

**ELECTRONIC PROCUREMENT AND PERFORMANCE OF NON-  
GOVERNMENTAL ORGANIZATIONS IN KENYA. A CASE OF  
PATHFINDER INTERNATIONAL KENYA**

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## DECLARATION

Student

I affirm that this project is my original work which has never at any point been presented elsewhere or submitted for academic credit or examination purpose in any other college, university or institution of higher learning.



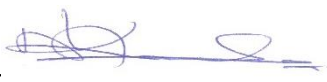
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## **DEDICATION**

I have dedicated this work to my loving Dad Mr. David Ndi. My dad has been my pillar of hope, support and encouragement in this education journey. To my siblings Joyce, Rachel & Samuel for their inspiration to further my studies. To my mum the Late Peris Nyambura, it is your words that made me work so hard to achieve what you couldn't. And above all to the God Almighty for blessing my plan of advancing my studies, provision of knowledge, wisdom, guidance, finances and a stable mind.

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## TABLE OF CONTENTS

DECLARATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
TABLE OF CONTENTS .....	v
LIST OF TABLES .....	ix
LIST OF FIGURES .....	xi
OPERATIONAL DEFINITION OF TERMS .....	xiv
ABSTRACT .....	xv
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.1.1 Organizational Performance .....	4
1.1.2 Electronic Procurement.....	6
1.1.3 Pathfinder International – Kenya .....	13
1.2 Statement of the Problem.....	14
1.3 Objectives of the Study.....	16
1.3.1 General Objective .....	16
1.3.2 Specific Objectives .....	16
1.3.3 Research Questions .....	16
1.4 Significance of the Study .....	16
1.5 Scope of the Study .....	17
1.6 Limitation of the Study .....	17

1.7 Organization of the Study .....	18
<b>CHAPTER TWO .....</b>	<b>19</b>
<b>LITERATURE REVIEW .....</b>	<b>19</b>
2.1 Introduction.....	19
2.2 Theoretical Review .....	19
2.2.1 Disruptive Innovation Theory .....	19
2.2.2 Diffusion of Innovation Theory .....	20
2.2.3 Technology Acceptance Model Theory.....	22
2.3 Empirical Review .....	25
2.3.1 E-sourcing and organizational performance .....	25
2.3.2 E-ordering and organizational performance .....	27
2.3.3 E-invoicing and organizational performance.....	29
2.3.4 E-payment and organizational performance .....	30
2.4 Summary Literature Review .....	32
2.5 Research Gap .....	33
2.6 Conceptual Framework.....	38
<b>CHAPTER THREE .....</b>	<b>40</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>40</b>
3.1 Introduction.....	40
3.2 Research Design .....	40
3.3 Target Population.....	40
3.4 Sampling Design.....	41
3.5 Data Collection Instruments .....	42

3.5.1 Validity of the Research Instrument .....	42
3.5.2 Reliability of the Research Instrument .....	43
3.6 Pilot Testing.....	44
3.7 Data Collection Procedure .....	44
3.8 Data Analysis and Presentation .....	45
3.9 Ethical Considerations .....	46
<b>CHAPTER FOUR.....</b>	<b>48</b>
<b>RESEARCH FINDINGS AND DISCUSSIONS .....</b>	<b>48</b>
4.0 Introduction.....	48
4.1 Reliability Test.....	48
4.2 Response and Non-response Rate.....	48
4.3 Descriptive Statistics.....	49
4.3.1 Staff Demographics .....	49
4.3.2 State of e-procurement in the organization.....	52
4.3.3 E-sourcing .....	53
4.3.4 E-ordering .....	55
4.3.5 E-invoicing.....	58
4.3.6 E-payment .....	61
4.4 Inferential Statistics .....	67
4.4.1 Coefficient of Correlation .....	67
4.4.2 Analysis of variance.....	68
4.4.3 Coefficient of Determination Results .....	69
4.4.4 Multiple Regression Analysis Model Results.....	69

<b>CHAPTER FIVE .....</b>	<b>72</b>
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>72</b>
5.1 Introduction.....	72
5.2 Summary of Study .....	72
5.2.1 Electronic Procurement and Organizational Performance.....	72
5.2.2 Electronic Sourcing and Organizational Performance.....	72
5.2.3 Electronic Ordering and Organizational Performance.....	73
5.2.4 Electronic Invoicing and Organizational Performance.....	73
5.2.5 Electronic Payment and Organizational Performance .....	73
5.3 Conclusion .....	74
5.4 Recommendations.....	75
5.5 Suggestion for Further Research.....	76
<b>REFERENCES.....</b>	<b>77</b>
APPENDIX I: Cover Letter .....	94
APPENDIX II: Introductory Letter .....	95
APPENDIX III: Questionnaire .....	96
APPENDIX IV : Authorization Letter.....	102
APPENDIX V : Research Permit .....	103



## LIST OF TABLES

Table 2.1: Research Gap.....	33
Table 3.1: Target Population .....	41
Table 4.1: Reliability Statistics.....	48
Table 4.2: Response and Non-response Rate.....	49
Table 4.3: Staff Demographics .....	50
Table 4.4: E-procurement in the organization .....	52
Table 4.5: E-sourcing.....	53
Table 4.6: Staff Opinion on E-sourcing.....	54
Table 4.7: Staff's Advice on Implementation of E-sourcing.....	55
Table 4.8: E-ordering .....	56
Table 4.9: Staff Opinion on E-ordering .....	57
Table 4.10: Staff's Advice on Implementation of E-ordering .....	57
Table 4.11: E-invoicing .....	59
Table 4.12: Staff Opinion on E-invoicing .....	60
Table 4.13: Staff's Advice on Implementation of E-invoicing .....	60
Table 4.14: E-payment.....	61
Table 4.15: Staff Opinion on E-payment.....	62
Table 4.16: Staff's Advice on Implementation of E-payment.....	63
Table 4.17: Effect of E-payment on Performance .....	64
Table 4.18: Organization Performance .....	65
Table 4.19: Recommendations to Improve Performance .....	66
Table 4.20: Correlation Analysis .....	67

Table 4.21: Analysis of Variance Results.....	68
Table 4.22: Model Summary. ....	69
Table 4.23: Regression Coefficients.....	70

## LIST OF FIGURES

Figure 2.1 Conceptual Framework .....	38
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## **ABBREVIATIONS AND ACRONYMS**

AfCFTA	African Continent Free Trade Area
ACCPAC	Accounts Package
APA	American Psychological Association
B2B	Business to Business
B2G	Business to Government
EA	East Africa
EAC	East Africa Community
EAPS	East African Payment System
EFT	Electronic Fund Transfer
E-RFX	Electronic Request for quotation
ERP	Enterprise Resource Planning
G2B	Government to Business
HIV	Human Immunodeficiency Virus
HR	Human Resource
ICT	Information and Communications Technology
INGOs	International Nongovernmental Organizations
IT	Information Technology
IS	Information System
KENGEN	Kenya Electricity Generating Company
KES	Kenya Shilling
KU	Kenyatta University
LPO	Local Purchase Order
MBA	Master of Business Administration

MINECOFIN	Ministry of Finance and Economic Planning
NACOSTI	National Commission for Science, Technology & Innovation
NGO	Nongovernmental Organization
NGOs	Nongovernmental Organizations
PC	Personal Computer
PEOU	Perceived Ease of Use
PLS	Partial Least Square
PU	Perceived Usefulness
RFQ	Request for Quotation
SA	South Africa
SEM	Structural Equation Modelling
SRM	Supplier Relationship Management
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UAE	United Arab Emirates
US	United States
USA	United States of America

## OPERATIONAL DEFINITION OF TERMS

- Electronic invoicing** It is the electronic processing of invoices whereby archiving of invoices for safe keeping is done through an ERP system. It enables ease accessibility and security of invoices and it saves a lot of time during creation, storing and retrieval.
- Electronic ordering** This is whereby purchase orders are processed electronically in an ERP system in order to achieve transparency, error reduction and for efficient customer and order management.
- Electronic payment** This is whereby payment is processed electronically in a system in order to enable credibility of transactions, convenience to all parties and for security and safety of all transactions.
- Electronic sourcing** This is whereby sourcing of products and services is done through an ERP system in order to achieve efficiency in the process. It also creates and improves supplier relationship management and improves negotiation in the procurement process.
- Organizational Performance** It is the outcome that is achieved by the organization which leads to improved operations efficiency which then enables the organization to retain staff which leads to employee satisfaction.

## ABSTRACT

Manual procurement in the organizations have proved to be very difficult to operate with because it has led to waste of time and resources, insecurity, loss of documents, inconveniences, fraud due to lack of transparency, poor customer and supplier's relations, increased errors in the documents and lack of credibility among many others. Due to this, organizations have realized the importance of Electronic Procurement and found it very vital in achievement of organizations objectives. Electronic procurement involves more than online transactions. E-procurement delivers a very manageable and orderly method to provide a clear path in communicating with vendors during transactions. Despite their crucial role in improving people's lives and alleviating poverty, most non-governmental organizations have been recording poor performance. The general objective of the study was to establish the relationship between electronic procurement and performance of organizations in non-governmental organizations in Kenya. The specific objectives for the study were to establish how e-sourcing, e-ordering, e-invoicing and e-payment relates to performance of Pathfinder International. This study was guided by four theories namely, Disruptive Innovation Theory, Diffusion of Innovation Theory, Technology Acceptance Model Theory and Theory of Planned Behavior. The study adopted descriptive research design. The target population for the study was 135 participants. Census survey was employed whereby the entire population of 135 procurement staff were required to participate. The response rate for this study was 103 participants. Both open ended and close ended questionnaires were used to collect primary data. The study collected data through drop and pick method. Validity of the questionnaire were tested using content validity whereas reliability was tested using Cronbach's Alpha. Quantitative data was analyzed using both descriptive and inferential statistics using SPSS Version 24 while qualitative data was analyzed using content analysis. Descriptive statistics was presented in frequency distributions tables and percentages. Inferential statistics such as correlation and regression were applied to assess the relationship between the independent and dependent variables. All ethical considerations were observed especially confidentiality, anonymity, consent and avoidance of biasness. The study concluded that electronic procurement and performance of organizations was indeed related and it was recommended that all procurement systems be made mandatory and that the procurement teams be well trained on all systems used to ensure efficiency is achieved through use of e-procurement.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

NGOs are private organizations whose intention is not to make profit for all parties and stakeholders. They offer benefits to the society. Some of the benefits offered are for free and some may be charged (Kitonga, Bichanga, & Muema, 2016).

