyan context, decision making on development programs implemented by various development agencies is also invariably influenced by M&E systems. As recipients of international donor funding, Kenyan state and non-state organizations have not been immune to demands for greater accountability for development results (Obunga, 2017). Empirical evidence reveals that project performance among Kenyan state corporations is positively influenced by M&E best practices (Muchelule, 2018). Despite increased adoption of M&E activities (Obunga, 2017), studies amongst Kenyan NGOs however show that there are problems in the effective utilization of M&E services and

information, mainly ascribed to the tools and techniques used in the set-up, design, operations and maintenance, and staffing of M&E systems (Wachamba, 2009). m

M&E products should be used to help NGOs effectively align, communicate, and execute their operational, tactical and strategic actions to the realization of a vision that identifies the measurable value they commit to add to their stakeholders (Guerra-Lopez & Hicks, 2015). This study, therefore, sets out to find the effects of M&E systems: specifically, the dimensions of M&E information availability and accessibility; M&E system responsiveness; and M&E sustainability on managerial decision-making among selected NGOs in Nairobi, which as alternative development vehicles from government, aim to improve the livelihoods and welfare of communities through implementation of development interventions.

By assessing the systemic and human capabilities of NGOs to make effective decisions while managing development programs and interventions, this study seeks to determine how M&E systems influences managerial decision making for improved operational, tactical and strategic processes. The study will thus establish critical M&E dimensions by which development project/ program decision processes, useful program outputs, and outcomes are associated.

1.2 Problem statement

It is the job of NGO managers to make organizational decisions that border along allocation and prioritization of limited resources to meet competing development demands. Managers albeit fail to apply information (processed data) and evidence (findings from research and M&E systems) into practice. Despite M&E systems being in place, most NGOs do not benefit optimally from M&E systems due to their limited capacity to effectively generate timely, rigorous and meaningful information to feed decision-making processes. While M&E is essentially set-up to generate timely information on the implementation and results of development programs or projects, and to provide an evidence basis for improved managerial decision-making (Wongtschowski, Oonk, & Mur, 2016), weak M&E service quality impedes the uptake of evidence within development organizations.

M&E system weakness is attributable to unavailability of information, inaccessibility of information, M&E system unresponsiveness, lack of M&E system sustainability and flexibility. Additionally, individual and institutional incentives, human and institutional capacity, influence whether organizations incorporate data, research, or evaluation findings into decision making (Flora, 2018)

Effective managerial decision-making practice is largely influenced by utilization of available M&E information and evidence, reliable and valid organizational facts, metrics and assessments, managerial experience and concerns of affected stakeholders (Rousseau & Barends, 2011) which ultimately leads to improved operational, tactical and strategic decision-making within organizations. As observed by Briner, Denyer and Rousseau (2009), the use of reliable and relevant evidence is likely to enhance decision-making processes in the formulation, design, appraisal and implementation of development projects as a result of systematic and transparent use of scientific knowledge (Langer, Stewart, Erasmus, & Wet, 2015).

In the past ten years, numerous studies have been conducted and published related to M&E in the field of development. For instance, in a study on the determinants of effective M&E systems in Non-Governmental Organizations within Nairobi County, Wachamba (2009) finds that the selection of tools and techniques, management role, M&E training and technical expertise of staff contribute to the effectiveness of M&E systems. A case study on the roles of M&E in achieving project success conducted by Dejene (2017) on a project implemented by Save the Children in Ethiopia revealed that the dimensions of M&E practices as a system, competency, program accountability, and project life cycle stages are core functions of M&E that contributed to Save the Children Project Success. Mataka (2015), in a study investigating capacity gaps and systems problems in the M&E systems that caused the majority of North West provincial government departments to receive a qualified opinion on performance information between 2010-2014 financial year, found that adequate oversight role and effective leadership, and political stability are central in the implementation process of M&E systems.

Studies on the concept of M&E systems as an influencer of effective managerial decision-making within NGOs has however seldom been conducted. This study aimed to examine how managerial decision-making within NGOs can be improved based on evidence generated from M&E systems.

1.3 Purpose of the study

The purpose of this study was to examine the effects of M&E systems on managerial decision-making among NGOs in Nairobi County, Kenya.

1.4 Objectives of the study

The specific objectives of the study were:

a) To examine the influence of M&E information availability on managerial decision-making among NGOs in Nairobi, Kenya.
b) To assess the extent to which accessibility of M&E information influences managerial decision-making among NGOs in Nairobi, Kenya.
c) To establish the extent to which the responsiveness of an M&E system influences managerial decision-making among NGOs in Nairobi, Kenya.
d) To determine how sustainability of M&E systems influences managerial decision-making among NGOs in Nairobi, Kenya.

1.5 Study questions

a) In what ways does the availability of information from M&E systems influence managerial decision-making among NGOs in Nairobi, Kenya?
b) To what extent does M&E system information accessibility influence managerial decision-making among NGOs in Nairobi, Kenya?
c) To what extent does managerial decision-making among NGOs in Nairobi depend on the responsiveness of M&E systems?
d) In what ways does the sustainability of M&E systems influence managerial decision-making among NGOs in Nairobi, Kenya?

1.6 Justification of the study

The rationale for this study emanated from the researcher's desire to uncover dimensions of project/ program M&E systems whose operationalization would influence the capabilities of NGO leaders and managers to make effective managerial decisions based on data, information, and evidence generated from these M&E systems. As observed by Haidar, "It can be established that the root cause of almost all programs failure can be traced back to human error or misjudgment, and poor judgment can often be traced back to the way the decisions were made" (Haidar, 2016:25). Findings of this study offers recommendations on how to strengthen M&E systems for improved managerial decision-making. Study results will inform practice by diverse development actors including National and County Governments, Donors, NGOs, CBOs, and development practitioners in a learning process. The study will also enrich scientific knowledge and facilitate in building a comprehensive framework in M&E for decision making in the formulation, design, appraisal, implementation and control of development projects and thus contribute positively towards the achievement of project/ program objectives.

1.7 Delimitation

This study focused on empirically examining M&E systems and management decision making among NGOs implementing ongoing and completed projects in Nairobi, Kenya between the year 2013 and 2019. Specifically, the study investigated the uptake of information among selected NGOs and their system and human capabilities for accessing and utilizing M&E information for managerial decision-making. The respondents of the study were project managers and M&E staff of these projects. Nairobi, being the capital city of Kenya, was chosen as the study area because the county hosts an array of government ministries and agencies, private businesses and companies, Non-Governmental Organizations, and Community Based Organizations. The study, mostly, confined its discussions to M&E and decision-making of NGOs in Nairobi County, Kenya. An investigation into the services provided by M&E systems within NGOs was made to discern effective M&E systems attributes (key sub-dimensions and components) that may affect the capabilities of NGOs to make effective managerial decisions.

1.8 Limitations

The study was limited contextually and geographically to the aspects that determine the effectiveness of M&E systems within NGOs in Nairobi. This implies that the study provided a partial scope that was not generalizable to practice among other NGOs located outside Nairobi. The survey (questionnaire research) achieved a response rate of 73%, and thus suffered a nonresponse bias of 27%. This response rate however exceeded the expected response rate of 60% assuring representativeness of the sample to the study population (Fincham, 2008). Moreover, some targeted NGOs had put in place confidentiality policies that constrained respondents from disclosing some information embedded in the study questionnaire.

Provision of specific information was considered to contravene organizational confidentiality policies. This challenge was mitigated by guaranteeing respondents of utmost confidentiality on the strict use of study findings for academic purposes. Incomplete or delayed survey responses emanating from some of the respondents not filling or completing the survey questionnaire, or some benchmarks being misinterpreted leading to insufficient responses to some questions. Some respondents also took leave before completing the questionnaire. The challenge of incomplete or delayed responses was mitigated through sending email reminders to the targeted respondents during data collection window, which included presenting an introduction letter obtained from the university and also presented a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) to the NGOs' management. This helped to circumvent respondents doubts and enabled the respondents to disclose much of the information sought by the study.

1.9 Assumptions

Assumptions reflect what this research holds true to draw valid conclusions. This study was premised on the assumptions that the sampled NGOs and projects had some form of M&E system (complex or rudimentary) that enabled them to generate evidence (information) from the implementation of programs and projects. This assumption was anchored on the observation that evidence can be systematically applied to inform the

design and implementation of development policies and programs to improve development outcomes (Langer, Stewart, Erasmus, & Wet, 2015).

This study also assumed that there existed institutionalized mechanisms or incentives for the uptake of evidence among sampled NGOs. Additionally, the study assumed that the sampled NGOs had an understanding of decision practices and decision outcomes and that the inclusion criteria into the sample was appropriate and therefore, assumed that the respondents had all experienced effects of M&E systems on managerial decision-making. Finally, the study assumed that participants answered the survey research questions in an honest and candid manner.

1.10 Definitions of terms

Decision This study views a decision as a position, opinion, or judgment reached after consideration of potential consequences, risks, and uncertainties (Haidar, 2016).

Evaluation Evaluation is a means to strengthen learning within our organization to support better decision-making and promote learning among stakeholders (UNDP, 2019).

Evidence Evidence is defined as information or facts that are systematically obtained in a manner that is replicable, observable, credible and verifiable (Liang, Howard, Leggat, & Murphy, 2012).

Informed-Decision Making Informed-Decision Making Practice is decision making through the careful, clear, and sensible use of information: decision-maker's expertise and judgment, evidence from the situation, a critical evaluation of the best available research evidence, and the viewpoints of those people who might be affected by the decision (Briner, Denyer, & Rousseau, 2009). This study defines informed-decision making as the application of M&E information and evidence to support operational, tactical and strategic decision making.

M&E information accessibility	M&E information accessibility refers to the ease and user-friendliness of relevant internal and external program stakeholders to access timely data, information and evidence on program achievements and results.
M&E information availability	M&E information availability refers to the ability of the organization to generate timely program M&E mandatory reports on evaluations and studies, existence of M&E dashboard, communication tools and, knowledge sharing platform among program stakeholders.
M&E service quality	M&E service quality constitutes key subdimensions: information availability, information accessibility, M&E system responsiveness, M&E system flexibility, and M&E system sustainability/ resilience.
M&E system	M&E system is defined as a comprehensive Information System that creates sound and reliable information to help decision-makers define, implement and learn though actionable knowledge and evidence (Ba, 2019).
M&E system responsiveness	M&E system responsiveness refers to the M&E system's capacity to carry out timely specific M&E studies and other tailored products requested by program stakeholders.
M&E system sustainability	M&E system sustainability refers to the ability of the M&E system to remain fully functional when significant changes occur in the M&E team, ease of access of M&E system with minimum supervision and support and the utility of M&E data after program closure.
Monitoring:	Monitoring is the routine tracking of program activities by regularly measuring whether planned activities are being carried out.

1.11 Summary

NGOs encounter aggravated challenges of limited M&E system capabilities as well as uncertainty in selecting the most appropriate approaches and techniques to employ as they make day-to-day (recurring) and long-term (consequential) development program decisions. Inefficient managerial decisions within programs lead to ineffective development interventions which ultimately fail to meet desired social, economic and political changes. The effective use of M&E system products (data, information, and evidence) contributes to improved managerial decisions on resource allocation or prioritization.

Global, regional and national development actors have heightened their call for M&E products to support decision making, knowledge generation, learning and empowerment from the implementation of development programs. M&E products should be used to help NGOs effectively align, communicate, and execute their operational, tactical and strategic actions to the realization of a vision that identifies the measurable value they commit to add to their stakeholders. As a core managerial function, program managers require reliable and relevant information and evidence to enhance decision-making processes in the formulation, design, appraisal, and implementation of development programs. This study sets out to find the effects of M&E systems, specifically; M&E information availability and accessibility, M&E system responsiveness, and M&E system sustainability on managerial decision-making among selected NGOs in Nairobi. This study offers recommendations on how to strengthen M&E systems for improved managerial decision-making among diverse development actors.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature related to the study from the global, regional and local perspective and presents a theoretical, empirical and conceptual framework reflecting the relationship between the identified dependent and independent variables.

2.2 Theoretical framework

Effective decisions rely on credible data and evidence (Haidar, 2016) and hence within the development program context, M&E has been proposed as a strategy to facilitate the provision of valid, reliable, timely and accurate evidence (Moreland & Curran, 2018) that is critical for making informed decisions in risky and uncertain contexts. In cognizance of the uncertainty and risks (Nusrat, 2013) that program managers face while making managerial-decisions, this sub-section presents the prospect decision theory in a bid to create a theoretical foundation for this study.

2.2.1 Prospect Decision Theory in Development Programs

Daniel Kahneman and Amos Tversky developed the prospect theory in 1979 as an alternative model to the expected[1] utility theory. The prospect theory explains managerial decision making under risk or uncertainty. The prospect theory persuasively reflects better the decision processes within development programs (Haidar, 2016). As a descriptive theory, the prospect theory was derived from empirical experiments and observations (Roy, 2016) and assumes that human beings are not always rational while making decisions (Nusrat, 2013). According to Hohlfeld et al., (2007), the prospect theory proposes that the value of a particular prospect (V), among a set of prospects, is a function of the prospect's payoff or loss if it occurs (x) and the probability of its occurrence (p):

[1] Expected utility theory is among key pioneer theories of decision making under risk, but failed in predicting outcomes in many instances since it was obvious that the value that particular payoff held for the decision maker was not always directly related to its precise monetary worth (McDermott, 2001)

$$V(x, p) = v(x)w(p).$$

Where;

$v(x)$ = subjective value of the consequence of x

$w(p)$ = impact of the probability of the prospect occurring

The theory distinguishes two phases in the decision process, namely, **framing**, and **valuation**. During the framing phase, managers conduct a preliminary analysis of challenges (prospects) they are facing. Based on the quantity, quality, and timeliness of information available to the manager coupled with his/ her past experiences and knowledge about the subject matter, the manager constructs perceptions of the challenge. The manager then frames associated contingencies and possible outcomes. During the valuation phase, the manager weighs opportunities versus threats that the challenge presents as well as the gains and losses and chooses accordingly with the aim of minimizing uncertainties. According to Haidar (2016), the manager then makes decisions by selecting options that satisfy their most important needs even if they do not have all the required information and their choice is not optimal.

Haidar (2016) however presents information challenges under the prospect theory that may affect the program manager's capability to make effective decisions under the prospect theory. These information challenges include: 1) lack of adequate, relevant and timely information on the challenge; 2) Mis-implementation of what was decided; 3) a shift in the context in which the decision was made (program design, budgets, and resources); and 4) flawed decision-making approach or process resulting in flawed decisions.

As a significant behavioral theory of choice, the prospect theory thus informs decision making under risks under uncertainty (Vis & Kuijpers, 2018). By advocating for the adoption of primary research data capable of capturing managers' perceptions of risk in real organizational contexts and environments, the prospect theory if adopted appropriately, anchors actions on calculated gains and losses (Abdulnabi, 2014).

2.2.2 Behavioral Theory of the Firm

Behavioural theory of the firm (BTF), as advanced by Cyert & March (1963) March & Simon (1958), is a composite of theories that emerged within sociology, economics, business and management studies – to tackle issues of how firms act in a market place and what governs the associations between firms (Kuusela, 2013). In contrast to the economic theory of the firm which views the firm as a unit processing inputs into outputs, BTF attempts to expand this limited view, and examines the internal factors of the firm such as organization structure, organizational learning, and organizational slack, and how price and output decisions are made regarding production, scheduling, and inventory (Argote & Greve, 2007). As a decision theory, BTF elucidates the conditions surrounding operational and strategic management decisions, and the outcomes that yield value addition to organizational processes. Under BTF, decisions are understood as successive processes which comprises both rational and non-rational aspects, and are influenced by ownership rights, control over resources, power, and liabilities.

The BTF espouses internal drivers as the core sources of decision-makers' preferences and expectation in situations of risk, uncertainty and complexity. According to Cyert & March (1963), individuals or groups of managers within organizations take part in setting organizational goals as well as decision-making (Gavetti, Greve, Levinthal, & Ocasio, 2012). While making these decisions, BTF emphasizes that the set goals must be satisfied, following a generally accepted order of priority among them (Kuusela, 2013). During prioritization exercises, decision makers at both top and lower management levels may either opt for "good enough" options rather that pushing for the selection of best possible outcomes (Gavetti, Greve, Levinthal, & Ocasio, 2012).

The resultant effect of adopting BTF as an approach to managerial decisions is the formation of organizational slack (Kuusela, 2013). Organizational Slack, being the difference between total organizational resources which enhance a firm's competitiveness and necessary payments (costs), thus allows organizations to effectively adapt to both internal and external pressures (Wefald, Katz, Downey, & Rust, 2010) . Decision making under BTF therefore boosts profit maximization rather than satisficing behaviour.

2.3 Empirical literature review

This section presents an analytical review of arguments from studies relating to the effects of M&E systems on managerial decision-making among NGOs. Specifically, it elucidates perspectives of different authors and scholars on how M&E system products (data, information, and evidence) are utilized, accessed to inform decision-making process in NGOs; and how M&E systems responsiveness and sustainability impact on decision-making processes, program outputs, and outcomes.

2.3.1 M&E Information Availability

A key role of M&E systems is to supply timely and reliable information demanded by various program decision makers. In a case study on M&E systems of development programs implemented in five West-African Countries, BA (2019) found that the M&E system was primarily set-up to generate timely and quality information, packaged in various forms such as program mandatory reports, M&E dashboards, M&E progress reports, to facilitate informed managerial decision-making. In a study aimed at understanding the use of data for decision making among development actors, Stout, Bhatia-Murdach, Kirby, & Powell (2018), note that international development actors spend upwards of USD 2.5 billion annually implementing program M&E intended at availing data, information, and evidence to facilitate informed decision-making. This is further corroborated by findings of the Health Policy Project (2014), which revealed that data are essential to support effective program development, implementation, M&E and control since it helps program stakeholders understand development issues, advocate for change, design appropriate strategies, prioritize interventions, and develop and amend operational, tactical and strategic plans.

The systematic and transparent use of scientific evidence in the formulation, design, appraisal, implementation and control of global development policies and programs (Langer, Stewart, Erasmus, & Wet, 2015) received cognizance in the adoption of Sustainable Development Goals (SDGs) in 2013-2014. This was a significant shift from the design of Millennium Development Goals (MDGs) as noted by Bhattacharya (2015), who observed that there were limited capabilities of countries to achieve MDGs within the specified timelines since countries did not correctly recognize the role of regional

monitoring and review mechanism (RMRM). This 2030 Agenda for Sustainable Development now calls for follow-up and review processes that examine progress toward achieving the Sustainable Development Goals (SDGs). Nevertheless, Booth (2012) notes that there is difficulty in the uptake of research findings among development agencies.

2.3.2 M&E Information Accessibility

Bradt (2009) observed that information enhanced with insights of how to advance becomes knowledge. Information can therefore be viewed as accessible if stakeholders involved in the decision-making process can obtain meaningful information from the M&E system. The use of relevant and reliable evidence is viewed as a means to enhance decision-making processes (Briner, Denyer, & Rousseau, 2009) especially in instances where subjective decision-making abound (Rousseau & Barends, 2011). M&E systems are however often limited in their ability to present information in simple and comprehensible formats to support effective uptake for decision making (Ba, 2019). This limited uptake of information from M&E systems to inform decision making is observed by Kirby and Bhatia-Murdach who note that M&E systems suffer from huge inefficiencies, ineffectiveness, and redundancy despite massive investments put in place (Kirby & Bhatia-Murdach, 2018). According to Kirby and Bhatia-Murdach (2018), these challenges are attributable to low staff awareness of how to use existing data and analytical tools, inability to triangulate data for decision-making as well as misalignment of existing tool to M&E purposes.

To demonstrate the challenges that managers in developing countries face in using evidence for decision making, Flora (2018) indicates that this low uptake of evidence is attributable to inaccessibility of evidence and difficulty in understanding the data. In an explorative study conducted in South Africa on the use of evidence in policymaking among senior governmental officials, Cronin and Sadan (2015) found that systematic barriers beyond the control of program managers limit utilization of available evidence despite knowledge of their existence.

A clear and all-inclusive M&E information sharing system is extremely difficult to realise. Bradt (2009) also observed that, humanitarian actors are faced with habitual difficulties

and gaps in the use of data including; information overload, lack of information and knowledge management systems that do not yield wisdom. Decision makers should thus have easy access to relevant, timely and easy-to-interprete data to facilitate informed managerial decisions. This therefore calls for user-friendly M&E systems (Ba, 2019).

2.3.3 M&E System Responsiveness

The ability of the M&E system to respond to information and data needs of various program stakeholders in a timely and manner is crucial for effective managerial decision making (Ba, 2019) and achievement of development objectives. Multinational, bilateral and International Non-governmental Organizations (INGOs) delivering global and regional interventions have since adopted development pathways that enhance new and more tailored M&E systems, as well as encouraged development and implementation of data collection systems and capacities, needed to reflect multidimensional measurements of growth, poverty and natural capital (PAGE, 2016). This increasing alignment is attributable to the critical need to generate information and knowledge derived from evidence on the intended and unintended effects of development interventions (White & Raitzer, 2017).

To capture the essence of informed decision-making in facilitating the achievement of development objectives, various global and multinational agencies have set up M&E Frameworks and prescribed models depicting how development assistance is meant to work (Mayne, 2015). In a case study findings from United Kingdom's Department for International Development (DFID) and the Government of Malawi's Ministry of Agriculture, Irrigation, and Water Development (MoAIWD), Kirby and Bhatia-Murdach (2018), conclude that achieving optimal use of data from M&E systems requires changing how M&E systems are implemented, by balancing M&E organizational accountability and learning needs to inform organizational learning and decision making.

At national levels, most countries have established M&E systems for social and economic development policies, plans and projects (PAGE, 2016). PAGE (2016) nevertheless observes that these National M&E systems are often not fully effective and not tailored or capable of being applied to integrated approaches to meet SDG goals. Where evidence is

used, it is generally to motivate, persuade or defend decisions already made, often to secure funding from Treasury (Cronin & Sadan, 2015). This poor performance of governments in meeting the socioeconomic quests of citizens has been identified as one of the reasons behind the proliferation of NGOs since millennium 2000 (Abegunde, 2009).

Stout *et al.*, (2018), however, note that this massive investment in M&E has not resulted into enhanced utilization of M&E data, information, and evidence for decision making among staff on donor and development programs. This is primarily due to a mismatch between the design of M&E systems, their contexts of operation, and information needs of program stakeholders. In a study on the determinants of effective M&E systems in NGOs within Nairobi County, Wachamba (2009) concludes that NGOs should be flexible to allow the adjustment of their M&E systems including tools and techniques.

2.3.4 M&E System Sustainability

Effective M&E systems remain fully useful and functional despite significant changes within the M&E team (Ba, 2019). M&E staff turn-over, program closure, changing donor priorities have the potential of disrupting the functionality of M&E systems. A paper by Nutley (2012), discussing the unique role of health data in strengthening health systems, argues that informed decision-making using data, information, and evidence generated from M&E systems should consider data collected during program monitoring, review, planning, and improvement. This argument implicitly infers that the supply of data, availability of tools to conduct data analysis, and skills in data analysis will automatically lead to the utilization of data in decision-making (Stout, Bhatia-Murdach, Kirby, & Powell, 2018).

Lopez-Acevedo, Krause, and Mackay (2012), in a book on the nuts and bolts of M&E systems further add that for informed decision-making to occur within development programs, there must be sufficient supply and demand of M&E information. This, therefore, implies a need for closer coordination between producers and users of M&E data along the entire continuum of collecting, aggregating, analyzing, publishing, and interpreting data as posited by Khan and Foti (2015).

2.3.5 Managerial Decision-Making Capabilities

Monitoring and Evaluation systems in NGOs aims to quantify and enhance the effectiveness of development interventions, ensure relevance and efficiency in the implementation of the program and to generate lessons on what works, what does not and why in a particular context. NGOs require data, information, and evidence to make informed decisions and implement programs that equitably, effectively, efficiently and justly allocate scarce resources and meet people's social and economic needs (Flora, 2018). A policy brief published by Health Policy Project (2014) highlights the need for informed managerial- decision making to facilitate the achievement of program goals and objectives. The Health Policy Project identifies core competencies that program managers require to support analysis, interpret, translate and distill complex data into useful evidence for program and service delivery decision making. The policy brief suggests that for optimum level of program performance to be achieved, the use of data has to correlate with the information needs of data users directly (Health Policy Project, 2014).

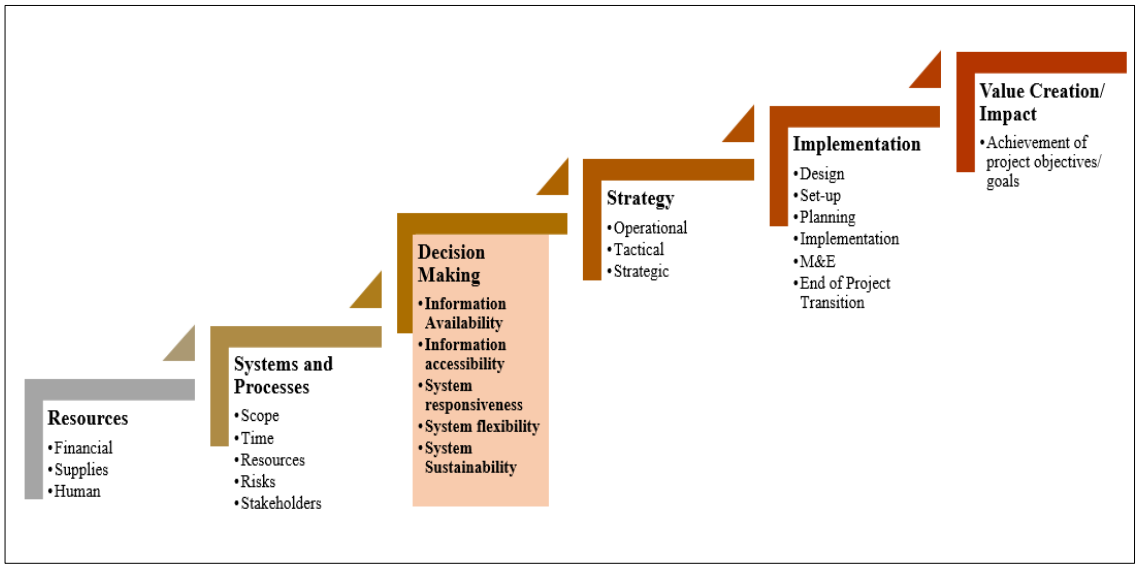


Figure 1: Step-wise importance of decision making. **Source**: Author (2019)

From the previous review, M&E systems provide a basis for decision making across the spectrum of development planning, implementation, and control. Figure 1 illustrates the step-wise importance of decision making as a step towards the achievement of development program objectives. Through the implementation of process monitoring

(tracking of indicators and resources) and evaluation of change and program outcomes, which results in information availability and access for decision-making. NGOs thus engage in a progressive operational, tactical and operational planning which translates into action (program implementation) and ultimately the achievement of program objectives and goals. Wachamba (2009) concludes that management teams within NGOs should have the expertise to operate and maintain development project M&E systems. This way, NGOs can meaningfully benefit from M&E systems and ultimately advance their capability to realize development objectives and goals (Ba, 2019).