NGOs are important because they perform a huge function in expansion of nations at local, global and international level. They offer development to the society hence improving people's lives. They operate without seeking any form of profits in return. NGOs provide food, education, medication, employment among others. They are organizations which are created by people so that they can help other people (Kaur, 2015).

In US; Bureau of Democracy, Human Rights and Labor has been found to help and sustain the establishment of NGOs. A study on Human Rights by the US Department of State in 2017, indicated that US government keeps a distance from the NGOs and do not interfere on how they are run and how they intend to implement and accomplish their planned objectives. To improve performance of the organizations, NGOs in the US has been given the freedom to hire participants for their specific organizations as they wish. In order to increase performance, the US government has given their NGOs power and permission to collaborate with NGOs throughout the world. This freedom has been found to have improved the level of efficiency and effectiveness of NGOs (Democracy, Human Rights, & Labor, 2017).

In Europe, performance of NGOs relies on the organizations working both collaboratively and independently with government institutions. This is done in governance in defining and achieving the public good. Research has found out that NGOs are defined broadly and the



interest is mostly in those who perform in relations to the public interest and whose work is in areas related to health services, human rights, humanitarian aid or social aid (Brintall, Hajnal, & Jeziorska, 2019). The study revealed that retention of employees improved performance.

In Africa; NGOs have been seen to be of great importance mostly in provision of health care and education. Studies has shown how NGOs have over the years become key players in responding to emergency related cases which mostly involve poverty and correlated suffering. Performance of NGOs has grown rapidly. Research shows that in SA there have been more that 100,000 registered NGOs. The study found that in EA the number of NGOs grew by over 400% between years 1997 and 2006. Performance and existence of NGOs in Africa has been found to be of great purpose because they fight poverty, improve lives and accelerate the level & quality of education (Matthews, 2017). This has been possible to achieve because of employee's satisfaction.

Kenya NGOs coordinating board report (2016) pointed out that up to 90% of NGOs fully depend and operate on donor funds. Performance of NGOs in Kenya has gone down due to uncertainties and decline of donor's extension. Donors' withdrawal of funds was due to misuse and wastage led by poor management. This act threatens staff retention since it proves difficult to retain staff when there is no funding (Cheruiyot, 2018). Effectiveness and efficiency in organizations has been discovered to improve performance of NGOs. This is because proper planning leads to use of minimized resources while leading to gaining the projected objectives (Masero, 2016). When proper planning has been implemented there is employee satisfaction in the organization.

Research shows that e-procurement accelerates the procurement process of an organization when the right IT tools are used. Electronic procurement has over the years helped organizations save a

lot of money since it is an effective method of transacting and increases workflow in the long run (Kitunzi, 2016).

A study conducted on public procurement performance in Kenya showed organizations have been experiencing procurement challenges which affect their performance. These challenges include lack of full implementation of e-procurement processes, failure to maintain high ethical standards in the procurement process, bureaucracy, biasness, lack of transparency, delays in the processes, risk mitigation, poor criteria in recruiting, retaining and training staff, managing stakeholders (Nyaboke, Mburu, Amemba, & Osoro, 2015).

Barasa, Namusonge and Okwaro (2017) found that e-procurement systems presented a very crucial development for the purchasing process which through implementation of Web-based e-procurement system in the business to business benefited the organizations through purchase process, improvement of internal procurement efficiency, reduction of both price and transaction costs through negotiation and increased collaboration with suppliers. Importance of technology bases support for purchasing actions are broadly categorized into organization level and inter-organizational level.

Research has found out that performance in NGOs helps in providing the basis for the organization to effectively and efficiently asses how well the organization is progressing towards its planned goals, identification of strengths and weaknesses and how to help the organization decide on its future initiatives together with the planned goals (Moronge & Munyao, 2018). Research on Performance of NGOs on procurement procedures has recorded an increase from procurement practitioners, agencies and researchers which has led to efficiency in procurement processes.

### **1.1.1 Organizational Performance**

Organizational performance in NGOs has been identified to be the central and essential characteristic that must always be absorbed in detail. It is the recurrent procedure that is usually attended by organizations so as to be able to guarantee that goals are being achieved and that the organizations are still running, succeeding and growing (Afzal, Raza, & Ansari, 2018). Performance of Pathfinder International was measured through operations efficiency, staff retention and employee satisfaction. The current study intended to measure performance in non-financial terms since NGOs are not for profit organizations and they do not generate cash activities.

Performance at Pathfinder International, has been affected by the workload that the stakeholders deal with, especially the employees and partners who work in the facilities. This is due to the high number of patients availing themselves to the facilities whereby there are very few facilities in the coast region. It has therefore become very difficult to fully provide the services that are needed by all the beneficiaries and partners in the facilities. Studies have discussed several indicators that relate to organizational performance. These indicators include operational efficiency, staff retention and employee satisfaction.

Latif, Ahmad and Naeem (2013) found out that satisfaction of employees and other stakeholders is very important to the organization and it determines why employees and other stakeholders either stay or leave the organization. The study found that if all stakeholders are satisfied then an enjoyable working condition is created at the work place leading the organization to accomplish more in an improved and manner of efficiency, leading to job satisfaction internally and creation of good relationships externally with all stakeholders.

Akoth (2014) viewed performance of NGOs in terms of operations efficiency because this is the primary goal. Organizations measure operational efficiency depending on how well they achieve their mission, purposes and goals through improving the lives of a targeted group and measure depending on how well they deploy their resources through use of minimal resources to achieve the utmost goal (Muathe, Waithaka & Malongo, 2019). Mostly, performance of an organization is measured either internally or externally depending on its capacity to achieve its planned goals.

Jahanshahi, Rezaei, Nawaser, Ranjbar and Pitamber (2012) in their study found that many NGOs have become more focused on their performance. The study revealed that the results of a company is determined by its impact to the society. However, the study found that measurement of performance is hard because what must be measured keeps on changing. Due to these findings, many organizations have been keen and more focused on their performance.

Performance of NGOs has deteriorated due to employees, suppliers and creditors frustration, inefficient policies, long working hours, supervisor behavior and majorly due to lack of technological facilities. When stakeholders are dissatisfied, they no longer want to get involved for a long period in the organization and this proves difficult for the organization to retain them leading to low or poor performance. To be able to retain stakeholders, several benefits such as annual salary increment, pension and satisfactory credit terms should be offered (Ammar, Khuwaja, & Noor, 2018).

Importance of performance in NGOs involves objectives that include setting of goals, preparation, acknowledgement, training, appreciating and accepting efforts (Puckett, 2019). Productivity and achievement of goals has been pointed out as the key measures of organizational performance. Productivity is measured by calculating how much benefits the employees bring to the organization when there is satisfaction. Achievement of goals has been

measured according to how much accomplishment and success an organization has experienced in terms of goal fulfilment, this is related to level of staff retention (Moss, 2016).

### **1.1.2 Electronic Procurement**

E-procurement has been recognized to be one of the best procurement practices. It is the use of technologies and systems through online platform to conduct the procurement process. These systems include searching, sourcing, tendering, negotiation, ordering, receipt, invoicing, payment and post purchase review (Hussein, 2018). Electronic procurement is using IT to manage the procurement processes at the whole organization with the major aim being to improve procedure of procurement (Muhia & Afande, 2015).

Pathfinder International has fully implemented e-procurement to enhance effective procurement of all the materials, works and services that are needed in the organization. These include medical equipment for testing HIV, stationeries to support the organization, programmatic services such as procuring online trainings regarding the organization's missions and visions in order to achieve operations efficiency. Through using e-sourcing, e-ordering, e-invoicing and e-payment Pathfinder has managed to run its procurement activities efficiently by saving time, money, reducing errors, enhancing security, improving supplier relationship management and customer management, increasing convenience and credibility (Author, 2020).

Gichane and Moronge (2018) studied influence of electronic business practices and discussed several indicators of E-procurement. These are; electronic sourcing, electronic ordering, electronic invoicing and electronic payment. Electronic sourcing has been identified to be the use electronic systems that process the strategic procurement procedures mostly in terms of vendor selection and qualification. It is the information technology supported system of finding and picking out suitable vendors. The study recommended e-sourcing to be implemented because it

assisted the organization in creating and improving supplier relationship management, saving costs through negotiation and helping the organization to run efficiently and effectively.

According to a report done by Aberdeen Group on e-sourcing, the group considered e-sourcing to be a procedure used to create, achieve and control contracts through electronic systems in a paperless form. The group reported that a perfectly organized out-sourcing procedure should be able to rank first company's requirement, know it's market, choose the most efficient vendor, negotiate for the overall value, establish the best relationship with client and supplier, come up with strategies that cut costs and improve extended performance of the procurement activities and undertakings so as to achieve efficiency and improve overall organizational performance (Micheni, Muma, & Rotich , 2016).

One of the greatest benefits of e-sourcing is efficiency and effectiveness. When the procurement department and the organization at large understand the procurement cycle and uses the same procedures, it leads to realization of high-quality end products and services and availability when and where users need them. This leads to use of minimal resources and achievement of the targeted objectives which in turn improves organizational performance (ProcurePort, 2017).

Another benefit is that through e-sourcing organizations are able to create great supplier and customer relationship. Closure of a contract has been identified as the beginning of supplier relationship management (SRM). The procurement department should make it their priority responsibility to manage supplier relationship. Even though negotiation of a lower price and focusing on the price is no longer considered the only factor in choosing the suppliers, it is important for negotiation to be considered in order to enable the organization achieve it's set goals by ensuring that it incurs the least possible cost in its transactions (Mahdillou & Akbary, 2014).

E-ordering is the use of internet-based systems which are used to provide operational procurement process which includes preparation of requisitions, orders, approving orders, transmission and acceptance of the requirements by the vendors. In early stages e-procurement technology solutions seemed to focus on e-ordering feature of e-procurement because it was believed that it was the area by which maximum efficiencies could be achieved. This was because suppliers were in a position to receive the purchase order information electronically and would upload it directly into their order management systems without having to wait for the hard copies (Osir, 2016).

Electronic ordering operates with online transfers of documents throughout the e-procurement process which usually begins at issuance of purchase orders from buyers ending when they receive their ordered goods from the suppliers. E-ordering has been defined as the process of creating and approving purchasing orders electronically. It greatly improves the supply chain performance hence enhancing transparency, error reduction, saving costs and time, improving efficiency and effectiveness, reducing papers while enhancing productivity as compared to written orders (Chepkwony & Chepkwony, 2017).