2.4 Research gap

It is clear for from the review of literature that for effective, efficient and sustainable development results to be achieved, organizational decision-makers require timely access to valid, relevant, reliable data, information and evidence to facilitate informed decision-making when formulating, designing, appraising, implementing, and controlling development programs. While various decision-making theories and frameworks have been developed to enhance development actors' managerial decision-making, it is unclear how program managers can optimally leverage on M&E systems and processes to make effective managerial decisions.

This study, therefore, sought to review and understand M&E Systems dimensions that influence managerial decision-making in a bid to address the limitations facing NGO decision makers as they seek to benefit fully from M&E system products (data, information, and evidence). By examining how NGOs utilize system products, this study set out to determine M&E system qualities necessary for improved managerial decision making to help support future interventions in this area.

2.5 Conceptual framework

The study looked at the influence of critical dimensions of M&E systems including; information availability, information accessibility, M&E system responsiveness and M&E system sustainability on managerial-decision making among program managers in development projects as illustrated in Figure 2.

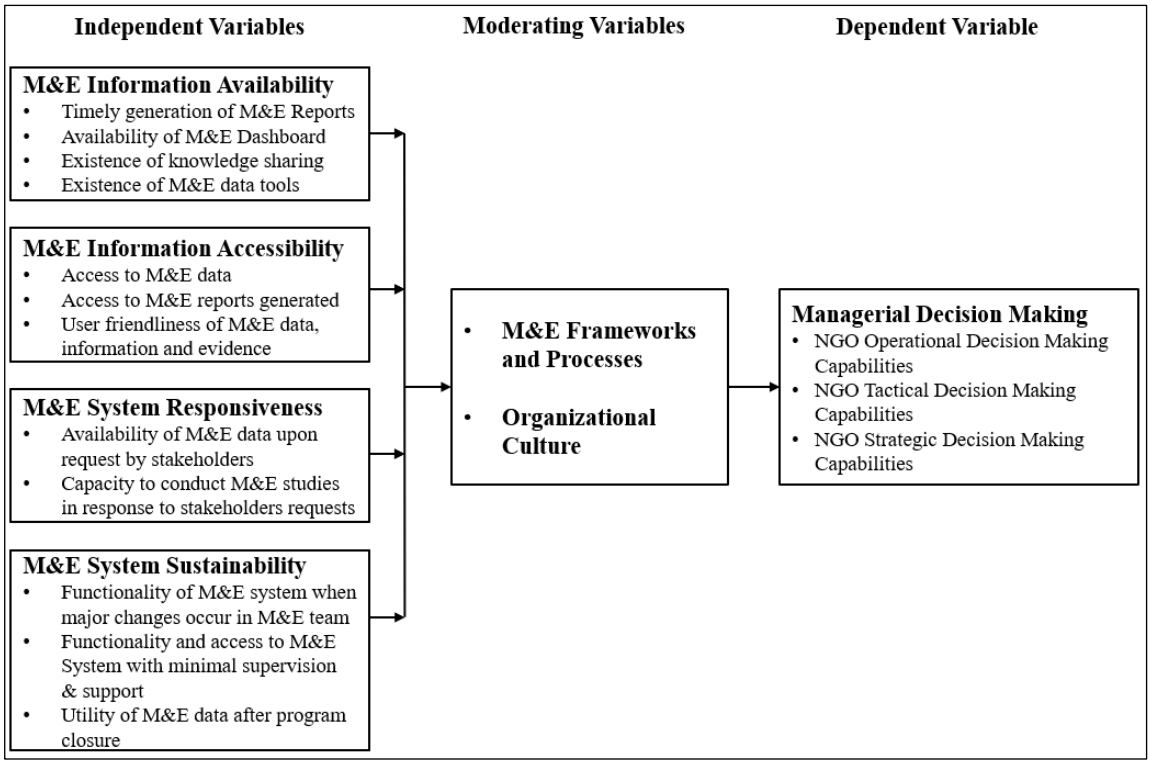


Figure 2: Conceptual model. **Source:** Author (2019)

Dependent variable

This study focused on **managerial decision making** as the dependent variable of interest and looked at decision making at three management decision levels; strategic, tactical, and operational (Rademeyer & Lubinsky, 2017). At the operational level, management decisions are informed by raw data generated from M&E systems. At a tactical level, management decisions are informed by processed data (information) generated from M&E systems. At a strategic level, information created from M&E systems produces knowledge to help make strategic decisions (White G. , 2009).

Independent variables

According to Langer *et al.*, (2015), informed managerial decision making requires the availability of high-quality and program-relevant information and evidence which as noted by Flora (2018) can be used to set priorities, formulate and design programs, guide implementation, and iterate. **Availability of information** and evidence is also an indicator of accountability (Wongtschowski, Oonk, & Mur, 2016)

For effective decision-making to occur, relevant and timely information and evidence from M&E systems should be readily **accessible** to decision makers in a format that is easy to understand (Flora, 2018). As observed by Stout *et al.,* (2018), there are negative implications for decision-making, accountability, and learning when M&E systems products (data, information, and evidence) are not useful or used. Additionally, the M&E system should be **responsive** and **sustainable** in addressing the end user's needs (Ba, 2019) by readily availing M&E data, information and evidence upon the request of program stakeholders (Cronin & Sadan, 2015).

Moderating Variables

Moderating variables in the model modify the causal relationship between Managerial decision-making and M&E system dimensions. Whereas key dimensions of M&E systems mentioned above as independent variables will be expected to enhance the capabilities of NGOs to make improved managerial decisions, managerial decisions may also be influenced by **M&E frameworks and processes** embedded within programs as well as **organizational culture**.

2.6 Summary

Chapter two reviews the literature on how managerial decision-making within NGOs can be improved by effectively utilizing data, information, and evidence generated from M&E systems. By providing a basis for appropriate intervention design and measurable performance, M&E system products especially data, information, and evidence availability and accessibility, M&E system responsiveness and sustainability within NGOs is essential for the realization of the impact of specific activities among target populations in communities.

The empirical literature review highlights perspectives of different authors and scholars on how M&E system products are utilized to inform decision-making process in NGOs; and how M&E systems impact on decision-making processes, program outputs, and outcomes. While various decision-making theories and frameworks have been developed to enhance development actors' managerial decision-making, it is unclear how program

managers can optimally leverage on M&E systems and processes to make effective managerial decisions.

This study, therefore, sought to review and understand M&E systems dimensions that influence managerial decision-making in a bid to address the limitations facing NGO decision makers as they seek to benefit fully from M&E system products. The study identified strengths and information challenges that may affect the program manager's capability to make effective decisions under each of the theories.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the body of procedures, rules, and techniques to be used in data collection and analysis. The areas covered include research design, study site, target population, sample size determination, sampling procedures, data collection methods, pilot testing, instrument reliability and validity, data collection instruments, data analysis and presentation, and ethical consideration.

3.2 Research design

A partially mixed concurrent equal status design (Leech & Onwuegbuzie, 2009) was employed for this study. Partially mixed implies quantitative and qualitative findings were integrated after completion of data analysis; concurrent implies quantitative and qualitative data were collected concurrently, and equal status implies that both quantitative and qualitative data were accorded equal weight in addressing the research questions. This mixed methods research design was selected because the combination of both quantitative and qualitative approaches delivers higher understanding of research problems than either approach alone.

The specific research design used for the quantitative research component was a descriptive correlational research design, to study the relationship between M&E system dimensions and managerial decision-making among NGOs. For the qualitative research component, the study adopted a survey research design to gather in-depth feedback from key informants on the experience of the various NGOs regarding the variables of interest. Qualitative feedback generated from Key Informant Interviews (KIIs) was then transcribed, synthesized and integrated with quantitative findings to paint a whole picture of the study phenomena. Triangulation of data from both quantitative and qualitative approaches enhanced the significance of study findings.

3.3 Study area

The study was conducted among selected NGOs registered and operational in Nairobi County, Kenya. Nairobi County is the Capital City of Kenya and is one of the 47 counties in the Republic of Kenya. Nairobi borders Kajiado to the South and Machakos to the East, Kiambu County to the North and West. The County has a total area of 696.1 Km^2. See Appendix 4 for a map of Nairobi County. Nairobi County was selected for two key reasons: 1) Nairobi hosts many businesses, companies, non-governmental organizations (NGOs), international companies and organizations. According to the Nairobi County Integrated Development Plan (Nairobi City County, 2017) there were 2,683 NGOs registered to work in Nairobi County; and 2). Majority of the NGOs registered to work in Nairobi county intervene in the social sector targeting vulnerable and marginalized communities mainly in the informal settlements. These NGOs also contribute considerably towards community empowerment, protection of human rights awareness creation and civic education.

3.4 Target population

A total estimated 2,683 NGOs registered to operate in Nairobi by the NGO Coordination Board were targeted for inclusion into the study.

3.4.1 Sample size determination

3.4.1.1 Quantitative Sampling: Survey

To obtain a representative sample to be included in the quantitative survey, this research used the National NGO estimated number of 2,683 registered NGOs in Nairobi based on Nairobi County Integrated Development Plan (Nairobi City County, 2017). The study adopted the simplified Yamane formula (1967) as indicated below to compute the NGO sample: A 95% confidence level and P=.05 were assumed for the sample Equation.

$$n = \frac{N}{1 + \ N(e)^2}$$

Where,

n = the required sample of NGOs in registered to operate in Nairobi

N = the NGO population size

e = level of precision or permissible error which was set at 0.05

The estimated population of NGOs registered and operating in Nairobi is 2683.

When this formula is applied to the above sample, we get

$$n = \frac{N}{1+\ N(e)^2} = \frac{2683}{1+\ 2683(.05)^2} = 348$$

348 NGOs registered and operating in Nairobi were targeted to be included in the survey. The NGOs broadly targeted various development sectors including Governance and Democracy, Health, Education, Agriculture, Infrastructures, Energy, Poverty – Social Impact, Gender Empowerment, Food Security, Trade, and Investment, or other relevant development sectors.

3.4.1.2 Qualitative Sampling: KIIs

The study employed Key Informant Interviews (KIIs) as a method for conducting qualitative data collection. Purposive sampling for KIIs was undertaken. A total of 17 KIIs, each taking about 40 minutes, were conducted with the targeted respondents including M&E Technical Staff and Program Management Staff. The sample size of seven KIIs was considered adequate since it falls within the prescribed range of 15-30 interviews (Marshall, Cardon, Poddar, & Fontenot, 2013). Interviews were conducted continually until the data set was complete and data saturation point was reached.

The survey focused on development programs that had reached the midcourse of their implementation or were closed less than three years ago. This was done to make sure that critical M&E activities were already or were supposed to have been implemented, and that institutional memory of the M&E system was still alive to allow relevant data collection. At the project/program level, the respondents were part of the technical or management team to make sure relevant people who knew the program M&E system were interviewed to respond to the questionnaire.

3.5 Sampling procedure

From the list of NGOs operating in Nairobi and registered by the NGO Coordination Board, the researcher used stratified and simple random sampling to sample 348 organizations. The target population was divided into strata (or subgroups), and a random sample was taken from each subgroup (Taherdoost, 2016). Organizations were picked randomly from each of the strata namely; International NGOs (focus on cross-country programs), National NGOs (focus on nation/country-wide programs) and Local NGOs (focus on specific programs carried out exclusively within Nairobi only). The respondents from the selected organizations included technical and management staff involved in the various development projects.

3.6 Data collection methods

A survey questionnaire (See Appendix 1) was designed to gather quantitative feedback on M&E systems dimensions of interest. Hence, the questionnaire was composed of different sections that were commensurate with the M&E system dimension proposed, namely: M&E system Information availability; M&E system information accessibility; M&E system responsiveness; M&E system sustainability; and Managerial Decision-Making capabilities.

For each M&E dimension, relevant variables were measured as presented in Table 1. For the variables, a 5-Point Likert-Scale was created to measure the level of ranking as responded to by representatives from the sampled NGOs. The questionnaire was designed and administered as a paper-based survey and administered to approximatively 348 NGOs operating Nairobi. To improve participation rates/ response rates in the study, an online survey on SurveyMonkey platform was also administered, with respondents being selected based on the criteria described above. Repeat reminder emails to non-respondents were sent to prompt respondents and get timely feedback. Respondents were also persuaded that their responses will be used. In scenarios where it was difficult to get the responses through face-to-face interviews, online survey was organized for respondents to complete the questionnaires.

Table 1: Dimension and measurement of M&E system.

M&E system Dimensions	Measurements considered
M&E information availability	• Capacity for timely generation of program M&E mandatory reports • Capacity for timely production of assessments, evaluation and other M&E study reports • Percentage of M&E dashboards made available in a timely way to program managers and other stakeholders • The existence of a knowledge sharing system on M&E data, information, and evidence • The existence of M&E data communication tools
M&E information accessibility	• Percentage of program managers having access timely to evidence-based data on program achievements and results • Level of access of other program stakeholders to M&E products (data, information, and evidence) • Access to monitoring data for evaluation purpose • Access to program M&E data to broad public, media, and researchers • User friendliness of M&E data, information, and evidence for all users
M&E system responsiveness	• Availability of M&E data upon requests by program stakeholders • Capacity to carry out timely specific M&E studies requested by the program managers and external stakeholders • The capacity of the M&E team to produce timely tailored reports for program management and learning events • The capacity of the M&E system to respond to donor requests on the program achievements and results
M&E system sustainability	• The capacity of the M&E system to remain fully functional when significant changes occur in the M&E team • The capacity of the M&E decentralized units to be functional with minimum supervision and support • The capacity of the program managers and other stakeholders to access M&E information with minimum support from the M&E team • The utility of the M&E data after program closure
Managerial-Decision Making capabilities	• The capacity of NGO to develop and implement operational plans as a result of M&E systems • The capacity of NGO to develop and implement tactical plans as a result of M&E systems • The capacity of NGO to develop and implement strategic plans as a result of M&E systems

Source: Ba (2019)

Key Informant Interviews (KIIs) were used to gather in-depth information about the moderating variables and study objectives. KIIs were conducted, including meetings with key project stakeholders, mainly technical and management staff, using semi-structured KII guide. The criteria for participation was close engagement with the Key Informants to meaningfully respond to questions in the KII guide. Each KII included a moderator conducting the interview, and a research assistant taking notes. With permission from participants, the sessions were audio-recorded to capture the proceedings of the discussions. The purpose of the study was explained to each participant before being asked to sign an Informed Consent Form (ICF) before instrument administration.

3.6.1 Pilot testing

To increase validity and reliability, a pilot study was conducted to pre-test the questionnaire. Data collection instruments were pilot-tested in the field where instruments were administered the same way it was done in the main study. A small-scale trial run of all the procedures planned (data collection protocols) for use in the main study was done in one target NGO. NGO's used for pretesting were not included as part of the main study. Minor typing errors were identified and amended on the survey questionnaire. No issues were noted on the KII guidelines. In addition to pilot testing, twelve research assistants (5 female, 7 male), were trained on data collection techniques and contracted on short-term basis to collect field data. A full-day training for research assistants was conducted at St. Paul's University, Limuru Campus on March 13, 2019. The research assistants were recruited taking into account their academic qualifications and previous research experience. Other segments of the training focused on responsible conduct of research and ethical considerations.

3.6.2 Instruments reliability

Reliability concerns the extent to which a measurement of a phenomenon provides stable and consist result (Carmines and Zeller, 1979 as cited in Taherdoost (2016)). To demonstrate that data collection procedures under the study are replicable, with the same results (Yin, 2014), the researcher conducted a pilot test to check on the reliability of the questionnaire in answering the research questions. Unreliable questions identified in the

survey questionnaire were revised accordingly. Quantitative data consistency for each M&E dimension was also checked using a reliability test (Cronbach's Alpha methods). In this study, the Cronbach alpha coeffect was .937, implying that the scale was reliable with the study sample (Pavot, Diener, Colvin, & Sandvick, 1991).

3.6.3 Instruments validity

Validity explains how well the collected data covers the actual area of investigation (Ghauti and Gronhaug, as cited in Taherdoost (2016)). The researcher ensured that data collection instruments met validity standards (Yin, 2014) by maintaining data quality throughout the process. Validity was ensured in the following way: (a) use of reliable sources of data, corroboration with research assistants and cross-referencing with credible sources; (b) use of effective data collection tools and analysis methods (c) inbuilt data quality check in SurveyMonkey; (d) training of research assistants; reviewing the tools based on feedback; (f) cross-checking data collected daily to correct any anomalies while still in the field; (g) randomly spot-checking compiled data while in the field to validate their authenticity; and (h) de-briefing of the research team every evening.

3.7 Data analysis and presentation

The study utilized different methods to analyze data collected on each of the specific objectives. Basic descriptive analysis (including graphs and tables), correlation analysis and regression analysis was performed to generate quantitative findings. Data analysis was done in SPSS partly and Excel. Correlation analysis was conducted with SPSS to analyze the relations between and within components of the M&E system dimensions. Once the duplications and correlations are identified, the components were reorganized as per study questions with variables that are independent and representative of the measurements needed. Regression analysis was run to analyze the functional and explanatory relations between the core components of the M&E system dimension.

For the qualitative data, thematic content analysis was accomplished in two significant steps. First, KIIs responses were organized by topical areas through independent coding by two research assistants. Next, by continually comparing each code with the preceding ones to avoid redundancy, the researcher aggregated codes containing statements similar

in content to form themes. Finally, the researcher computed theme frequency (i.e., number of times a theme emerged in a KII, expressed as a percentage of the total number of KIIs). By quantifying qualitative data, the researcher gleaned more information which enhances the credibility of the research findings.

3.8 Ethical consideration

To ensure responsible conduct of research, the researcher adhered to the following accepted codes of conduct: a) sought informed consent from participants before conducting questionnaire surveys and key informant interviews; b) avoided information considered private or sensitive as this tantamount to infringing on the privacy of respondents; and c) avoided reporting wrong findings. All other people's ideas, processes, and results were given appropriate credit. Necessary authorizations were obtained before data collection from the board of postgraduate studies, the Ministry of Education National Commission for Science, Technology and Innovation (NACOSTI).

3.9 Summary

The study adopted a stratified and simple random sampling approach. The sample population included 348 registered NGOs operating in Nairobi. The target population was divided into strata (or subgroups including International NGOs, National NGOs and Local NGOs), and a random sample was taken from each subgroup. Organizations were picked randomly from each of the strata namely; International NGOs (focused on cross-country programs), National NGOs (focused on nation/country-wide programs) and Local NGOs (focused on specific programs carried out exclusively within Nairobi only). A partially mixed concurrent equal status design was employed. Quantitative and qualitative data collection instruments (questionnaire and interview guide for Key Informant Interviews) were used to gather primarily to address the research questions. Secondary information from literature reviews were also be collected. Basic descriptive, correlation analysis, and regression analysis were used to analyze quantitative feedback while and thematic content analysis was adopted for qualitative feedback. To ensure the responsible conduct of research, the researcher adhered to accepted codes of conduct.

CHAPTER FOUR
DATA ANALYSIS, PRESENTATIONS, INTERPRETATION, AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of data obtained from the survey and KIIs conducted. This section includes general information on the study sample, study response rate, presentation of findings and analysis based on the objectives of the study and as explored by the questionnaires and KIIs, where both quantitative and qualitative data were collected and analyzed to address the research questions.

4.2 Response Rate

The field research was conducted between March 18, 2019, and April 8, 2019. The study used a multimode approach (allowing for differing methods of returning surveys) to administer both paper-based questionnaires and online questionnaires. Paper-based surveys were administered to over 348 NGOs operating in Nairobi. To improve response rates in the study, an online survey on SurveyMonkey platform was also administered, with respondents being selected based on the study criteria described in Chapter Three. Repeat reminder emails to non-respondents were sent to prompt respondents and to get timely feedback. Respondents were also persuaded that their responses will be used. Where it was difficult to access respondents through face-to-face interviews, an online survey was sent for respondents to complete the questionnaires. Out of the 348 questionnaires administered, 254 (162 paper-based, 92 online surveys) were filled and returned using the multimode approach, representing a response rate of 73 percent. This response rate however exceeded the expected response rate of 60 percent assuring representativeness of the sample to the study population (Fincham, 2008). According to Morton, Bandara, Robinson and Carr (2012), a response rate of 60 percent is adequate.

Table 2: Response Rate.

Questionnaires administered	Questionnaires filled & returned	Percentage
348	254	73%

Source: Survey Data (2019)

4.3 Demographic Information

The study sought to find out the demographic information of the respondents which included sex, designation, level of education, years of work experience and age.

4.3.1 Sex and Designation

The gender distribution of the respondents was sought in a bid to establish if there were any gender parities between M&E Technical and Program Management staff. Findings revealed that more than half (57 percent) of the survey respondents were male, of whom 53 percent) were technical staff. Of the females who responded to the survey, the majority (71 percent) were management staff.

Table 3: Sex by Designation Crosstabulation (*n*=254)

		Designation	
		Technical Staff	**Management Staff**
Sex	Male	53.0%	47.0%
	Female	28.6%	71.4%
Total		42.9%	57.1%

Source: Survey Data (2019)

4.3.2 Age of respondents

Nearly half (49 percent) of the survey respondents were aged between 30-45 years, 41 percent were below 30 years while 10 percent were aged over 46 years.

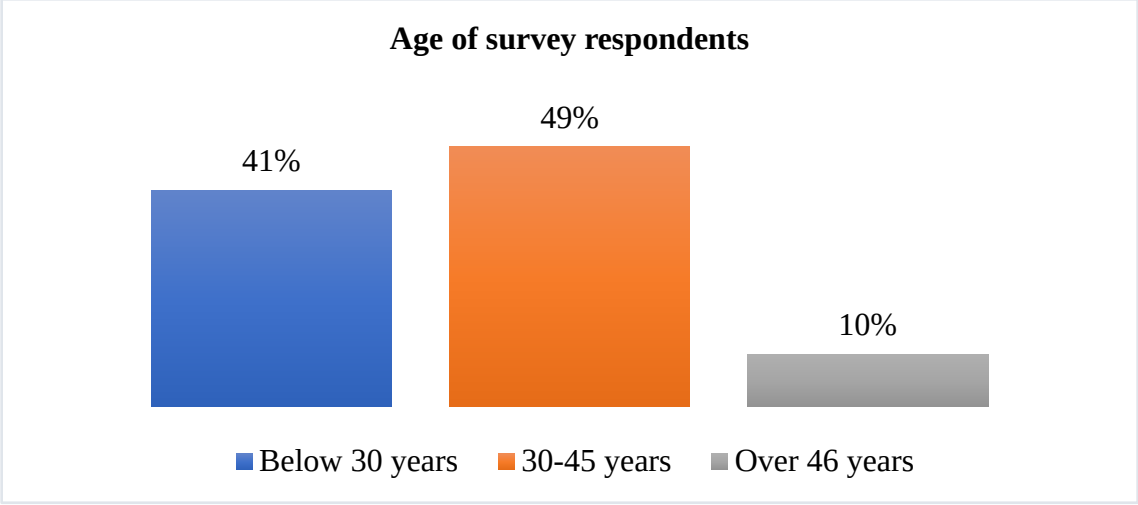


Figure 3: Age of survey respondents (*n*=254) **Source:** Survey Data (2019)

4.3.3 Education and Years of work experience

The study explored the relationship between respondents' years of experience and level of education. Findings revealed that nearly half (47 percent) of the respondents were bachelor degree holders, nearly half (55 percent) of whom had 2-5 years of work experience. On the other hand, 83 percent of those who had a master's degree and above also had over 6 years of work experience. Few (7 percent) of the respondents were Diploma holders.

Table 4: Education by Years of Experience Crosstabulation (*n*=254)

		Years of Experience		
		1-2 years	**2-5 years**	**Over 6 years**
Education	Diploma	25.0%	25.0%	50.0%
	Degree	20.2%	54.6%	25.2%
	Masters +	4.3%	13.0%	82.6%
Total		13.4%	33.5%	53.1%

Source: Survey Data (2019)

4.3.4 Types of NGOs

The study sampled 254 NGOs registered and operating in Nairobi. Of the 254 NGOs, 43 percent were international NGOs, 33 percent national NGOs and 24 percent local NGOs.

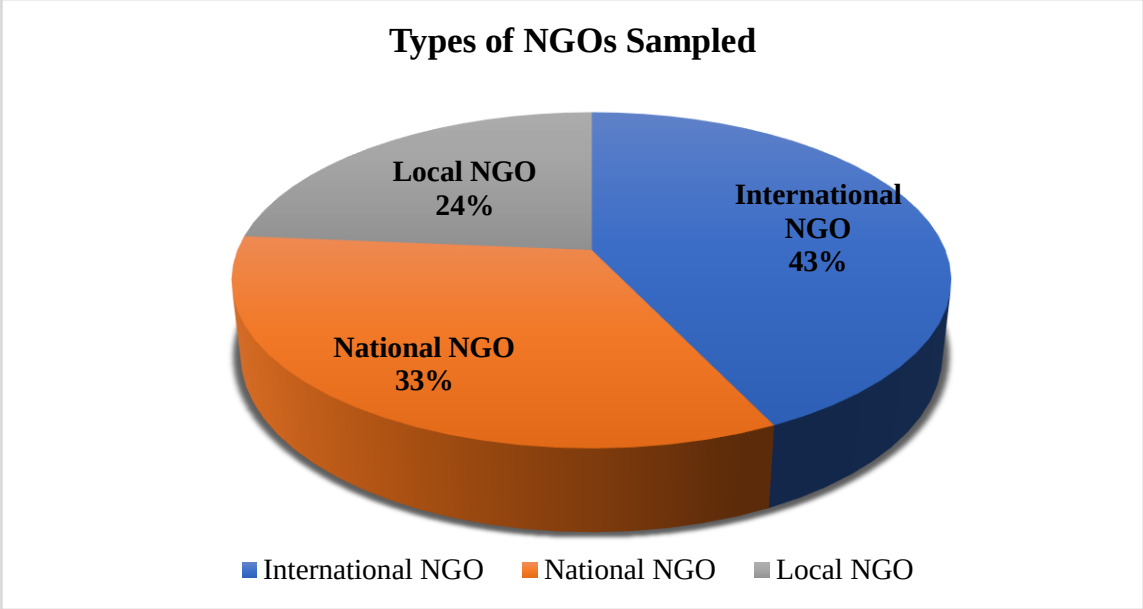


Figure 4: Types of NGOs Sampled (*n*=254) **Source:** Survey Data (2019)

4.4 Dimensions of effective M&E systems

This section presents research findings based on descriptive and inferential analysis of feedback from the questionnaire survey and thematic content analysis of KIIs conducted among NGOs in Nairobi. Specifically, this section elucidates perspectives of Managerial Staff and M&E Technical Staff on four dimensions of effective M&E systems; the availability of M&E information, M&E information accessibility, and M&E Systems responsiveness and M&E system sustainability within the sampled NGOs.

4.4.1 Influence of M&E information availability on managerial decision-making

A majority (77 percent) of the survey respondents agreed or agreed strongly that their NGOs' M&E systems generated timely information in supporting decision making. Consistent with survey findings, KIIs also indicated that information gathered from M&E systems was largely used to inform the next steps of the project implementation cycle and in informing new projects/programs. This finding was in agreement with the views of Wongtschowski, Oonk, & Mur, (2016), who noted that M&E systems are principally set-up to generate timely information on the implementation and results of development programs or project. Moreover, (Baar, Deligianni, & Stettina, 2016) also argued that M&E information is valuable to facilitate improved decision making and to inform strategies among NGOs.