A study performed on influence of electronic procurement and performance of organizations asserts that e-procurement concept has been felt in a massive way in all sectors of the economic development. The study revealed that the arrival of web-based electronic procurement, electronic ordering, electronic sourcing, e-receipt, e-invoicing and e-requisitions should be able to minimize the time spent during the process of order execution, minimize storage and stock levels, reduce all administrative expenses related to procurement and also boost fulfilment of order and improve organizational performance (Kisimbii & Maalim, 2019).

Doing away with the manual systems and by going paperless has enhanced productivity, improved order management process and has greatly improved the organizations performance by improving its effectiveness and efficiency. E-ordering has also helped the organizations to reduce costs and improve customer and supplier relationship (Chepkwony n. c., 2017).

A study carried out by Ordering Company identified that e-ordering encourages transparency in the procurement process. Through the ordering systems, customers get the ability to acquire order details in real time for all documents done in the past and for documents currently in process. The study concluded that when organizations offer unmatched and automated customer support experience with apps and systems it improves the confidence of customer leading to improved performance. It was recommended that apps and systems be used in order to provide all the necessary transaction requirements, sort clients inquiries and give practical information while concurrently suiting the branding (Ordering, 2019).

Research conducted by Tao (2019) found that B2B order management and fulfilment of customers' needs is a major component for a successful supply chain. Due to the excess availability of communication tools, organizations face transactional challenges especially in online ordering brought about by the rising expectations of customers. The study revealed that one way to face the challenges is through introduction of online ordering system for the businesses. The system saves time and it consolidates real-time information across multiple channels.

Electronic invoicing has been defined as the spread, receipt and processing of digital transactional documents between vendors and purchasers. This system should be entirely electronic for it to be considered as e-invoicing. The data from the vendors should be placed in a way that it can be integrated directly into the system of the purchaser. This has been seen through



effective archiving which leads to easier retrieval of documents, shortening of the payment cycles hence saving time, improvement on account reconciliation, enhancement of compliance due to security, error free transactions, wastage reduction (Yvanovich, 2018).

E-invoicing is a better way of doing business. It is cheaper, faster and is more environmentally friendly than use of manual systems and digital invoicing. It helps the organization to run efficiently and hence improves performance. Manual processes have now been let go by many organizations due to computerization (Anderson, 2019).

E-invoicing is an electronic system that is used for both by (B2B) and (B2G/G2B) sections. This involves entirely the electronic invoice exchange between suppliers and buyers but it does not consider the exchange of data between the suppliers, buyers and the tax authorities for either reporting or control purposes. Definition of e-invoicing has greatly varied across the globe but simply it means automated invoicing (Koch, 2017). E-invoicing leads to a permanent archiving system, instant receipt, accessibility and secure led by digitalization and time saving leading to elimination of delays.

E-invoicing archives leaves a permanent record of the organization's entire history with either customers or suppliers without taking up space. When an organization has the system of e-records in place, finding an invoice from ages back takes very little time leading to effectiveness. This serves best during a compliance exercise or during the audit period. It leads to efficiency since it is a unique and reliable means of storing and retrieving organizations documents (Biedron, 2018).

Tondon (2019) identified that invoices can be forwarded to the customers in a very fast way. This means that the customer will receive the bill faster and that the probability of the supplier

being paid quickly is high. The study revealed that the system comes with progressive security system hence leaving zero chance for hackers to log into the account. This way, the customers details are safe, and that way trust is built and enhanced. It was found that using the system led to an easier way of searching for a specific invoice. This consumed less time in comparison to paper invoicing.

Newman (2019) revealed that e-invoicing leads to a lot of time saving. This is so because through e-invoicing many processes which include entering data manually, checking for accuracy and interchanging software are cut out of the invoicing process. This way, time is saved for both the supplier and the customer. It was also found that time saving in e-invoicing was led by increased use of e-invoicing software where the e-invoice is delivered through an e-invoicing operator.

Electronic payment is a type of monetary assurance from the purchaser to the vendor that is provided using electronic communication systems. It is a form of monetary transaction by use of electronic platform to enable the two parties perform their planned transactions. These include mobile payment, internet payments, e-cards, PC Banking and e-cash (Maalim & Kisimbii, 2019). The researcher studied the credibility, security and convenience involved in e-payment.

E-payment has been defined as a system or a means by which funds are transferred via the internet. In e-procurement, these transactional payments are usually done between suppliers and buyers. E-payment is an electronic means that is used to make payment of goods, services and works online without involvement of any kind of paper (Kabir, Saidin, & Ahmi, 2015).

Studies has found that electronic payment enables organizational performance to be more ideal. This is because services and works are performed more conveniently, faster, safely, accurately,

transparently and in a credible manner while impacting on efficiency. Electronic payments have been identified to include electronic cash like M-pesa, prepaid cards, credit cards, debit cards and electronic check. These means are used to make payment transactions (Fatonah, Yulandari, & Wibowo, 2018).

E-payment leads to credible, convenient and secure transactions due to risk reduction and increased security in the whole process. Wall (2018) revealed that the Mexican government worked super hard to convince consumers to use cards and for all to adopt e-payment systems. It was revealed that use of online payments was a more credible means of transaction as compared to transacting with cash on hand. It was difficult to steal from dealers and present fake bills.

Kamble (2019) identified e-payment to be a very convenient means of payment as compared to the traditional payment methods such as cash and cheque. This is because payment is made instantly leading to saving time. Ability to pay for goods, services and works online at any time from any part of the world is very pleasing since customers do not have to queue awaiting to make payments. Customers also do not have to wait for the checks to clear.

Tondon (2018) found that both the customers and sellers throughout the world consider use of reliable merchants than sending and accepting cash directly from the site. This acts as a safety and security measure. It offers both stakeholders protection from any kind of fraud. Use of reliable merchants is an assured means to transact online. It creates and enhances confidence with the stakeholders because the money is secure and incase a product that was purchased online was not received, then the customers money is still safe and secure.

E-payment system has grown massively because of broad expansion of the online banking and buying. Most online payment and payment preparation systems have been established in order to

speed up, improve and provide safer online operations while also aiming at minimizing the proportion of cash and manual operations (Konior, 2016). EFT is among the secured system that is used to direct funds from one account to another without having to transact the cash in person or by hand. It comprises of direct debit, e-check and electronic billing.

### **1.1.3 Pathfinder International – Kenya**

Pathfinder International is a global organization whose mission demands that we recognize and act upon the need to catalyze change at the local level to achieve global impact. Research carried out by pathfinder showed that 78,000 people in Kenya became infected with HIV in the year 2015. Nearly 25% of the infected were adolescents (Pathfinder, 2015).

During its 56years of existence, pathfinder international has implemented e-procurement along the way and used many operating systems. Some of the local systems that Pathfinder has used include, Serenic Software, Serenic Navigator and ACCPAC system. Currently Pathfinder is using the Serenic System (Author, 2020).

Pathfinder Kenya has been driven to commitment to go where others will not. The organization has operated in Kenya since 1964. For over 50 years, pathfinder international has provided funds in order to establish and improve health services in the Kenyan Communities. Today, the organizations commitment to the people of Kenya is stronger than ever. Pathfinder international Kenya has partnered with the government and many Community Based Organizations to reach millions with the services that they need in order to transform their lives (Author, 2020).

Pathfinder gives a strong platform because it is an umbrella to many organizations. Findings of the current study included 16 community-based NGOs who are Grantees of Pathfinder International and who operate under Pathfinder's policies, regulations and systems. By using

these Grantees, the study covered a lot of community-based donor funds which are the implementing partners. These Community based Grantees gave a good platform since pathfinder supports them. This made pathfinder a perfect case study (Author, 2020).

Experience in use of difference types of systems, made pathfinder the best organization to evaluate performance. This is because through use of these systems the organization has been able to detect what affects the performance of the organization either positively or negatively. Serenic System is one of the identified systems by IFMIS. This gave a strong base for pathfinder being used as a case study because it uses legit and certified systems to implement its goals and evaluate performance (Author, 2020).

## **1.2 Statement of the Problem**

NGOs try to improve performance through organizational effectiveness and efficiency. Effectiveness of an organization is the productivity with which an association can achieve it's set goals and objectives. It is all about each employee or individual doing everything they know how to do and doing it right. It is measured through growth data and through the results of beneficiary's satisfaction surveys. Organizational efficiency is the ability of an organization in yielding its desired outcome with the minimum expense in terms of money, time, energy, human and material resources. Research has elaborated organizational efficiency to mean those organizations that produce desired results without waste (Pedraza, 2014).

Oteki, Namusonge, Sakwa, and Ngeno (2018) study showed that some firms in Kenya have fully adopted technology in procurement which include e-ordering, e-invoicing and e-payment. These practices were found to significantly affect organization performance. However, there were some firms that used technology to a very low extent due to unreliable internet and systems failure which proved to be hard when dealing with aspects of e-procurement.

In 2016, a study was carried out in Kenya at the Kenya Ports Authority and it indicated that 60.1% showed the aspects that determined the relationship between e-procurement and organizational performance. These aspects were determined by IT, IS, the capability of the employees in the procurement department and systems that are used internally for the procurement process. The study suggested that the rest of the 39.9% be researched to determine the other aspects that affect e-procurement and organizational performance (Siricha & Theuri, 2016).

In the past, NGOs followed the traditional procurement processes which was time consuming, faced many errors and involved huge paperwork leading to wastage such as use of lots of papers, toners, multiple documentations for different department using support documents. E-procurement has proved to improve the way systems work by making work more efficient. Use of e-procurement saves time, improves efficiency, accuracy, productivity and flexibility. E-procurement simplifies the way things are done and encourages transparency in integration of supplier relationship in the whole procurement process and hence improves the organizational performance (Mubarak, 2019). The researcher of the current study carried it out to be able to prove and confirm whether indeed the said problem were fully solved.

However, there has been limited study carried out on performance of NGOs in relation to e-procurement in the Coastal Region despite there being many recognized NGOs in Coast Kenya. The researcher planned to fill this gap by carrying out research that establishes the relationship between electronic procurement and performance of NGOs a case of Pathfinder International in the Coastal Region. The researcher considered Coastal Region as the location for the study because it is widely known for its active activities with different kind of NGOs such as Health, education, children, agriculture, gender based among others.

### **1.3 Objectives of the Study**

#### **1.3.1 General Objective**

The general objective was to establish the relationship between electronic procurement and performance of non-governmental organizations in Kenya.