Most respondents (86 percent) reported that their organizations generated program M&E mandatory reports on a timely basis implying that the program mandatory reports were produced within the agreed timeframes and quality. M&E Program documents such as Activity Monitoring, Evaluation and Learning Plans (AMELP) and Performance Indicator Reference and Tracking Sheets (PIRS) were availed in a timely fashion to decision-makers and other stakeholders. 78 percent of the survey respondents reported that their NGOs produced timely study M&E reports of evaluations and studies. Studies and evaluations are often independently commissioned by funders. These findings on the availability of M&E information among NGOs was in line with the observations of Moreland & Curran (2018) who suggested that by providing a basis for measurable performance and accurate reporting on the results achieved by development interventions, M&E systems are essential because funders and other stakeholders want to know about the project progress

and results. This view however contradicts that of Cronin and Sadan (2015) who contended that M&E information was rarely analyzed and used for program learning and decision-making purposes.

Table 5: Sub-dimensions of M&E information availability (*n*=254)

Sub-dimensions of M&E Information Availability	**n**	**DS+D**	**DS**	**D**	**N**	**A**	**AS**	**A+AS**
		%	%	%	%	%	%	%
1) The organization generates timely program M&E mandatory reports.	254	**8**	2	6	6	51	35	**86**
2) The organization produces timely study M&E reports of evaluations and studies	254	**12**	4	8	10	60	18	**78**
3) The organization has M&E dashboards which are made available to program managers and other stakeholders.	254	**18**	2	16	13	49	20	**69**
4) There exists a knowledge sharing system for M&E information.	254	**14**	2	12	10	51	25	**76**
5) There exist M&E data communication tools in the organization.	254	**10**	4	6	14	51	25	**76**
Average	254	**12**	**3**	**9**	**11**	**52**	**25**	**77**

n=number of participants; **DS** = Disagree Strongly; **D** = Disagree; **N** = Neutral; **A** = Agree; **AS** = Agree Strongly. **Source:** Survey Data (2019)

A majority (76 percent) reported that there existed a knowledge sharing system for M&E information as well as M&E data communication tools in their organizations. Key informants reported using data communication tools such as Enterprise Resource Planning (ERP), Antiretroviral Dispensing Tool (ADT), IQ Care, Open Data Kit (ODK) and other government service delivery tools. The existence of a knowledge sharing system also suggests that the projects/ programs organized learning events at least twice a year based on information generated from the M&E systems and that beyond the program mandatory M&E reports, evaluations, and other studies reports. M&E information was packaged more regularly in memorandums, snapshots, briefs, annual scorecards, annual and periodic reports, donor reports, mailing lists and other communication tools for a better sharing of program results and achievements. Having talked to technical and managerial

staff on level of M&E information availability embedded within NGO's knowledge sharing platforms, a KII respondent said;

> *"Knowledge generated from M&E systems is normally shared through reports, and write-ups on our website, and verbally during regular Program Review Meetings."* (KII 12, 2019)

Thematic content analysis of KIIs further revealed that M&E platforms are used to actively translate data into meaningful information used to guide implementation and to track programs/projects progress and to relay success stories. Only 69 percent of the survey respondents reported having M&E dashboards which are made available to program managers and other stakeholders. This survey finding was consistent with KII feedback which revealed that the M&E dashboards are sometimes over-engineered and complicated, using too many tools to enter and report data resulting into limited use of M&E information. Furthermore, this finding is comparable to the study observations of Cronin and Sadan (2015) who found that numerous frameworks and reporting formats create a confusing mass of information that is problematic to effectively use for the enhancement of programs. While commenting on the nature of M&E dashboards used, one KII respondent said,

> *"M&E systems should be designed in a way that generates demand for information to be used by decision-makers in the formulation and adoption of new strategies. M&E should be more proactive to respond to program staff demands/needs to make the system more adaptive and responsive."* (KII 4, 2019)

The relationships among the five sub-dimensions of M&E information availability were investigated using Pearson product-moment correlation coefficient. Initial analyses were done to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. From the output given in Table 6, there was a strong positive relationship between 'the existence of knowledge sharing systems for M&E information' and 'existence of M&E data communication tools in the organization' (r=0.75). 'Timely production of both M&E study reports' and 'timely production of mandatory reports' was also strongly associated (r=0.61 and r=0.69 respectively) with the 'existence of knowledge

sharing systems for M&E information.' In summary, the sub-dimension - existence of knowledge sharing systems for M&E information was found as a key measurement of information availability and can represent the four other measurements. The existence of knowledge sharing systems for M&E information implies that regular discussions and brainstorming were conducted among program stakeholders for decision making. These findings are consistent with the assertions of Haider (2016), who said that the quality of their decisions have a direct positive correlation to quantity and quality of information available to decision makers in NGOs.

Table 6: Matrix of correlation of measurements of M&E information availability (*n*=254)

	1) NGO generates timely program M&E mandatory reports	NGO produces timely study M&E reports of evaluations and studies	3) NGO has M&E dashboards made available to program managers and stakeholders.	4) There exists a knowledge sharing system for M&E information.	5) There exist M&E data communication tools in the organization.
2) NGO produces timely study M&E reports of evaluations and studies	**.693****	**1**			
3) NGO has M&E dashboards which are made available to program managers and stakeholders.	**.403****	**.402****	**1**		
4) There exists a knowledge sharing system for M&E information.	**.610****	**.639****	**.657****	**1**	
5) There exist M&E data communication tools in the organization.	**.459****	**.647****	**.570****	**.750****	**1**

** Correlation is significant at the 0.01 level (2-tailed). **Source:** Survey Data (2019)

4.4.2 Influence of M&E information accessibility on managerial decision-making

About one-half (53 percent) of the survey respondents agreed or agreed strongly that their M&E information was accessible in supporting decision making. A majority (79 percent) reported that program managers had timely access to data on program achievements and

results, implying that most program managers did not have difficulty interpreting the data and findings generated from the M&E systems. This finding contradicts the views of Barends, Rousseau and Briner (2014) who noted that few development practitioners have the requisite capacity to critically examine (access) information they use for decision-making. Nevertheless, nearly one-quarter (28 percent) found their M&E information inaccessible implying that some program managers had difficulty accessing and interpreting M&E information for decision making. The limited ability of managerial staff to access M&E information was also confirmed by a key informant who said that;

> *"We need to re-structure and re-design the entire M&E system to enable it respond to the information needs of both our organization and donors, for smoother program planning, implementation reporting, and learning."* (KII 7, 2019)

Flora (2018) attributed low uptake of evidence for managerial decision-making to the inaccessibility of evidence and difficulty in understanding M&E data. This finding was also similar to the observations of Stout *et al.*, (2018), who noted that there are negative implications for decision-making, accountability, and learning when M&E systems products (data, information, and evidence) are not useful or used.

Table 7: Sub-dimensions of M&E information accessibility (*n*=254)

Sub-dimension of M&E Information Accessibility	**n**	**DS+ D**	**DS**	**D**	**N**	**A**	**AS**	**A+A S**
		%	%	%	%	%	%	%
1) Program managers have timely access to data, information, and evidence on program achievements and results.	254	**18**	0	18	4	49	30	**79**
2) Other program stakeholders (including external) have access to M&E data.	254	**26**	0	26	22	49	4	**53**
3) Accessing monitoring data for evaluation purpose is easy.	254	**30**	8	22	22	35	13	**48**
4) All partners (including public) can access program M&E data.	254	**45**	20	25	26	19	10	**29**
5) M&E data is user-friendly for all users.	254	**21**	0	21	28	43	13	**56**

Average	254	**28**	**14**	**22**	**21**	**39**	**14**	**53**

n=number of participants; **DS** = Disagree Strongly; **D** = Disagree; **N** = Neutral; **A** = Agree; **AS** = Agree Strongly. **Source:** Survey Data (2019)

Nearly one-half (45 percent) of the survey respondents felt that partners (including relevant public, researchers and media who were interested in the NGO program M&E information) had difficulty accessing relevant data and information. Only 29 percent of the survey respondents agreed that relevant public can access program M&E data implying that there is a need for better sharing, dissemination, and use of the evidence and information generated through the program M&E system.

Over one-half (56 percent) of the survey respondents agreed or agreed strongly that M&E data is user friendly for all users implying that M&E information users in at least half of the NGOs had technical problems in their interpretation or use of the data and findings and recognized the user-unfriendliness of the M&E information. This findings were consistent with those of Ba (2019), who observed that decision makers experience challenges in accessing user-friendly M&E systems able generate relevant, timely and easy-to-interpret data to facilitate informed managerial decisions. Responding to the question as to how their M&E system can be made more beneficial to organizational users, one key informant observed that;

> *"Our M&E systems can be made more beneficial if we share the goals of project M&E with project staff, and have the reporting tools harmonised to avoid duplication of the same piece of information in various reports. Also, the program can benefit a lot if both program staff and the M&E department would work harmoniously as opposed to working in silos."* (KII 8, 2019)

Table 8: Matrix of correlation of measurements of M&E information accessibility (*n*=254)

	1) Program managers have timely access information on program achievements and results.	2) Other program stakeholders have access to M&E data.	3) Accessing monitoring data for evaluation purpose is easy.	4) All partners can access program M&E data.	5) M&E data is user-friendly for all users.
2) Other program stakeholders (including external) have access to M&E data.	**.486****	**1**			
3) Accessing monitoring data for evaluation purpose is easy.	**.419****	**.373****	**1**		
4) All partners (including public) can access program M&E data.	**.400****	**.298****	**.575****	**1**	
5) M&E data is user-friendly for all users.	**.450****	**.272****	**.262****	**.395****	**1**

** Correlation is significant at the 0.01 level (2-tailed). **Source:** Survey Data (2019)

The relationships among the five sub-dimensions of M&E information accessibility were investigated using Pearson product-moment correlation coefficient. Initial analyses were performed to ensure that the assumptions of homoscedasticity, linearity and normality were not violated. From the output given in Table 8, there was a strong positive relationship between the 'level of accessing monitoring data for evaluation purposes' and the 'level of partners accessing program M&E data.' (r=0.58). The strong positive relationship identified between the two measures implies that at any time of the program life cycle, evaluation teams mobilized to conduct M&E activities could access all needed M&E data straight from the inception of their studies, avoiding overlaps in data collection and ensuring consistency in the production of evidence and findings. This positive relationship was confirmed by a key respondent who said,

> *"Our M&E system generates information that is accessible and available to various stakeholders at their various levels. Key among them are the donors who receive periodic reports on the project progress. These reports are then disseminated to the various counties, and project focus areas as required."* (KII 13, 2019)

The relationships between the other measurements were found not to be significant. In summary, the sub-dimension of M&E system information accessibility was captured through the two key measurements: 1) Level of accessing monitoring data for evaluation purposes and 2) Level of partners accessing program M&E data.

4.4.3 Influence of M&E system responsiveness on managerial decision-making

A majority (77 percent) of the survey respondents agreed or agreed strongly that their M&E system was responsive in supporting managerial-decision making. This implies that the NGO M&E systems readily supplied data/information upon short notice requests of program stakeholders. Majority (88 percent) reported that the system promptly responded to donor requests on the program achievement and results implying that the M&E team cooperates very well with their donors and that the system was highly responsive in providing donors with the M&E data, information or other relevant evidence on the program in order to make sure that the donor was cognizant and had appropriated the program achievements and results.

Having talked to technical and managerial staff on the responsiveness of their M&E systems, key informant feedback was consistent with survey findings that M&E systems were primarily built to service donor information needs and to meet donor requirements. For example, one key informant said;

> *"M&E reports to the donor are tailored in a pre-defined and prescribed standard format to meet donor requirements. This is unlike the preparation of internal progress reports where the data collection team at the grassroots level generate simple reports for easy understanding and usability."* (KII 8, 2019)

Table 9: Sub-dimensions of M&E system responsiveness (*n*=254)

Sub-dimensions of M&E system responsiveness	n	DS+D	DS	D	N	A	AS	A+AS
		%	%	%	%	%	%	%
1) M&E data/information is readily available upon requests of program stakeholders.	254	**12**	0	12	10	50	28	**78**
2) The organization carries out timely and specific M&E studies requested by the program managers.	254	**16**	2	14	18	47	20	**66**
3) The M&E team produces tailored reports on a timely basis for program management and learning events.	254	**10**	4	6	14	49	27	**76**
4) The M&E system responds to donor requests on the program achievements and results.	254	**2**	0	2	10	49	41	**88**
Average	254	**10**	**3**	**7**	**13**	**48**	**29**	**77**

n=number of participants; **DS** = Disagree Strongly; **D** = Disagree; **N** = Neutral; **A** = Agree; **AS** = Agree Strongly. **Source:** Survey Data (2019)

On the other hand, 66 percent of the survey respondents observed that their NGOs carried out timely and specific M&E studies requested by the program managers implying that the M&E team was somewhat receptive and responsive when it receives new requests of specific studies or assessments expressed by the program managers and other decision makers within a revised scope and budget approved.

The relationships among the four sub-dimensions of M&E system responsiveness were explored using Pearson product-moment correlation coefficient. Initial analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. From the output given in Table 10, there was a strong positive relationship between 'The M&E system's capability to respond to donor requests on program achievements and results' and 'The NGO's capability to carry out timely and specific M&E studies requested by the program managers' (r=0.75). 'The level of availability of M&E data/information upon requests of program stakeholders.' and 'The capacity of M&E team to produce tailored reports on a timely basis for program management and learning events' were also strongly associated (r=0.71 and r=0.62 respectively) with the 'The M&E system's capability to respond to donor requests on program achievements and results.' In summary, the sub-dimension – 'The M&E system's

capability to respond to donor requests on program achievements and results" was strongly and positively associated to M&E system responsiveness and could represent the three other measurements.

Table 10: Matrix of correlation of measurements of M&E system responsiveness. (*n*=254)

	1) M&E data/information is readily available upon requests of program stakeholders.	2) Organization carries out timely and specific M&E studies requested by the program managers.	3) M&E team produces tailored reports on a timely basis for program management and learning events.	4) M&E system responds to donor requests on the program achievements and results.
2) Organization carries out timely and specific M&E studies requested by the program managers.	**.708****	**1**		
3) M&E team produces tailored reports on a timely basis for program management and learning events.	**.555****	**.581****	**1**	
4) M&E system responds to donor requests on the program achievements and results.	**.655****	**.751****	**.616****	**1**

** Correlation is significant at the 0.01 level (2-tailed). **Source:** Survey Data (2019)

4.4.4 Influence of M&E system sustainability on managerial decision-making

Nearly one half (58 percent) of the survey respondents agreed or agreed strongly that their M&E systems were sustainable in supporting managerial decision making. This finding implies that the functionality of the NGOs' M&E systems was not adequately resilient and the M&E system could be significantly affected if and when significant changes occur in the M&E team. This finding was consistent with the assertions of Lopez-Acevedo, Krause, and Mackay (2012) who noted that a successful M&E systems is able to survive

changes in NGO staffing. KII feedback on the sustainability of M&E system was in line with survey findings. For example, a key informant said;

> *"Our M&E system is not effective as the staff have not embraced its full use and potential. As much as relevant information is updated and input in the M&E Enterprise Resource Planning (ERP) information system, staff keep leaving the organization draining the institutional memory. There is a risk of losing out as a result of staff turnover when staff leaves with office information."* (KII 14, 2019)

Knowledge and information sharing practices within most NGOs organizations need to be reviewed and amended, to allow new staff especially in the M&E department to adequately familiarize with already established M&E systems. This way the transition of M&E technical staff is swift and smooth as NGO staff don't have to re-invent the wheel by developing new M&E tools and protocols. KII respondents acknowledged the need for M&E Technical Staff to train program staff on M&E systems to allow optimal benefit from the systems.

Table 11: Sub-dimensions of M&E system sustainability (*n*=254)

Sub-dimensions of M&E System Sustainability	**n**	**DS+D**	**DS**	**D**	**N**	**A**	**AS**	**A+AS**
		%	%	%	%	%	%	%
1) The M&E system remains fully functional when significant changes occur in the M&E team.	254	**12**	0	12	26	39	24	**62**
2) M&E decentralized units are functional with minimum supervision and support.	254	**16**	2	14	30	39	16	**54**
3) Program managers and other stakeholders can access M&E information with minimum support from the M&E team	254	**28**	2	26	26	37	10	**46**
4) M&E data and information is used after program closure	254	**16**	2	14	14	45	26	**70**
Average	254	**18**	**2**	**16**	**24**	**40**	**19**	**58**

n=number of participants; **DS** = Disagree Strongly; **D** = Disagree; **N** = Neutral; **A** = Agree; **AS** = Agree Strongly. **Source:** Survey Data (2019)

Less than one half (46 percent) of the survey respondents agreed or agreed strongly that Program managers and other stakeholders can access M&E information with minimum support from the M&E team implying that less than one-half (46 percent) of decision makers had easy access to the M&E data with minimal support from the M&E team and can understand, interpret and use the M&E information with minimal technical support from the M&E team. Nearly one-half (54 percent) of the survey respondents observed that M&E decentralized units are functional with minimum supervision and support implying that barely one-half of NGOs with M&E decentralized (field level) units are able to be completely functional with minimal supervision from the headquarter and are delivering high-quality inputs that meet the essentials of data quality standards at any time during the program lifetime.

Table 12: Matrix of correlation of measurements of M&E system sustainability (*n*=254)

	1) M&E system remains fully functional when significant changes occur in the M&E team.	2) M&E decentralized units are functional with minimum supervision and support.	3) Program managers and other stakeholders can access M&E information with minimum support from the M&E team	4) M&E data and information is used after program closure
2) M&E decentralized units are functional with minimum supervision and support.	**.487****	**1**		
3) Program managers and other stakeholders can access M&E information with minimum support from the M&E team	**.585****	**.426****	**1**	
4) M&E data and information is used after program closure	**.405****	**.309****	**.263****	**1**

** Correlation is significant at the 0.01 level (2-tailed). **Source:** Survey Data (2019)

Majority (70 percent) of the survey respondents observed that M&E information and data was used even after program closure implying that majority of the NGOs recognized the importance and usefulness of M&E data and information even beyond the program schedule and lifetime for post evaluations initiatives (including resource mobilization) or as a baseline for future programming. Lopez-Acevedo, Krause, and Mackay (2012)

identified an effective M&E system as one which is utilized over a sustained period of time. Consistent with this survey finding, a KII respondent said;

> *"Evaluations reports have helped in informing programs/project design, quality reporting and in informing decision making. The benefits of evaluations are however not fully exploited."* (KII 5, 2019)

The relationships among the four sub-dimensions of M&E information accessibility were investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. From the output given in Table 12, there was a strong positive correlation between the 'The capability of the M&E system to remain fully functional when significant changes occur in the M&E team' and 'the capability of Program managers and other stakeholders can access M&E information with minimum support from the M&E team.' (r=0.58). The other correlations are not significant enough. In summary, the sub-dimension of M&E systems sustainability was captured through the two key measurements: 1) The capability of the M&E system to remain fully functional when significant changes occur in the M&E team and 2) Capability of Program managers and other stakeholders can access M&E information with minimum support from the M&E team.

4.5 Effects of M&E system dimensions on NGO Managerial Decision-Making

About 68 percent of the survey respondents agreed or agreed strongly that Managerial Decision Making had improved as a result of evidence, data and information generated from their NGO M&E systems. Majority (73 percent) observed that there was improved Strategic Decision-Making in the organization attributable to the program M&E system effectiveness, implying that there is irrefutable and concrete evidence that shows clearly that there is strategic decision-making improvement in the program or inside the organizations. This finding was in line with that of Haider (2016), who observed that program managers depend on M&E information to make decisions which in-turn significantly influence on the strategic value of the programs and projects delivered.

Having spoken to technical and managerial staff from NGOs on the usefulness of M&E information to support strategic decision-making, one key informant said,

> *"M&E evidence is the basis upon which all our programs, and organizational decisions are made. M&E provides data used for formulation of short-term and long-term organizational strategies as well as to guide daily decisions on operations."* (KII 3, 2019)

This finding on the usefulness of M&E information to support strategic management decision was further supported by thematic content analysis of all 17 KIIs which revealed that NGOs utilize M&E information for decision making during the conceptualization of new programs and projects, in deciding program priorities, in determining the inputs (human resources and finances) required for successful delivery of projects, in the design and selection of performance measurements or indicators, in project planning and learning. KIIs also disclosed the significance of M&E in improving managerial decision-making within NGOs, with content analysis of respondents' feedback revealing three key net-benefits of M&E information: 1) M&E provides data which when manipulated and analysed results to information critical to understanding trends upon review to then fit to a bigger picture; 2) M&E informs the project planning and implementation teams on how to allocate resources; 3) M&E helps in the alignment of the strategic plan with donor requirements and thus support the achievement of global objectives.

Table 13: Managerial Decision Making (*n*=254)

M&E System Value add on Managerial Decision Making	**n**	**DS+D**	**DS**	**D**	**N**	**A**	**AS**	**A+AS**
		%	%	%	%	%	%	%
1) There is improved Operational Decision-Making in the organization attributable to the program M&E system effectiveness.	254	**12**	0	12	19	38	32	**69**
2) There is improved Tactical Decision-Making in the organization attributable to the program M&E system effectiveness.	254	**14**	0	14	24	39	24	**63**
3) There is improved Strategic Decision-Making in the organization	254	**6**	0	6	22	45	27	**73**

attributable to the program M&E system effectiveness.								
Average	254	**10**	**0**	**10**	**22**	**41**	**28**	**68**

n=number of participants; **DS** = Disagree Strongly; **D** = Disagree; **N** = Neutral; **A** = Agree; **AS** = Agree Strongly. **Source:** Survey Data (2019)

Nearly 69 percent of survey respondents reported improved Operational Decision-Making in the organization attributable to the program M&E system effectiveness with 63 percent citing improved Tactical Decision-Making in the organization attributable to the program M&E system effectiveness. Not all managerial decisions are however pegged on M&E information as revealed by study findings. One key informant noted that,

> *"M&E facilitates planning processes in our organization to a limited extent as other factors come into play. Decisions are guided by a legal lens which renders the M&E contribution less powerful."* (KII 16, 2019)

Apart from evidence and information generated form M&E systems, KIIs identified the following five alternative mechanisms that influence decision making in NGOs: 1) Consensus and collective voice by Management Team; 2) Donor requirements and priorities (e.g., "decisions in our organization are made based on the donor ideologies and donor funding priorities...." [KII 15, 2019]); 3) Board of Directors Decisions; 4) National government and County Policies and Regulations; and 5) Legal instruments (including the Constitution of Kenya). Having talked to key informants, one key informant said,

> *"To some extent, the information gathered from the system is used to make decisions, though not at all times. Based on other external factors, evidence may not be used to inform the decision especially if it is against the project plan or policy for the donor/organization."* (KII 7, 2019)

The relationships among the three measures of Improved Managerial Decision-Making were investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. From the output given in Table 14, there was strong positive correlation between 'Improved Strategic Decision-Making in the organization attributable to the program M&E system effectiveness' and 'Improved Tactical Decision-Making in

the organization attributable to the program M&E system effectiveness' (r=0.81). 'Improved Operational Decision-Making in the organization attributable to the program M&E system effectiveness' was also strongly associated (r=0.78) with the 'Improved Strategic Decision-Making in the organization attributable to the program M&E system effectiveness.' In summary, the sub-dimension – 'Improved Strategic Decision-Making in the organization attributable to the program M&E system effectiveness' is strongly and positively associated to Managerial Decision-Making and can represent the two other measurements.

Table 14: Matrix of correlation of measurements of Managerial Decision-Making (*n*=254)

	1) There is improved Operational Decision-Making in the organization attributable to the program M&E system effectiveness.	2) There is improved Tactical Decision-Making in the organization attributable to the program M&E system effectiveness.	3) There is improved Strategic Decision-Making in the organization attributable to the program M&E system effectiveness.
2) There is improved Tactical Decision-Making in the organization attributable to the program M&E system effectiveness.	**.782****	**1**	
3) There is improved Strategic Decision-Making in the organization attributable to the program M&E system effectiveness.	**.781****	**.808****	**1**

** Correlation is significant at the 0.01 level (2-tailed). **Source:** Survey Data (2019)

4.5.1 Relationship between dimensions of M&E system and Managerial-Decision Making

This section of the analysis examines the effects of the four dimensions of effective M&E system: Information Availability, Information Accessibility, System Responsiveness and System Sustainability, on managerial decision making. A multinomial logistic regression was adopted to test the model and predict categorical outcomes with 5 categories given that the survey questionnaire was a 5-Point Likert-Scale created to measure the level of ranking by respondents from the sampled NGOs. This allowed the study to explore the predictive ability of sets of stock variables, and to specify the entry of variables based on

a ranking system from 1 to 5 for stock variables, while controlling for the effects of other predictors in the model.

All independent (predictor) variables; Information Availability (IAv), Information Accessibility (IAc), System Responsiveness (SR) and System Sustainability (SS) were entered into the equation simultaneously. Each independent variable was then assessed in terms of its predictive power. This helped determine how much the unique variance of the dependent variable (managerial decision making) was explained by each the four dependent variables thereby giving an indication of the relative contribution of each independent variable. The results are presented below.

Number of complete observations: 254, out of a total of 254 observations.

Equation Model:

Managerial Decision-Making = 0.337 + 0.144*IAv + 0.095*IAc + 0.388*SR + 0.289*SS

Influence of explanatory variables

	Coefficient	**Standard coefficient**
Constant	.337	
Information Availability (IAv)	.144	.168
Information Accessibility (IAc)	.095	.131
System Responsiveness (SR)	.388	.329
System Sustainability (SS)	.289	.323

Quality of estimate:

The model accounts for **53.79 percent** of the variance of the variable to be explained.

Coefficient of the multiple correlation: R = **0.734**.

P-value of R: p(R) = <**0.01**.

The model composed of Information Availability, Information Accessibility, System Responsiveness and System Sustainability explains 53.79 percent of the variance of Managerial Decision-Making. The coefficient of multiple correlations (R) has also shown a good model. In summary, the four sub-dimensions of M&E; Information Availability, Information Accessibility, System Responsiveness and System Sustainability were positively linked and contributed positively (54 percent) to improved managerial decision-making in NGOs.

4.6 Summary

Chapter four presents perspectives of 254 NGOs (43 percent International, 33 percent National, and 24 percent Local) that participated in the research study conducted between March 18, 2019 and April 8, 2019 in Nairobi. The study achieved a response rate of 73 percent, exceeding the expected response rate of 60 percent and thus assuring representativeness of the sample to the study population. Study findings were presented based on descriptive (frequencies and percentages) and inferential analysis (correlation and regression) of the questionnaire survey and thematic content analysis of KIIs conducted. 57 percent of the survey respondents were male, of whom 53% were technical staff. Of the females who responded to the survey, 71 percent were management staff. 49 percent of the survey respondents were aged between 30-45 years, 41 percent were below 30 years while 10 percent were aged over 46 years. The study revealed that 77 percent of the sampled NGOs' M&E systems generated timely information and that their M&E systems were responsive in supporting decision making. Information gathered from M&E systems was largely used to inform project planning and implementation. 53 percent of the sampled NGOs could access M&E information to support decision making. 58 percent of the survey respondents agreed or agreed strongly that their M&E systems were sustainable in supporting managerial decision making. The four sub-dimensions of M&E; Information Availability, Information Accessibility, System Responsiveness and System Sustainability were positively associated and jointly accounted for 54 percent of improved managerial decision-making in NGOs.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter briefly discusses the summary of findings, provides a set of conclusions and recommendations, and lastly offers suggestions for further research. This study sought to examine the effects of M&E systems on managerial decision-making among NGOs in Nairobi County, Kenya.