#### **1.3.2 Specific Objectives**

The study sought to,

- (i) Evaluate the relationship between e-sourcing and performance of Pathfinder.
- (ii) Assess the relationship between e-ordering and performance of Pathfinder.
- (iii) Determine the relationship between e-invoicing and performance of Pathfinder.
- (iv) Examine the relationship between e-payment and performance of Pathfinder.

#### **1.3.3 Research Questions**

This study was guided by the following four research questions,

- (i) To what extent does e-sourcing relate to performance of Pathfinder International?
- (ii) Does e-ordering have any relationship with performance of Pathfinder International?
- (iii) Does e-invoicing relate to performance of Pathfinder International?
- (iv) How does e-payment relate to performance of Pathfinder International?

### **1.4 Significance of the Study**

Findings of this research are anticipated to be of great importance to many participants, among them the management of Pathfinder International, 16 Grantees of Pathfinder International, procurement department, finance team, policy makers in both nonprofit and profit-making organizations, the public sector and scholars. These beneficiaries may use the findings as a framework that helps them to put more emphasis on the practice of electronic procurement. These findings are projected to assist the organizations to implement strategic measures that help

in participation of electronic procurement being the strategy for growing and well performing organizations.

### **1.5 Scope of the Study**

This research emphasized on the relationship between electronic procurement and performance of NGOs in Coast part of Kenya a case study of Pathfinder International. The researcher evaluated how e-sourcing relates to performance of Pathfinder International directly and thorough it's grantees, assess how e-ordering relates to performance of Pathfinder International, determine the relationship of e-invoicing on performance of Pathfinder International and examine the relationship of e-payment on performance of Pathfinder International. The study was carried out for a period of 14 working days and it targeted 135 respondents. Respondents comprised of Procurement, Finance and Admin and all the procurement departments from the 16 grantees in four counties of Coast Kenya. The study adopted four theories namely, Disruptive Innovation Theory, Diffusion of Innovation Theory, Technology Acceptance Model Theory and Theory of Planned Behavior.

### **1.6 Limitation of the Study**

The limitations that hindered the researcher from conducting effective and unbiased study were projected to include difficulty in reaching respondents some of whom were field officers, difficulty in reaching procurement staff who were in the management level and operated on busy schedule. Difficulty in reaching pathfinder grantees who were spread across four counties. Difficulty in acquiring information from respondents who feared that their identities might be disclosed and difficulty in maneuvering thorough the counties due to the lockdown caused by the Covid-19 pandemic. The researcher overcame these challenges by using drop and pick method. The questionnaires were filled during the respondent's free time and were sent via email after



scanning was done. The researcher assured the respondents that their identities would not be disclosed.

### **1.7 Organization of the Study**

The following is how the study was structured; the foregoing chapter provided the introduction and background of the study, statement of the problem, research objectives, significance of the study, scope of the study and the limitations that were encountered in the course of the study. Chapter two presented literature review on e-procurement and organizational performance and the conceptual framework while chapter three dealt with the methodology that was be employed in the study. Chapter four provided the research findings and discussions of the study while chapter five represented the summary, conclusions and recommendations of the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section explained an overview of existing literature from studies that has been done in the past. The section covered the various theories that guided the study, the empirical review, summary of literature, research gaps and the conceptual framework. The examination of literature was gotten from journals, internet, government documentaries, brochures, books and newspapers.

#### **2.2 Theoretical Review**

The area described the various theories which were related to the research variables. Construction of these theories was done to well understand, foresee and explain the challenges and extend the knowledge that is existing within the critical bounding assumptions limits. The study was be guided by Disruptive Innovation Theory, Diffusion of Innovation Theory, Technology Acceptance Model Theory and Theory of Planned Behavior.

##### **2.2.1 Disruptive Innovation Theory**

Larson (2016) studied a theory developed by the American scholar (Christensen, 1995). DIT described how new entrants in the market disrupts long-term established companies. DIT was defined as the process by which smaller developing companies with fewer resources have the capacity to challenge an already established business by entering from the bottom and through continuation of moving up and being very successful. DIT gained more fame when companies such as Uber and Amazon emerged with a main goal of changing their respective kind of industries.

The reason as to why this theory is considered most suitable and of importance in this study is because it recognizes that systems used by organizations are less flexible. Due to this discovery, the acceptance of e-procurement approaches needs a strategic and a very practical tactic in building the new system such as e-sourcing to ensure that it sticks to the existing structure rather than adoption of completely new systems through saving costs, increasing speed and improving supplier relationships. It explains that, for innovation to be effective, adequate preparation is required in terms of the right technology, training the staff members on how to use the new systems and creation of awareness campaign among users. Studies has shown that disruptive innovation sometimes only work in the short run making it a limitation to use this theory (Harelimana, 2018).

Disruptive Innovation Theory was the theory underpinning the study. This was because of its major element in sustenance of innovation. In the fast-changing world, there are emerging economies that are constantly increasing their importance in the global economy whereby innovation has assumed an international dimension. This has largely impacted the organizations performance and has led to acceptance of electronic systems in the departments such us electronic procurement (Corsi & Minin, 2013).

### **2.2.2 Diffusion of Innovation Theory**

Lamorte (2019) studied a DIT, a theory that was initiated by (Rogers, 1962) who was a communication theorist at the University of New Mexico. DIT seeks to explain how, why and at what rate throughout time, a concept or an invention advances its drive and spreads over a specific residents or community structure therefore improving organizational performance. Research shows that the outcome of the system is for users as a part of societal scheme to accept and start using the new developed idea, a behavior, a product, meaning that human beings will

do rather contrarily as compared to what they have always done in the past. For adoption to be possible the behavior, idea or the product must be perceived. DIT has broadly shown how people have embraced and adopted to e-ordering and e-invoicing by dropping the manual systems.

The main strength of this theory was that it showed how the model has assisted the organizations to better understand how purchasers implement and engage with new technologies over time and it also tends to explain how an idea can pass through several stages of adoption by different players (Mutuku & Muathe, 2020). This theory is used in circumstances where a new service or work is being launched, familiarizing with it or announcing a product that is already in existence into a new market. this clearly illustrates that a service can be adopted by five different categories. The innovators; users who always want to try first, early adopters the users who represent opinion leaders, early majority those users see first before they can adopt, late majority who are skeptical and only adopt once the revolution has worked and laggards; the people who are very doubtful of change and are the hardest group to enroll in to the innovation procedure (Hanlon, 2013).

This theory has been identified to have some weaknesses because the rate of the innovation is affected by the move from rural to urban population within a society, the extent of industrialization, level of development and education. Researchers has found out that the adoption rate differs for the different types of innovation. An example is how the society's adoption to internet may have been fast as compared to adoption of automobile. This is due to cost, accessibility and familiarity with the change in the technology sector or usage. This theory has identified another barrier which is cultural limitation. Due to this, the adoption of a behavior becomes hard because some programs in the society do not accept them (Halton, 2019).

This theory is considered most suitable and of importance to this study because it shows how innovation as a process is aimed to improve economic development. Studies has shown that this theory enables users to perform more efficiently and effectively. DIT perfectly explains adoption to use of new technology. According to this theory, innovation is the idea that is alleged to be new to users. It is the combination of all aspects that are essential to generate, create and sell upcoming or better enhanced items or methods (Harelimana, 2018).

DIT seems to gauge an invention through use of five characteristics. These are innovation attributes, relative advantage, compatibility, complexity, observability and trialability. Research has shown that there are three determinants namely relative advantage, compatibility and complexity which are highly and reliably allied with technology application in the performance of organizations (Ibrahim & Daoud, 2017).

### **2.2.3 Technology Acceptance Model Theory**

Taherdoost (2018) studied TAM, a theory developed by (Davis 1989, Bagozzi, Davis and Warshaw 1992). It is an IS theory which through step by step elaborates how operators will be able to come to terms in accepting and using technology. TAM explains inspiration of operators by three features, perceived usefulness (PU), perceived ease of use (PEOU) and attitude towards use. It assumes that when people using a product observe that the technology they are using is working and that it is friendly to use, these people become interested in using it. Study has proved that PU and PEOU have significant influence on the attitude of the user which could be favorable or unfavorable towards the system depending on the perception of the user.

Research has connected the main strengths of this theory to the first belief of PU which explains persons intention to use technology and degree by which an individual acknowledges that a specific system will improve performance and the second belief of PEOU which explains a

persons believe that usage of a specific system would not cost anything or will be effortless (Davis, 1989). A study explored the effect of user perception on use of online digital platforms found it important for awareness to be created. It revealed that PU and PEOU had significant impact on adoption and use of online digital platforms because the two are based on user's perception to their belief about the system. PU and PEOU greatly affected users' attitude towards the use of a system (Mutuku, 2020).

A study by Ajibade (2018) shows that this model has some weaknesses which indicates that the model did not put into consideration some aspects like level of education and how old a person is. These aspects should have been considered because they influence how acceptance is achieved and the willingness of a person to use technology. It is next to impossible to be able to measure behavior because unseen character personalities repeatedly motivate behavior. Study has shown that most people using technology do not always place their level of acceptance and willingness to use new technology on their perceptions of the usefulness of IT and how easy it may seem in terms of using it.

TAM is considered most suitable and of importance to this study because of its popularity in terms of thoughtful connection between human and technology through PU and PEOU which improves performance. TAM has stood out in exploring and reviewing the issues affecting user's acceptance of modern technology. It has benefited organizations to improve on performance since it promotes the use and acceptance and gives individual difference, societal inspirations, belief, attitudes and situational influences as features which endorse an aim to use technology and encourage the ability to either accept or reject it. TAM predicts the eagerness and motivation to perform several skills by ensuring that organizations run effectively and efficiently (Durodolu, 2016).

#### **2.2.4 Theory of Planned Behavior**

Siricha and Theuri (2016) studied TPB, a theory that was developed from the TRA which was proposed by Fishbein and Ajzen (1980). TRA was developed to project a person's intent to be involved in a certain behavior during a specific period and place. TPB was later proposed by Ajzen (1985). TPB appoints that achievement of a specific behavior is dependent of both the persons intention and behavior control. As one of social cognitive theories, this theory has been used to predict and explain how human beings exercise actual intention and self-control over a behavior. TPB distinguishes three kinds of beliefs stated as behavioral, normative and control. It comprises of six concepts. These concepts put together they represents people's real control over a given behavior. These are social norms, attitudes, behavioral intention, subjective norms, perceived power and perceived behavioral control.

A study about the TPB done in New York, shows the main strengths of TPB to be that it has emerged as a major framework for enabling people to understand, predict and change human social behavior. It is argued that, through this theory an understanding into automaticity can help in well understanding of behavior which is provided by a reason action approach (Higgins, Kruglanski, & Lange, 2012). This theory seeks to elaborate better that behavior is not usually performed automatically but it usually follows a reasonably and a consistent form which is usually relevant to the available information.

TPB has been identified to have some weaknesses. A study on the Behavioral Change Models by LaMorte (2019) identified that the theory assumes that people who have already acquired opportunities and resources are successful in their day-to-day performance of behavior even without considering the intention. The study found that this theory usually does not consider other variables that are related to behavior of human beings. It also does not take into

consideration about the environmental or economic factors that may influence a human's intent to perform a specific performance. TPB does not in any way show how actual control over a behavior should be handled. The researcher also found out that TPB does not indicate the timeframe of when an intent and when an action is performed.

TPB is considered of importance and most suitable because it explains the connection of the intended behavior and that of the real behavior. A study on Belief Importance and the Theory of Planned Behavior found that TPB predicts behavioral intention better than the theory of reasoned action. Theory of Planned Behavior has been found to have improved the predictability of intention. It has also been found out to explain a person's day to day behavior better as compared to TRA. TPB expresses performance of a behavior depending on one's actual behavior control. This is according to their ability to perform a certain behavior (Shackelford & Hill, 2017).

## **2.3 Empirical Review**

### **2.3.1 E-sourcing and organizational performance**

Noor and Kimutai (2016) conducted a study to examine the function of strategic electronic sourcing practices on supply chain performance in state corporations in Kenya. The study adopted a cross-sectional survey and used qualitative and quantitative techniques. The population was 450 employees. They used Purposive probability sampling to select and analyze the sample. Questionnaires were used through drop and pick method. Descriptive and inferential statistics was done through SPSS. It was concluded that optimization of e-sourcing had improved the use of technology. Use of internet-based systems proved to save cost, improve performance and led to efficiency and effectiveness. The current study focused on an NGO hence this was a gap in study.



Oona (2017) examined the Strategic & Global Sourcing on Sourcing of Small Home Electronics from China. The focus of the study was finding new strategies in order to improve the company's performance. The study used qualitative method. Both primary and secondary data collection methods were used. Secondary data was gathered from trusted internet sites, journals and books and primary data from observations and interview. The study employed both descriptive and explorative research. It concluded that the company had an effective sourcing strategy. The study recommended the company to evaluate and do further research to enable them to decide whether to stick to supplies from china or whether to find new emerging markets. However, the current study concentrated on NGOs and not Electronic Companies.

Basta and Aziz (2018) assessed the adoption and outcomes of a strategic e-sourcing system at Bravo Solution in Dubai, UAE. Questionnaires were used thorough Primary data method. Two surveys were conducted. A sample of 253 employees was used and 673 suppliers participated in the study. The finding was that efficiency and effectiveness in companies is achieved through the practice of e-sourcing and that it allows companies to work in collaboration in order to build, provide and gauge tracking measures of sourcing through secure online platforms. The study concluded that adoption of e-sourcing added great value to both the client and the supplier. However, the current study concentrated on NGOs and not on oil producing companies.

Kamaru and Were (2018) explored the impact of electronic procurement on performance of state corporations under the State Department for Infrastructure in Kenya. Descriptive research and explanatory research design were used. The population was 142 employees with a sample of 14 individuals and stratified random sampling was employed. Primary data collection instrument was used. Electronic sourcing was found to have brought about positivity impact on performance. It was recommended that adoption of e-procurement be fully implemented because

e-sourcing was identified to enhance accountability, minimize errors, increase speed, enhance supplier relationship, reduce cost and hence ensuring efficiency and effectiveness of the procurement systems. The current study did not focus on Infrastructure hence this was a gap.

### **2.3.2 E-ordering and organizational performance**

Bulut and Yen (2013) examined e-procurement in public sector. The study adopted qualitative data collection method and employed. It adopted descriptive case study approach. A limited number of interviews were conducted via email on the condition of confidentiality. The current study concentrated on NGOs hence this was a gap. The study concluded electronic procurement has not been properly utilized and expansively used in public facilities as it is within the private sector.

Chepkwony and Lagat (2016) studied e-ordering and e-informing on supply chain performance in retail marketing outlets in Kenya. Explanatory research design and census survey was utilized. A target population was 244 officers and questionnaires were used to collect data. Pearson correlation coefficients and multiple regression analysis was employed. Quantitative data was analyzed using descriptive statistical method and assessment of internal consistency of the items was determined using Cronbach alpha coefficient. It was found that electronic ordering is of great importance in the process of supply chain. The study concluded that e-ordering increases supply chain performance. It was recommended that e-ordering be implemented. This study was only conducted in retail marketing outlets, but the current study was be conducted amongst NGOs.

Onjala (2017) conducted a study in determining how e-procurement implementation and supply chain performance of dairy firms in Kenya are related. The study relied on descriptive research and used questionnaires to collect data. Quantitative method to analyze data was used. The

population was the dairy firms in Kenya. The study revealed that e-ordering helps in capturing data and it helps keep track of inventory and ensures quick response to customer orders. A limitation was found which included leakage of confidential information, lack of enough technical expertise and security threats. This study focused only on dairy firms, but the current study focused on NGOs in the coast region.

Gunawan and Candra (2017) conducted a study to examine the impact of electronic procurement practice in Indonesia government. The population for the study was 60 users and purposive sampling was used. Data was analyzed by use of Structural Equation Modelling (SEM) and Partial Least Square (PLS) program was used to examine the relationship between variables. The findings found that implementation of e-procurement was of a great importance and largely impacted on how electronic marketplace contributed. The current study concentrated on NGOs being a gap.

Anane and Kwarteng (2019) carried out research to study prospects and challenges of procurement performance measurement in selected technical universities in Ghana. Both descriptive and exploratory research design were adopted. Target population for the study was 210 and all the 120 respondents participated. Convenience and quota sampling techniques were used. The study relied on both primary and secondary data and data was collected by use of questionnaires together with journals. SPSS and Microsoft excel were employed. Correlations, regression and standard deviation for analysis. It was concluded the right procedures be used to evaluate the performance of procurement. It was recommended that public procurement be completely implemented. The study was only conducted amongst technical universities whereas the current study was conducted amongst NGOs.

### **2.3.3 E-invoicing and organizational performance**

Haag, Born, Kreuzer and Bernius (2013) carried out a study to investigate organizational resistance to e-invoicing results from an empirical investigation among SMEs in Germany. The study adopted quantitative and qualitative survey. Questionnaires were used to collect data. A sample size of 416 participants was used. Findings were that resistance to use e-invoicing was due to lack of ICT knowledge. For organizations to achieve efficiency, effectiveness and transparency, implementation of digitalization of documents had to be put to effect. It concluded that the adoption to digitalization was still very low mostly on small organizations who resist to implement the use of e-invoicing because of lack of know-how. The study was only conducted amongst SMEs, but the current study was conducted amongst NGOs.

Bittok (2017) carried out research to determine the effects of e-procurement adoption on procurement performance of KENGEN. This study relied on use of questionnaires and descriptive survey research design. The target population was 255 employees and non-probabilistic sampling procedure was used. Purposive sampling method was used. The researcher used Fisher, R.A. to get a sample. Data was analyzed using regression model. Findings found that e-invoicing improved organizations performance and recommended that mechanisms to be organized and implemented in order to handle all the cons that hamper the operation of e-procurement. The study was only conducted in the Electricity Generating company, but the current study was conducted amongst NGOs.

Kiusya (2018) carried out a study to investigate the effect of e-procurement practices on the operational performance on manufacturing firms in Mombasa. The study adopted a cross sectional descriptive survey research design. The population was 41 manufacturing firms and primary data collection method was used through questionnaires. Regression analysis was

employed. The findings revealed that e-invoicing provides advantages to organizations and suppliers, hence improving performance. The study was only conducted amongst manufacturing firms, but the current study was conducted amongst NGOs.

Olaleye and Sanusi (2019) carried out a study to explore the need for Green Companies in Nigeria, a study of electronic invoicing. The study relied descriptive research and survey method was used. Non probabilistic sampling procedure and snowball sampling approach were used. Primary data collection method was used through use of questionnaires. SPSS was used for preliminary reliability test. The findings were that that performance expectancy and effort expectancy variables adapted from the model did not have any considerable impact on companies' behavioral intent to adopt e-invoicing in Nigeria. A gap was found out when the financial risk hypothesis result was found to be negatively related to the intentions of the study. The study was only conducted amongst Green Companies, but the current study was conducted amongst NGOs.

#### **2.3.4 E-payment and organizational performance**

Kabir, Saidin and Ahmi (2015) carried out a study to explore adoption of e-payment systems; a review of literature. It employed meta-analysis technique of research. It was recommended because of its precision, high performance in accuracy and comprehensiveness when offering measures for periodical effect. The study reviewed 51 empirical papers. Findings showed e-payment systems are important mechanisms which are safer and accessible for offering online payment. It was revealed that during that period it was an opening allow technology to advance in all areas of the world's whole economy improving performance.

Rasto and Yusuf Kibet (2017) studied the effects of e-procurement practices on organizational performance in public hospitals in the county government of Uasin Gishu, Kenya. The study

adopted a descriptive survey. A sample size of 367 respondents was used and questionnaires were the main type of data collection tool. (SPSS) version 22 was used. The study made use of both the quantitative and qualitative data. The data was offered in tabulations, frequencies and percentages. It was founded that establishment of IT improved utilization of electronic payment which has therefore upgraded utilization of supply chain management. The researchers therefore recommended more research be conducted.

Harelimana (2018) conducted a study to determine the impact of e-procurement on the performance of public institutions in Rwanda. This study adopted a descriptive research design and correlational study. Both primary and secondary data collection methods were employed. Data for the study was sourced from MINECOFIN reports and internet documents. The population for the study was 42 staffs. The entire population was used, and universal sampling technique was applied. The findings found that in African nations, the public sector is in the early stages of acquiring fame. This study established that on security in e-payment, ERP systems enhance security of management data which in turn improves procurement performance.

Fatonah, Yulandari and Wibowo (2018) conducted a study to investigate a review of e-payment system in e-commerce in Indonesia. The study adopted a meta-analysis technique to re-analyze the results of statistically administered in the studies. Quantitative research design was adopted. The study relied on primary data collection which included questionnaires, observations and interviews. The study revealed that electronic payment makes it very easy to do business transactions among vendors and users. The study recommended future researchers to use different methods of data collection technique.