5.2 Summary of findings

The study was designed to investigate the extent to which managerial decision-making among NGOs in Nairobi, Kenya was influenced by four dimensions of effective M&E systems; 1) the availability of M&E information, 2) M&E information accessibility, 3) M&E systems responsiveness, and 4) M&E system sustainability. To address the research questions, quantitative and qualitative data was collected and analysed yielding five main findings as follows:

5.4.1 M&E information availability was positively linked and contributed positively to improved NGO managerial decision-making.

The study noted that majority of NGOs' M&E systems generated timely information to support decision making by generating program M&E mandatory reports within the agreed timeframes. Information gathered from M&E systems was largely used to inform project planning and implementation. There also existed knowledge sharing systems for M&E information as well as M&E data communication tools within most organizations. Various data communication tools including Enterprise Resource Planning (ERP), Antiretroviral Dispensing Tool (ADT), IQ Care, Open Data Kit (ODK) and other government service delivery tools were utilized. M&E platforms were also used to actively translate data into meaningful information used to guide implementation and to track programs/projects progress and to relay success stories. The study noted the limited use of M&E dashboards since the dashboards were found to be over-engineered and complicated. Strong positive relationships among the sub-dimensions of M&E information availability were observed. M&E information availability was positively

linked and contributed positively (57 percent) to improved NGO managerial decision-making.

5.4.2 M&E information accessibility moderately influenced NGO managerial decision-making.

Nearly one-half of the NGOs could easily access M&E information to support decision making with a significant proportion of the program manager reporting difficulty accessing and interpreting the evidence, data, and information for decision making. The study noted that nearly half of the NGO partners (including relevant public, researchers and media who were interested in the NGO program M&E information) had difficulty accessing relevant data and information hinting at a need for better sharing, dissemination, and use of the evidence and information generated through the program M&E system. There was a strong positive relationship between the 'level of accessing monitoring data for evaluation purposes' and the 'level of partners accessing program M&E data' implying that at any time of the program life cycle, evaluation teams mobilized to conduct M&E activities could access all needed M&E data straight from the inception of their studies. Accessibility of M&E information was positively linked and contributed positively (59 percent) to improved managerial decision-making in NGOs.

5.4.3 Responsiveness of M&E systems greatly influenced NGO managerial decision-making.

A majority of the NGOs found their M&E system responsive in supporting managerial decision-making implying that the NGO M&E systems readily supplied data/information upon short notice requests of program stakeholders. The study noted that the existent M&E systems promptly responded to donor requests on the program achievement and results suggesting that the M&E team cooperates very well with their donors. This could further infer that most NGO M&E systems were primarily built to service donor information needs and to meet donor requirements. A strong positive relationship was found between 'M&E system's capability to respond to donor requests on program achievements and results' and 'NGO's capability to carry out timely and specific M&E studies requested by the program managers.' The study found that 'The M&E system's

capability to respond to donor requests on program achievements and results' was strongly and positively associated to M&E system responsiveness and could represent the three other measurements on system responsiveness. Responsiveness of M&E systems was positively linked and contributed positively (65 percent) to improved managerial decision-making in NGOs.

5.4.4 M&E system sustainability was positively linked and contributed greatly to improved NGO managerial decision-making.

Over one-half of the NGOs had sustainable M&E systems that supported managerial decision making beyond program life-time with majority recognizing the importance and usefulness of M&E data and information even beyond the program lifetime. The study nevertheless noted that the functionality of the M&E systems was not adequately resilient and could be significantly affected if and when significant changes occurred in the M&E team. The study further revealed that knowledge and information sharing practices within most NGOs organizations needed to be reviewed and amended, to allow new staff especially in the M&E department to adequately familiarize with already established M&E systems. Most decision makers had difficulty accessing M&E data with minimal technical support from the M&E team. Analysis of correlation coefficients revealed that M&E systems sustainability was captured significantly through the two key measurements: 1) Capability of the M&E system to remain fully functional when significant changes occur in the M&E team and 2) Capability of Program managers and other stakeholders can access M&E information with minimum support from the M&E team. Sustainability of M&E systems was positively linked and contributed positively (65 percent) to improved managerial decision-making in NGOs.

5.4.5 M&E systems contribute significantly to improved managerial decision-making

Using Pearson product-moment correlation coefficient, the study analysed relationships among the sub-dimensions of M&E systems M&E; Information Availability, Information Accessibility, System Responsiveness and System Sustainability. The four sub-dimensions were positively linked and jointly contributed positively (54 percent) to

improved managerial decision-making in NGOs. Majority (68 percent) of NGOs attributed their improved Managerial Decision-Making capabilities to evidence, data and information generated from their NGO M&E systems with 69 percent of the NGOs reporting improved Operational Decision-Making in their organizations attributable to the program M&E system effectiveness and 63 percent citing improved Tactical Decision-Making in the organization attributable to the program M&E system effectiveness.The influence of moderating variables on managerial decision making could not be ignored. The study found out that managerial decisions are not entirely pegged on M&E Systems. Thematic content analysis of KIIs revealed that organizational culture, embedded within five alternative mechanisms influence decision making in NGOs: 1) Consensus and collective voice by Senior Management Team; 2) Donor requirements and priorities 3) Board of Directors Decisions; 4) National government and County Policies and Regulations; and 5) Legal instruments (including the Constitution of Kenya).

5.3 Conclusions

This research produced comprehensive information which can facilitate in building an effective M&E system that successfully supports improved managerial decision-making among NGOs. Development actors, including National and County Governments, Donors, NGOs, CBOs, and development practitioners can use the study results to inform M&E and decision-making practice in a learning process. The use of relevant and reliable evidence is viewed as a means to enhance decision-making processes especially in instances where subjective decision-making abounds. While some managerial decisions are influenced by organizational culture as well as decision makers' individual experience, this study finds that M&E systems contribute significantly in providing a basis for making choices based on reliable and valid information and evidence.

Consistent with the literature review conducted in this study, research analysis has demonstrated tangible measured relationships between M&E systems and their effects on managerial decisions. The analysis of the results as presented in in Figure 5 presents various standardized coefficients from various multiple regressions that reveal the pathway for NGOs to ensure Improved Managerial Decision-Making in the planning, implementation and control of development projects and programs.

Based on the study findings that managerial decision-making practice relies to a large extent on the availability and accessibility of high-quality information, as well as responsive and sustainable process of feeding evidence into decision-making procedures, it is logical to conclude that firstly, if M&E information is readily available and accessible, then the M&E systems can supply timely and reliable information demanded by various program decision makers. Secondly, if the M&E system is sustainable, then NGOs can seamlessly benefit from M&E information and remain fully functional despite significant changes within the M&E team. Thirdly, if the M&E system is responsive to user's needs, then the NGO can at any time provide necessary information to support decision making by program managers and other decision makers including donors within tight timelines, program scope and approved budgets. Fourthly, in line with literature review and research analysis, and despite the influence of other moderating variables cited in this study, all these four dimensions of effective M&E systems; namely 1) M&E information availability, 2) M&E information accessibility, 3) M&E systems responsiveness, and 4) M&E system sustainability, should function collectively to effectively ensure improved managerial decisions.

5.4 Recommendations

The demand and supply of timely, reliable and accessible information suggests the critical role that M&E systems plays in supporting effective operational, tactical and strategic decision making within a development program context. The research findings and conclusions confer managerial implications to inform the ways in which M&E systems should be designed and implemented. As noted in this study, M&E systems cannot be viewed simplistically as tools for tracking project progress, but as comprehensive Information Systems (IS) that create sound and reliable information to help decision-makers define, implement and learn through actionable knowledge and evidence. NGO's utilization of M&E system products and services to support effective managerial decisions is welcome progress. However, development program M&E systems focused on providing information to support managerial decision making would fare better with well-designed M&E systems than without it.

5.4.1 Policy Recommendations

i) There is a need for NGOs to enhance the availability of M&E information by setting-up simple M&E dashboards and knowledge sharing systems which readily provide high-quality information to decision-makers and other stakeholders within agreed timeframes. The establishment of strong knowledge sharing system for M&E information as well as M&E data communication tools within the organizations will spur active translation of data into meaningful information for decision making, to guide implementation and to track programs/projects progress and relay success stories.

ii) To support the uptake of evidence for decision making processes, decision-makers should obtain meaningful information from the M&E system especially in instances where subjective decision-making abound. Data and findings generated by M&E systems should be presented to relevant decision-makers in simple and comprehensible formats that can easily be accessed without the difficulty of interpretation.

iii) In as much as most M&E systems are primarily built to service donor information needs and to meet donor requirements, NGOs should endeavor to produce high quality information for internal stakeholders given the critical role that they play in design, set-up, implementation and control of development project and programs.

iv) The resilience of M&E systems should be strengthened to cushion the organizations from significant changes especially staff turn-over within the M&E team. There is need for knowledge and information sharing practices within NGOs to be reviewed and amended, to allow new staff especially in the M&E department to adequately familiarize with already established M&E systems.

v) Organizational culture including organizational vision, mission, values, governance and leadership structure should be aligned and integrated within a

broader strategic framework to support M&E practice for decision-making. As recommended by a key informant,

> *"Our M&E systems can be made more beneficial if we share the goals of project monitoring and evaluation with project staff, and have the reporting tools harmonised to avoid duplication of the same piece of information in various reports. Also, the program can benefit a lot if both program staff and the M&E department would work harmoniously as opposed to working in silos."* (KII 7, 2019)

vi) Given that managerial decision-making within development programs relies heavily on evidence and information from M&E systems, NGOs should endeavor to set-up and implement participatory M&E systems with clear scopes and objectives.

5.4.2 Recommendations for further research

The study focused only on NGOs based in Nairobi, Kenya and therefore a systematic generalization of the study outcomes was impossible. The study thus suggests the following;

i) That an up-scaling of the research to broader geographical contexts should be considered with measured steps.

ii) Despite the growing knowledge on M&E, future studies on effective M&E systems are crucial to examine the underpinnings that inform development design and management strategy, performance measurement, and knowledge information management which are key to catalyze NGO's capability to advance development objectives.

iii) That further studies on the contribution of effective M&E systems towards the achievement of each of the 17 Sustainable Development Goals should be considered to harness lessons for M&E framework strengthening.

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Appendix 1: Data collection instruments

INFORMED CONSENT TO PARTICIPATE IN THE STUDY
(*Information to consider before taking part in this study****)***

As partial fulfillment of the requirements for the award of the degree of Master of Development Studies (MDS) of St. Paul's University, students are required to write a dissertation. This study sets out to find the effects of Monitoring and Evaluation (M&E) systems on managerial decision-making among selected Non-governmental Organizations (NGOs) in Nairobi.

Findings of this study will offer recommendations on how to strengthen M&E systems for improved managerial decision-making among diverse development actors.

PURPOSE OF THE STUDY: You are being asked to participate because you are a technical or management staff in registered NGOs operating in Nairobi. There is no right or wrong answer so please feel free to share.

STUDY PROCEDURES: If you agree to take part in this survey, I will be asking you some questions related to your experience utilizing Monitoring and Evaluation (M&E) Systems to inform managerial decision making in projects and programs implemented by your organization. Besides questions on demographic information, you will be asked to respond to Likert-type questions (Strongly disagree— Strongly Agree), Yes/No-type of questions, and open-ended questions which allow you to provide additional feedback regarding your experiences.

VOLUNTARY PARTICIPATION/WITHDRAWAL: Your participation is voluntary, and you can withdraw at any point without any penalty. You can choose to not respond to a question if you're uncomfortable.

BENEFITS & RISKS: We are not sure if you will receive any benefits by taking part in this study. Participation in this study is considered to pose minimal risk.

COMPENSATION: We will not pay you for the time you volunteer to participate in this study. However, the information you share will help us to understand how NGOs can optimally benefit from M&E system products (data, information, and evidence) in order to improve managerial decision-making capabilities.

PRIVACY & CONFIDENTIALITY: Your responses will be kept confidential, and combined with responses from other participants to provide an overall description of opinions or experiences. If you have any question, please feel free to ask (*Pause for participants to ask question or comment, if any*). If you choose to participate, then you are required to sign this form.

CONSENT: I understand that by signing this form, I freely give my consent to participate in the study.

Signature_____

_____ (*Signing means you have understood and accept to participate in this*

survey) Today's Date

✦✦✦

Activity ID														

TOOL 1 : SURVEY QUESTIONNAIRE – TECHNICAL OR MANAGEMENT STAFF

SECTION 1 : PARTICIPANT DEMOGRAPHICS

To create your unique ID number, we will use the **month** of your birth, and the last three digits of your telephone number *For example, May, Tel 0722675**432** has the ID number **05432**.*	☐☐☐☐☐ **M M # # #**
1.1 Designation	① Technical Staff ② Management Staff
1.2 Sex	① Male ② Female
1.3 Age	① Below 30 years ② 30-45 years ③ Over 46 years
1.4 Education	① Diploma ② Degree ③ Masters +

1.5 Years of experience?	① 1-3 years ② 2-5 years ③ Over 6 years
1.6 Identity/ Name of NGO	
1.7 Type of NGO	① International NGO ② National NGO ③ Local NGO

SECTION 2: M&E SYSTEM DIMENSIONS

The following statements relate to the availability of M&E system information in supporting managerial decision-making capabilities in your organization. Please indicate the extent to which you agree or disagree with the following statements.