## **2.4 Summary Literature Review**

The literature review has shown that electronic procurement has relations with performance of organizations. Noor and Kimutai (2016) revealed that e-sourcing has become more famous and immensely connected for the purpose of implementing evolution of organizations. Chepkwony and Lagat (2016) identified that electronic ordering played an important role in supply chain performance. Onjala (2017) established that e-ordering system helps in tracking of inventory and it ensures quick response to customer orders. Bittok (2017) found that e-invoicing improved organizations performance. Rasto, Yusuf and Kibet (2017) revealed a gap where organizations ignored e-payment in conducting transactions related to supply chain management. Kamaru and Were (2018) show that e-sourcing has a positive impact when it comes to performance and the researchers recommended that management of state corporations consider implementing e-procurement fully. Harelimana (2018) revealed that e-procurement is the process of gaining popularity especially in the public sector.

Olaleye and Sanusi (2019) revealed that performance expectancy and effort expectancy variables adapted from the model proved not to have considerable inspiration on company's behavioral purpose in accepting e-invoicing. It established that on security, e-payment ERP systems enhances security of management data. However, these studies were conducted in different sectors, different regions and employed different methodologies hence methodology, location and contextual research gaps which the current study aimed at filling by finding out how performance of an organization and electronic procurement are related to one another.

## 2.5 Research Gap

**Table 2.1: Research Gap**

<b>Author(s) and Year</b>	<b>Focus of the Study</b>	<b>Findings</b>	<b>Research Gap</b>	<b>Contribution of the Current Study</b>
(Oona, 2017)	Strategic & Global Sourcing on Sourcing of Small Home Electronics from China	Having an effective sourcing strategy improves performance	The study did not look at other organizations, it only concentrated on sourcing from china only	Electronic procurement and performance of NGO's in Kenya.
(Laryea, Ibem, Pagiwa & Phoi, 2014)	Effect of e-procurement adoption on the performance of state corporations under the State Department for Infrastructure in Nairobi Kenya.	Manual methods of were inefficient, lacked transparency, led to delays, had poor record keeping methods and wasted a lot of resources.	The study was done in a construction company set up and	Electronic procurement and performance of NGO's in Kenya.
(Kamau & Were, 2018)	The effect of e-procurement adoption on the performance of state corporations under the State Department for Infrastructure in Nairobi Kenya.	E-sourcing has a positive impact when it comes to performance	This study was carried out in the state corporations' sector while	Electronic procurement and performance of NGO's in Kenya.



<b>Author(s) and Year</b>	<b>Focus of the Study</b>	<b>Findings</b>	<b>Research Gap</b>	<b>Contribution of the Current Study</b>
(Candra & Gunawan, 2016).	Impact of e-procurement practice in Indonesia government; a preliminary study (The case of Electronic Procurement service at Bekasi District.	The findings found that implementation of e-procurement was positively taken and was of great effect in the markets.	Only 80% was used for analysis of the study and hence there was a gap of 20% which was not covered.	Electronic procurement and performance of NGOs in Kenya.
(Anane & Kwarteng, 2019).	Prospects and challenges of procurement performance measurement in selected technical universities in Ghana.	The necessary precautions were in place in evaluating procurement performance	The study only dealt with technical universities in Ghana and not NGOs	Electronic procurement and performance of NGO's in Kenya.
(Chepkwony & Lagat, 2016).	E-ordering and e-informing on supply chain performance in retail marketing outlets in Kenya.	E-ordering positively affected supply chain performance.	This research just focused on e-ordering and e-informing only.	Electronic procurement and performance of NGO's in Kenya.

<b>Author(s) and Year</b>	<b>Focus of the Study</b>	<b>Findings</b>	<b>Research Gap</b>	<b>Contribution of the Current Study</b>
(Haag, Born, Kreuzer, & Bernius, 2013).	Organizational resistance to e-invoicing results from an empirical investigation among SMEs in Germany.	Resistance to use e-invoicing was because ICT knowledge was not well spread in implementation of digitalization of documents had to be done through electronic channels	The study showed that there was no enough knowhow regarding how e-invoicing and its underlying process deters the enterprises from using e-invoicing.	Electronic procurement and performance of NGO's in Kenya.
(Olaleye & Sanusi, 2019).	Need for Green Companies in Nigeria, a study of electronic invoicing.	Performance and effort expectancy variables adapted from the model did not have any considerable influence on companies behavioral intent to adopt e-invoicing	The study concentrated on green companies in Nigeria	Electronic procurement and performance of NGO's in Kenya.
(Bittok, 2017).	Effects of e-procurement adoption on procurement of KENGEN.	e-invoicing improved organizations performance	The study only focused on the electricity generating company	Electronic procurement and performance of NGO's in Kenya.

<b>Author(s) and Year</b>	<b>Focus of the Study</b>	<b>Findings</b>	<b>Research Gap</b>	<b>Contribution of the Current Study</b>
(Fatona S, Yulandari, & Wibowo, 2018)	A review of e-payment system in e-commerce in Indonesia.	E-payment offers an easy way to transact and process documents in the e-commerce between users and vendors.	The study focused on e-payment system in Indonesia and has no relation to performance	Electronic procurement and performance of NGO's in Kenya.
Harelimana (2018)	Impact of e-procurement on the performance of public institutions in Rwanda.	In African nations, the public sector is in the early stages of acquiring fame in e-procurement.	The study focused on public institutions in Rwanda,	Electronic procurement and performance of NGO's in Kenya.
(Rasto & Kibet, 2017).	Effects of electronic procurement practices on organizational performance in public hospitals in the county government of Uasin Gishu, Kenya.	The research found that e-payment makes transactions cheaper. This was because of the little charges that are incurred in this process.	The study focused on hospitals in Uasin Gishu and it ignored the challenges that were facing e-procurement practices payment systems.	Electronic procurement and performance of NGO's in Kenya.

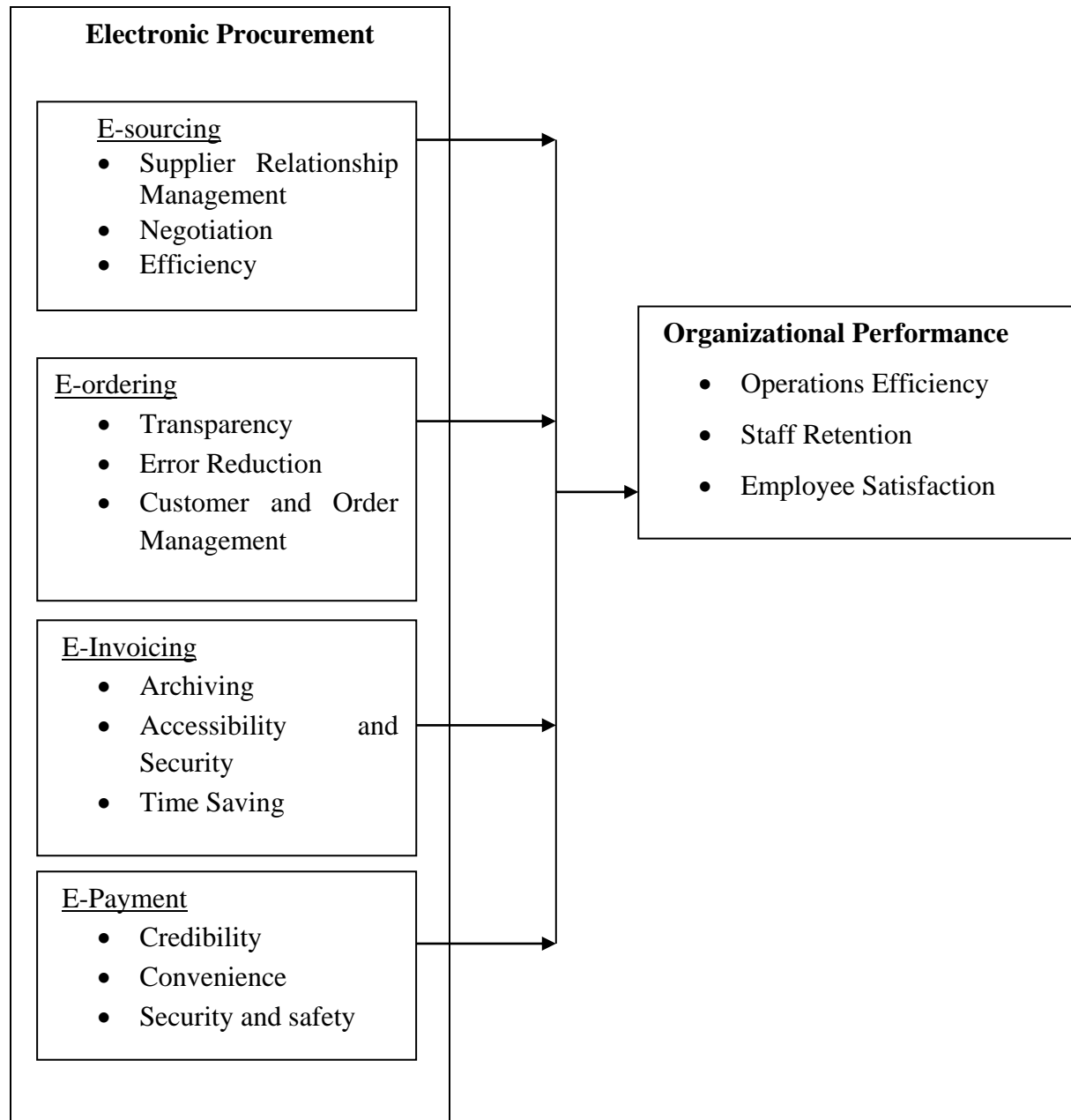
<b>Author(s) and Year</b>	<b>Focus of the Study</b>	<b>Findings</b>	<b>Research Gap</b>	<b>Contribution of the Current Study</b>
(Gavrea, Ilies, & Stegerean, 2011).	determinants of organizational performance; the case of Romania	Continuous performance was found to be the goal of any organization because it through performance that organizations can grow.	Fear of response led to minimal participation	Electronic procurement and performance of NGO's in Kenya.

**Source: Researcher (2020)**

## 2.6 Conceptual Framework

### Independent Variables

### Dependent Variable



**Figure 2.1 Conceptual Framework**

Source: (Author, 2020)

Figure 2.1 is a conceptual framework representing the relationship between the research variables. The independent variable is Electronic Procurement measured by E-sourcing, E-ordering, E-invoicing and E-payment while dependent variable is Organizational Performance which is measured by operations efficiency, staff retention and employee satisfaction.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discussed the research methodology that was used in the study. The chapter focused on the research design, target population, sampling techniques and the sample size, data collection instruments, validity and reliability of the data collection instruments, data collection procedure, data analysis techniques, data presentation and ethical considerations. Justification for each choice was clearly elaborated to explain the reason behind making of specific methodology choices.

#### **3.2 Research Design**

Sileyew (2019) defined research design as the method of how scholars and researchers conduct research. It is the strategy that is selected by the researcher in order to identify the different study components through a reasonable and clear means enabling the academic to address the problem which is being researched. This study employed descriptive research design. This design describes way things are without manipulating them. This leads to accurate data collection and a clear picture of the study phenomenon is established. It handles queries that ask questions such as Who? What? When? Where? How? Descriptive research has been identified as a method that describes features of a population what the researcher is studying (Cooper and Schindler, 2012).

#### **3.3 Target Population**

Cooper and Schindler (2012), defined population as the to the entire group of people, events, or things of interest that the researcher wishes to investigate; the population forms a basis from which the sample or subjects for this study shall be drawn from. Target population is the entire gathering of substances whereby the researcher wishes to make some inferences (Afande, 2013).

The population of interest for this study were the regular staff and grantees staff of Pathfinder International who interact with the procurement systems. These included Procurement department from main office, Finance and Administrative Department and all the procurement departments from the Grantees offices in the four counties in Coast Kenya. The researcher targeted 135 respondents (Pathfinder, 2020).

**Table 3.1: Target Population**

<b>Category</b>	<b>Frequency of Targeted Population</b>	<b>Percentages</b>
Procurement Department Main Office	41	30.37%
Finance & Administrative Department	22	16.296%
Mombasa Procurement Department	20	14.814%
Kilifi Procurement Department	16	11.851%
Kwale Procurement Department	14	10.37%
Taita-Taveta Procurement Department	22	16.296%
<b>Total</b>	<b>135</b>	<b>100</b>

Source: Pathfinder International (2020)

### 3.4 Sampling Design

Sample frame has been described as the number of items in a population whereby samples are usually gotten from. Sampling has been defined as the process whereby a representative from the population of the study is selected and sample size as the group of people or cases from the accessible population who takes part in the investigation (McLeod, 2019).

This study adopted a non-probability sampling procedure. Since the target population for the respondents was small and manageable, the study used census whereby the entire population of 135 respondents participated in the study. A census is mostly attractive for small population. It attempts to list all elements in a group and to measure one or more characteristics of those



specific elements. Census is effective in the sense that it offers an accurate image of what the study entails (Baffour, 2012).

### **3.5 Data Collection Instruments**

Medina (2017) defined it as those tools and approaches that are usually used for data collection from the respondents. Primary data was collected by means of open ended and close ended questionnaires. Drop and pick method was employed. The advantage of using questionnaires is because they are easy to formulate, manage and analyze, saves time and money and permit greater depth of response.

The questionnaires comprised of six sections. Likert scale was used for the close ended questions. Section A focused on the general information which included gender, age, years worked at pathfinder, education level and the category in which the respondents belong, section B concentrated on the relationship of e-sourcing on performance, section C was concerned with the relationship of e-ordering on performance, section D was focused on the relationship of e-invoicing on performance, section E concentrated on relationship of e-payment on performance and section F focused on organizational performance.

#### **3.5.1 Validity of the Research Instrument**

Validity is how accurately a method calculates what it is intended to be measured. This study employed content validity. The method refers means of extent by which items that are being tested have fairly represented the entire domain. It checks the wording, formatting and scoring of the instrument. For Validity to be proved effective the test being done must capture all the relevant features of the hypothesis (Middleton, 2019). To test for face validity, the questionnaire was submitted to one research expert in Kenyatta University who is the researcher's supervisor.

### **3.5.2 Reliability of the Research Instrument**

Stephanie (2016) defined it as the consistency that is seen in the results when the same tests are conducted repeatedly. It is the capability of test scores to be consistent. When results of tests done are found out to be consistent through use of similar means then the measurement is considered reliable. This study used Cronbach's Alpha; the method that has been widely practiced in assessing internal consistency of a research instrument. The alpha coefficient usually varies in values which start at zero to one. The closeness of Cronbach's alpha coefficient to one in the items of the scale is what makes internal consistency to be greater.

This study considered figures that are closer to one while figures below 0.7 were considered weak and rejected or unchanged. It is the most preferred and the most used because it saves time, provides a unique estimate of the internal consistency of a scale rather than there being a range of possible reliabilities and it requires only single administration of the research tools as stated by (Cooper and Schindler, 2012).

### **3.6 Pilot Testing**

Pilot testing has been defined as a preparation for what is to be studied in order to enable the researcher have the ability of testing their chosen study by using a few respondents to test the prepared research problem prior to getting involved with main study. The pilot study addressed several issues in the study; these included, testing and identifying potential practical problems in following the research procedure, establishing the issues to be addressed in the study, ensuring that the phrasing of the questions is clear, assessing the success of collection and processing methods, giving the researcher a chance to determine whether the data collected is useful, this is done through testing the reliability and validity of the questionnaires, ensuring that the respondents understand with clarity what is being asked, checking whether the time used to

analyze data is sensible and whether the respondents have the ability to finish the given problems within the given time frame (Wright, 2018).

The researcher randomly picked eight participants for piloting representing 6 percent of the sample size (135). The eight participants did not participate in the final data collection procedure. The pilot test was done in order to check whether the time allocated was enough, identify any practical problems and to check whether the variables collected was easily processed and analyzed. At the end of the pilot study, the researcher made sure that all questionnaires were revised, and the revised ones were the ones used during data collection in the main study.

### **3.7 Data Collection Procedure**

Kabir (2016) defined data collection procedure as that procedure that is followed by researcher to ensure that the data collection tools are applied accurately, honestly and efficiently in order to capture quality data to allow creating a dependable response to problems declared. The researcher prepared a letter to the management of Pathfinder requesting for clearance to collect data. The benefit of a clearance letter was to allow the researcher access all departments in the organization.

The researcher then prepared and issued introductory letters to the respondents. The importance of the letter was to clearly show all the requirements and instructions on how to go through the process of filling questionnaires. Questionnaires were then distributed by the researcher in person to ensure all clarifications arising from the respondents are addressed efficiently and in a timely manner. The researcher acquired authorization letter from KU and NACOSTI.

### 3.8 Data Analysis and Presentation

Data analysis has been defined as that procedure whereby data is evaluated so that useful data can be identified using analytical or statistical tools so that important and useful data can be identified (Grant, 2020). The data collected was coded and entered to a computer for analysis using Statistical Package for Social Sciences (SPSS) Version 24 to enable generation of analysis. Data cleaning was also be conducted to ensure that the analyzed data was be free from error. Quantitative data was analyzed through use of both descriptive and inferential statistics using SPSS Version 24 while qualitative data was analyzed through content analysis. Descriptive statistics was presented in frequency distributions, tables and percentages to interpret the perception that the respondent has raised in their questionnaires to answer. To assess how the independent(s) and dependent variables are related to each other, inferential statistics such as correlation and regression were applied. All the tests significance level was 95 percent confidence level. The regression equation was:

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

*Where:*

Y is the dependent variable (organization performance)

$\beta_0$  is the regression constant

$\beta_1$ ,  $\beta_2$ ,  $\beta_3$  and  $\beta_4$  are the coefficients of independent variables

$X_1$  is e-sourcing

$X_2$  is e-ordering

$X_3$  is e-invoicing

X<sub>4</sub> is e-payment

$\varepsilon$  is the error term

### **3.9 Ethical Considerations**

Zafna (2018) defined ethical considerations as the means which differentiates what is good from what is bad. Ethical considerations have been specified to be very important in research. Any harm to the respondents was avoided. This was achieved by observing the ethical rules of research. These rules were observed prior to the research, when the research begun and when the research was taking place when data was being collected, during analysis and reporting and during presentation of data.

Complete consensus obtained from the participants prior to the study. Norms and standards of behavior that were observed prior to the study included the making of study preparations. Measures to ensure that plagiarism is avoided included quoting of all authors by acknowledging their works. The researcher implemented this by ensuring that all works were acknowledges and citations well indicated by following APA code of conduct. The researcher was required to respect all academicians to this study accordingly (American Psychological Association, 2015).

During data collection the researcher treated the respondents with honor and their dignity was respected and prioritized. Information collected from the respondents was treated as confidential, neutral, unbiased and the findings were treated as anonymous. The researcher let the participants know when they had to break the confidentiality rule. Research participants were not subjected to harm in any way whatsoever and data collected was protected and stored safely (Seltzer, 2020).

The researcher ensured that rules and values were employed during data analysis, reporting and presentation by ensuring that data was reported exactly how it was collected without falsifying evidence, favoring data and findings and twisting the conclusion (Fisher, 2018). The researcher ensured that no external forces would negatively impact the honest and accurate analysis, reporting and presentation of research data, by ensuring that code of ethic was followed and an honest conclusion was provided without falsification (American Psychological Association, 2015).

**CHAPTER FOUR**  
**RESEARCH FINDINGS AND DISCUSSIONS**

**4.0 Introduction**

This chapter focused on data analysis, presentation, interpretation, and discussion. The purpose of the study was to establish the relationship between electronic procurement and performance of non-governmental organizations in Kenya. The responses were analyzed into frequencies, percentages and mean and presented in tables.

**4.1 Reliability Test**

Reliability of the questionnaire was tested to measure its internal consistency using Cronbach’s alpha. E-sourcing, E-ordering, E-invoicing, E-payment had alpha values of 0.891, 0.955, 0.925 and 0.928 respectively. NGO performance had an alpha value of 0.876 and the scale combination was 0.985 which is a sound and reliable measure of the minimum required scale of 0.7 The outcomes are presented in Table 4.1.

**Table 4.1: Reliability Statistics**

<b>Variables</b>	<b>Cronbach’s alpha</b>	<b>Items</b>
NGO performance	0.876	5
E-sourcing	0.891	6
E-ordering	0.955	6
E-invoicing	0.925	6
E-payment	0.928	6
Scale Combination	0.985	29

Survey Data (2021)

**4.2 Response and Non-response Rate**

The participants of the study were the regular staff and grantees staff of Pathfinder International. They returned the questionnaires as presented in Table 4.2.