One score is required for all questions (Strongly Disagree (1/5), Disagree (2/5), Neutral (3/5), Agree (4/5), Strongly Agree (5/5))

- **Strongly Disagree** corresponds to 20% or less for percent/ratio variables - 20 or less than 20 cases for flow variables – 20 or less in a ranking system from 0 to 100 for stock variables,
- **Disagree** corresponds to 21% to 40% for percent/ratio variables – 21 to 40 cases for flow variables – 21 to 40 in a ranking system from 0 to 100 for stock variables,
- **Neutral** corresponds to 41% to 60% for percent/ratio variables – 41 to 60 cases for flow variables – 41 to 60 in a ranking system from 0 to 100 for stock variables,
- **Agree** corresponds to 61% to 80% for percent/ratio variables – 61 to 80 cases for flow variables – 61 to 80 in a ranking system from 0 to 100 for stock variables,
- **Strongly Agree** corresponds to 81% to 100% for percent/ratio variables – 81 to 100 cases for flow variables – 81 to 100 in a ranking system from 0 to 100 for stock variables.

SECTION 2.1: M&E Information Availability	
1. The organization generates timely program M&E mandatory reports. **Benchmark:** *5/5 means that all (100%) of the program mandatory reports were high quality and produced within the agreed timeframes in the program documents and M&E Plan and available in a timely fashion to decision-makers and other stakeholders.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
2. The organization produces timely study M&E reports of evaluations and studies **Benchmark:** *5/5 means that all (100%) of the program evaluations and other studies reports were high quality and produced within the agreed timeframes in the program documents and M&E Plan and made available in a timely way to decision-makers and other stakeholders*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
3. The organization has M&E dashboards which are made available to program managers and other stakeholders. **Benchmark:** *5/5 means that all (100%) of the program dashboards were high quality and produced within the agreed timeframes in the program documents and M&E Plan and made available to decision-makers and other stakeholders*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
4. There exists a knowledge sharing system for M&E information. **Benchmark:** *5/5 means that the program Managers organized at least twice a year learning events on the information generated by the M&E system where discussions and brainstorming were made on their use and dissemination for a better sharing of the program results and achievements.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
5. There exist M&E data communication tools in the organization. **Benchmark:** *5/5 means that beyond the program mandatory M&E reports and evaluations and other studies reports, the M&E team produced more frequently snapshots, briefs, memorandums, and other communication tools on the program M&E information for a better sharing of program results and achievements.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

The following statements relate to accessibility of M&E system information in supporting managerial decision-making capabilities in the organization. Please indicate the extent to which you agree or disagree with the following statements.

SECTION 2.2: M&E Information Accessibility	
1. Program managers have timely access to data, information, and evidence on program achievements and results. **Benchmark:** *5/5 means that at any time of the program lifecycle, all program managers (100%) had easy access to evidence information on the program results and achievement produced through the M&E system without any difficulty of interpretation of the data and findings*.	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
2. Other program stakeholders (including external) have access to M&E data. **Benchmark:** *5/5 means that at any time of the program lifecycle, all program stakeholders (100%) had easy access to evidence information on the program results and achievement produced through the M&E system without any difficulty of interpretation of the data and findings.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
3. Accessing monitoring data for evaluation purpose is easy. **Benchmark:** *5/5 means that at any time of the program life cycle, evaluation or other study teams mobilized had to access to all needed M&E data straight from the inception of their studies to avoid overlaps in data collection and ensure consistency in the production of evidence and findings.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
4. All partners (including public) can access program M&E data. **Benchmark:** *5/5 means that the M&E managers ensured that all (100%) partners, relevant public, researchers and media who are interested in the program M&E information had easy access to relevant data and information for their specific purposes for a better sharing, dissemination, and use of the evidence generated through the program M&E system.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
5. M&E data is user-friendly for all users. **Benchmark:** *5/5 means that all (100%) of M&E information users had no technical problem in their interpretation or use of the data and findings and recognized the user-friendly of the M&E information.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

The following statements relate to the responsiveness of the M&E system in supporting managerial decision-making capabilities in the organization. Please indicate the extent to which you agree or disagree with the following statements.

SECTION 2.3: M&E System Responsiveness	
1. M&E data/information is readily available upon requests of program stakeholders. **Benchmark:** *5/5 means that all M&E data or information requested by any of the program stakeholders are made available within short notice and timely by the M&E managers or are easily accessible directly through the M&E data portal*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
2. The organization carries out timely and specific M&E studies requested by the program managers. **Benchmark***: 5/5 means that the M&E team is at any time highly responsive and reactive when it receives new requests of specific studies or assessments expressed by the program managers and other decision makers within a revised scope and budget approved.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
3. The M&E team produces tailored reports on a timely basis for program management and learning events. **Benchmark:** *5/5 means that the M&E team is able at any time within short notice to prepare tailored, high-quality reports or presentations for meetings and other learning events purposes to share the program results, achievements, and evaluations findings and recommendations.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
4. The M&E system responds to donor requests on the program achievements and results. **Benchmark:** 5*/5 means that the M&E team is collaborating very well with their donors and is highly responsive in providing donors with the M&E data, information or other relevant stories on the program in order to make sure that the donor is aware and has appropriated the program achievements and results.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

The following statements relate to the sustainability of the M&E system in supporting managerial decision-making capabilities in your organization. Please indicate the extent to which you agree or disagree with the following statements.

SECTION 2.4 M&E System Sustainability

1. The M&E system remains fully functional when significant changes occur in the M&E team. **Benchmark:** *5/5 means that even if unintended changes occur in the M&E team composition, the M&E system is highly resilient and remains fully functional after those changes.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
2. M&E decentralized units are functional with minimum supervision and support. **Benchmark:** *5/5 means that the M&E decentralized units are able to be fully functional with minimal supervision from the headquarter and are delivering high-quality inputs that meet the essentials of data quality standards at any time during the program lifetime.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
3. Program managers and other stakeholders can access M&E information with minimum support from the M&E team. **Benchmark:** *5/5 means that all the program managers (100%) have easy access to the M&E data with minimal support from the M&E team and can understand, interpret and use the M&E information with minimal technical support from the M&E team.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
4. M&E data and information is used after program closure **Benchmark:** *5/5 means that the M&E data and information are recognized very important and useful even beyond the program schedule and lifetime for post evaluations and capitalization purposes or as a baseline for future programming*.	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

M&E System Net-Benefits

One score is required for all questions (Strongly Disagree (1/5), Disagree (2/5), Neutral (3/5), Agree (4/5), Strongly Agree (5/5))

SECTION 2.5 M&E System Net Benefits on Managerial Decision Making	
2.5.1. There is improved Operational Decision-Making in the organization attributable to the program M&E system effectiveness. **Benchmark:** *5/5 means that there is conclusive and tangible evidence that shows clearly that there is an operational decision-making improvement in the program or inside the organization that is clearly attributable to the M&E system effectiveness*.	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

2.5.2. There is improved Tactical Decision-Making in the organization attributable to the program M&E system effectiveness. **Benchmark:** *5/5 means that there is conclusive and tangible evidence that shows clearly that there is tactical decision-making improvement in the program or inside the organization that is clearly attributable to the M&E system effectiveness.*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree
2.5.3. There is improved Strategic Decision-Making in the organization attributable to the program M&E system effectiveness. **Benchmark:** *5/5 means that there is conclusive and tangible evidence that shows clearly that there is strategic decision-making improvement in the program or inside the organization*	① Strongly Disagree ② Disagree ③ Neutral ④ Agree ⑤ Strongly Agree

TOOL 2: KEY INFORMANT GUIDE – TECHNICAL OR MANAGEMENT STAFF

Which Program/ Organization do you belong? _____
What is your title/ Role? _____

Which Program/ Organization do you belong?

_____

What is your title/ Role in the project?

_____

1. INTRODUCTION

1.1 Please tell me one significant thing M&E and decision-making process?

2. M&E SYSTEM DIMENSIONS

2.1 What informs decisions in your program/organization?

2.2 To what extent does your M&E system generate information needed by program stakeholders?

2.3 At which stages in your program cycle is data most useful? Why?

2.4 What tools and methods of data analysis do you use to generate information from data?

2.5 To what extent do evaluations improve your program work? Why?

2.6 How do you share knowledge/ information generated by your M&E systems?

3. M&E SYSTEM BENEFITS

3.1 How has M&E benefited your program?

3.2 To what extent is evidence and information gathered from your M&E systems used in the decision-making process?

3.3 To what extent does M&E facilitate planning processes in your program/ organization?

3.4 How can your M&E system be made more beneficial to your organizational users?

4. What can be done to improve decision making in your program?

_____

Thank you so much for taking the time to share your experiences with me today

Appendix 2: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **536923**

Date of Issue: **14/August/2019**

RESEARCH LICENSE



This is to Certify that Mr.. Rohin Onyango of St. Paul's University, has been licensed to conduct research in Nairobi on the topic: Effects of Monitoring and Evaluation systems on managerial decision-making among Non-governmental Organizations in Nairobi County, Kenya for the period ending : 14/August/2020.

License No: **NACOSTI/P/19/161**

536923

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix 3: Introduction Letter

ST. PAUL'S UNIVERSITY

Private Bag 00217 LIMURU, KENYA
Email: postgraduatestudies@spu.ac.ke
Website: www.spu.ac.ke

Tel Office: +254 (0) 20-2020505/10
Mobile: +254 (0) 728-669000
(0) 728-062420
(0) 736-424440

BOARD OF POSTGRADUATE STUDIES

National Commission for Science, Technology and Innovation
Off Waiyaki Way, Upper Kabete
P.O Box 30623, 00100
Nairobi, KENYA.

Dear Sir/Madam,

RE: ONYANGO ROHIN OTIENO - MDSNRB614518

This is to confirm that the above named is a final year student of St. Paul's University registered for Master of Development Studies.

The final year consists of a major research work leading to a dissertation comprising 20,000 words. The student's selected topic is:

Efforts at monitoring and evaluation systems on managerial decision-making among Non-governmental organisations in Nairobi county, Kenya.

The research will take place in Nairobi County from March 2019 to May 2019.

Kindly grant the student the required permit.

Yours Faithfully,

Dr. Sammy Githuku
Director, Postgraduate Studies

Appendix 4: Map of Nairobi City

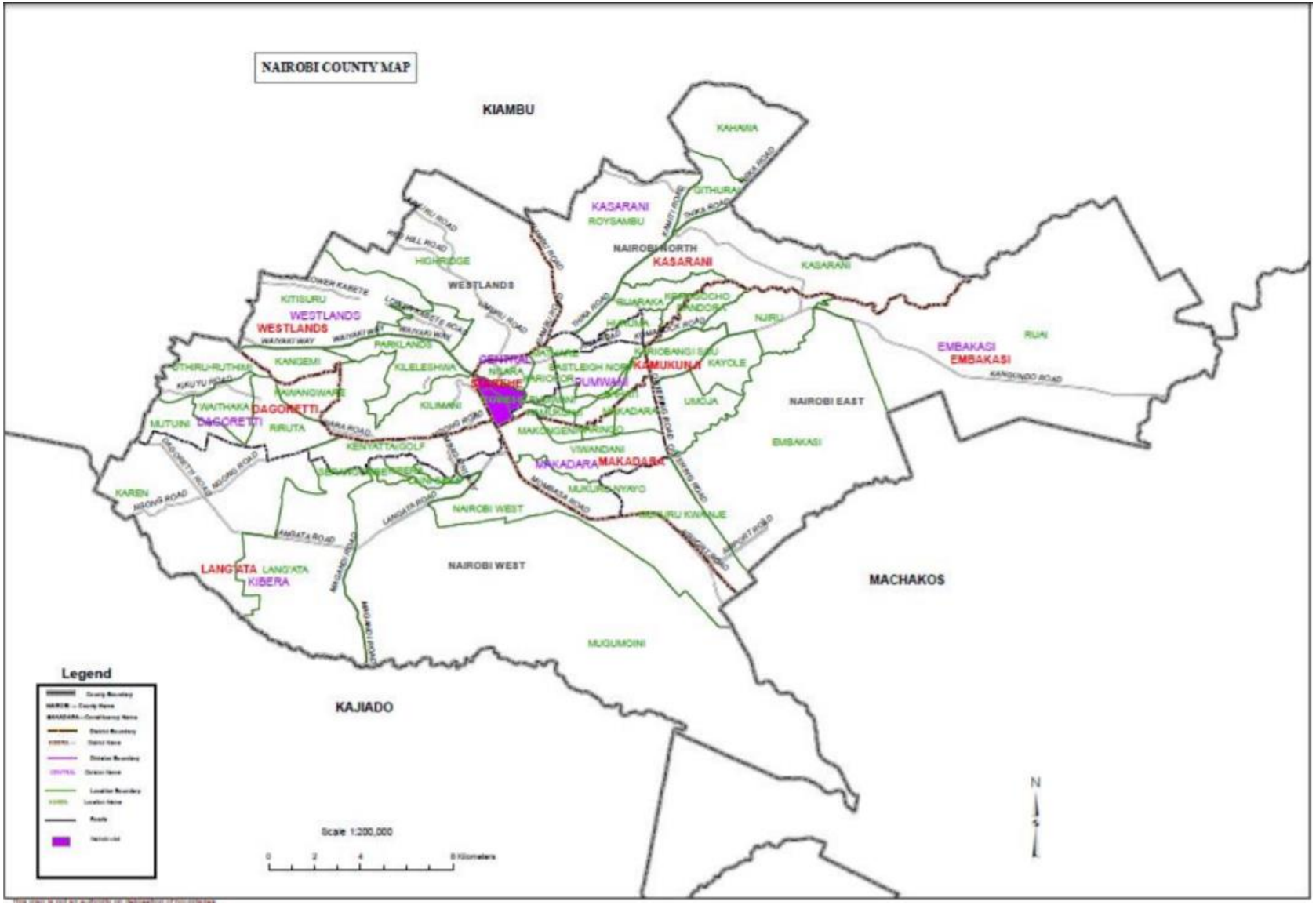


Figure 5: Map of Nairobi County Administrative/ Political Boundaries. **Source**: Nairobi City County (2017)