**Table 4.2: Response and Non-response Rate**

<b>Respondents</b>	<b>Frequency</b>	<b>Percentage</b>
Response Rate:		
Regular Staff	73	54.07
Grantees Staff	30	22.22
<b>Total Response rate</b>	<b>103</b>	<b>76.30</b>
Non-response Rate:		
Regular Staff	22	16.3
Grantees Staff	10	7.4
<b>Total Non-response rate</b>	<b>32</b>	<b>23.7</b>
<b>Total</b>	<b>135</b>	<b>100</b>

Survey Data (2021)

Table 4.2 shows that questionnaire response return rate was above 70 percent which is adequate for analysis according to (Wafula, Namusonge, & Okwaro, 2017).

### **4.3 Descriptive Statistics**

#### **4.3.1 Staff Demographics**

The background information for Pathfinder staff included gender, age, period of working at the organization, education level and job category. Findings are presented in Table 4.3.



**Table 4.3: Staff Demographics**

<b>Variable</b>	<b>Frequency (F)</b>	<b>Percentage (%)</b>
<b>Gender</b>		
Male	67	65.0
Female	36	35.0
<b>Total</b>	<b>103</b>	<b>100.0</b>
<b>Age</b>		
20-30 years	20	19.4
31-40 years	77	74.8
41-50 years	6	5.8
<b>Total</b>	<b>103</b>	<b>100.0</b>
<b>Period of working in the organization</b>		
Less than 5 years	30	29.1
6-10 years	57	55.3
11-15 years	10	9.7
16-20 years	6	5.8
<b>Total</b>	<b>103</b>	<b>100.0</b>
<b>Education level</b>		
Certificate	5	4.9
Diploma	15	14.6
Undergraduate	47	45.6
Postgraduate	36	35.0
<b>Total</b>	<b>103</b>	<b>100.0</b>
<b>Job category</b>		
Procurement main office	5	4.9
Finance and administration	72	69.9
Mombasa grantees	19	19.4
Kilifi grantees	6	5.8
<b>Total</b>	<b>103</b>	<b>100.0</b>

Survey Data (2021)

Findings in Table 4.3 indicate that 65 percent (67) of the respondents were male while 35 percent (36) were female. This implies that male both genders are well represented in the study and that pathfinder as an organization has respected and maintained the one third gender rule of employment. The study also shows that 19.4 percent (20) participants were in the age bracket of 20-30 years, 74.8 percent (77) were aged between 30-40 years and that 5.8 percent (6) were aged between 41-50 years.

The findings show that the minority of the staff are older while most of the staff members are in the youth age bracket. This declares that most employees are youthful and digital oriented and are the right people to implement e-procurement. The findings also indicate that 29.1 percent (30) had worked in Pathfinder for less than five years, 55.3 percent (57) has worked 6-10 years, 9.7 percent (10) for 11-15 years and finally 5.8 percent (6) has worked for the organization for 16-20 years. This implies that the staff had worked at Pathfinder for a considerable number of years hence in a good position to respond to questions regarding the organization.

The findings further show that 4.9 percent (5) of the staff had attained Certificate level of education, 14.6 percent (15) had attained Diploma level, 45.6 percent (47) had reached degree level and 35.0 percent (36) were of post graduate level. This shows that most of the staff members at Pathfinder International have attained a degree in their education. This means that the staff are qualified to work in the procurement department an in a position to answer to questions related to e-procurement.

Findings also show that 4.9 percent (5) of the staff were situated at the procurement main office, 69.9 percent (72) were in the finance and administration department, 19.4 percent (19) were located at the Mombasa Grantees office and 5.8 percent (6) were located in Kilifi Grantees

office. This means that all the procurement sections and departments of pathfinder were well represented in the study.

### 4.3.2 State of e-procurement in the organization

The staff were asked to tick on their level of agreement on statements regarding e-procurement at Pathfinder International. Findings are presented in Table 4.4.

**Table 4.4: E-procurement in the organization**

Key: 1= Strongly disagree. 2= Disagree. 3= Not sure. 4 = Agree and 5=Strongly agree. M=Mean. Mean (1-1.80= strongly disagree, 1.81-2.60= Disagree, 2.61-3.40= Not Sure, 3.41-4.20= Agree, 4.21-5.00= Strongly Agree)

Statements	SD		D		NS		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Pathfinder has fully implemented e-procurement	0	0	0	0	11	10.7	52	50.5	40	38.8	4.28
Pathfinder provides full support to enhance e-procurement	0	0	0	0	6	5.8	67	65.0	30	29.1	4.23
Systems used at Pathfinder International are of high quality	0	0	0	0	22	21.4	36	35.0	45	43.7	4.22
Pathfinder is an NGO who is an umbrella to many local NGOs	0	0	0	0	26	25.2	47	45.6	30	29.1	4.04
Pathfinder has fully supported Grantees who are community based	0	0	0	0	16	15.5	52	50.5	35	34.0	4.18

**N=103**

Survey Data (2021)

Findings in table 4.4 show that; pathfinder has fully implemented e-procurement (M=4.28), pathfinder provides full support to enhance e-procurement (M=4.23) and systems used at pathfinder international are of high quality (M=4.22), Pathfinder has fully supported Grantees who are community based (M=4.18), and that pathfinder is an NGO who is an umbrella to many

local NGOs (M=4.04). This implies that e-procurement is well embraced at Pathfinder. The findings agreed with Hussein (2018) that e-procurement has been recognized to be one of the best procurement practices.

### 4.3.3 E-sourcing

The first objective sought to evaluate how e-sourcing relates to performance of Pathfinder International. The staffs were asked to tick on their level of agreement on listed statements regarding e-sourcing in the organization. Findings are presented in Table 4.5.

**Table 4.5: E-sourcing**

*Key: 1 Strongly disagree. 2= Disagree. 3= Not sure. 4 = Agree and 5=Strongly agree.*

*M=Mean. Mean (1-1.80= strongly disagree, 1.81-2.60= Disagree, 2.61-3.40= Not Sure, 3.41-4.20= Agree, 4.21-5.00= Strongly Agree)*

Statements	SD		D		NS		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Pathfinder makes use e-sourcing to identify potential suppliers	0	0	6	5.8	5	4.9	67	65.0	25	24.3	4.08
E-sourcing was adopted to reduce costs associated with outsourcing	0	0	0	0	11	10.7	72	69.9	20	19.4	4.09
E-sourcing improves speed in negotiation which improves efficiency	0	0	0	0	16	15.5	47	45.6	40	38.8	4.23
Effective use of e-sourcing improves performance of the organization	0	0	0	0	0	0	53	51.5	50	48.5	4.49
I know how to effectively use Serenic System	0	0	0	0	26	25.2	42	40.8	35	34.0	4.09

Survey Data (2021)

Findings in Table 4.5 show that effective use of e-sourcing improves performance of the organization (M=4.49), e-sourcing improves speed in negotiation which improves efficiency (M=4.23). The staff agreed that e-sourcing was adopted to reduce costs associated with outsourcing (M=4.09) and that they know how to effectively use Serenic System (M=4.09) and that pathfinder makes use e-sourcing to identify potential suppliers (M=4.08). This implies that electronic sourcing is related to organizations performance. The findings concur with Basta and Aziz (2018) that efficiency and effectiveness in companies is achieved through the practice of e-sourcing and it improves performance.

The study sought to find out the opinion on e-sourcing implementation at Pathfinder. Findings are presented in Table 4.6

**Table 4.6: Staff Opinion on E-sourcing**

<b>Staff Opinion</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	77	74.8
No	26	25.2
<b>Total</b>	<b>103</b>	<b>100</b>

Survey Data (2021)

Findings on Table 4.6 show that majority of the staff members 74.8 percent (77) indicated that Pathfinder has fully implemented e-sourcing while 25.2 percent (26) disclosed that Pathfinder has not fully implemented e-sourcing. This implies that staff of Pathfinder are confident that e-sourcing has a chance to be fully implemented. The findings concur with Kamaru and Were (2018) e-procurement be fully implemented because e-sourcing was identified to enhance accountability, minimize errors, increase speed, enhance supplier relationship and reduce cost.

**Table 4.7: Staff’s Advice on Implementation of E-sourcing**

<b>Staff’s Advice</b>	<b>Frequency</b>	<b>Percentage</b>
Ensure remote/site offices have stable internet	43	41.7
Embrace the already available resources fully (Serenics)	27	26.3
Train staff on online platform	20	19.4
Have systems end to end	13	12.6
<b>Total</b>	<b>103</b>	<b>100</b>

Survey Data (2021)

Findings on Table 4.7 indicate that 41.7 percent (43) of the staff advises the organization to ensure that remote and site offices have stable internet, 26.3 percent (27) advises the organization to fully embrace the already available resources, 19.4 percent (20) advises the organization to train staff on online platform while 12.6 percent (13) advises the organization to have systems end to end. This implies that staff of Pathfinder are interested in ensuring that e-sourcing is fully implemented. This concurs with Micheni, Muma, & Rotich (2016) that e-sourcing procedure should be a company’s first requirement and should be embraced by both vendors and clients.

#### **4.3.4 E-ordering**

The second objective sought to assess how e-ordering relates to performance of Pathfinder International. The staff were asked to tick on their level of agreement on listed statements regarding e-ordering in the organization. Findings are presented in Table 4.8.

**Table 4.8: E-ordering**

Key: 1=Strongly disagree. 2= Disagree. 3= Not sure. 4 = Agree and 5=Strongly agree.

M=Mean. Mean (1-1.80= strongly disagree, 1.81-2.60= Disagree, 2.61-3.40= Not Sure, 3.41-4.20= Agree, 4.21-5.00= Strongly Agree)

Statements	SD		D		NS		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
I know how to electronically prepare and post purchase orders	6	5.8	0	0	5	4.9	42	40.8	45	43.7	3.83
Pathfinder fully uses e-ordering to prepare and send purchase orders	0	0	16	15.5	10	9.7	37	35.9	40	38.8	3.98
Pathfinder uses e-ordering to improve transparency, reduce errors and to improve customer order management	0	0	16	15.5	0	0	57	55.3	40	38.8	4.27
Serenic System is an efficient system for e-ordering	6	5.8	0	0	5	4.9	52	50.5	40	38.8	4.22
I know how to attach all relevant documents in the system	6	5.8	5	4.9	5	4.9	42	40.8	45	43.7	4.16

**N=103**

Survey Data (2021)

Findings in Table 4.8 show that Pathfinder uses e-ordering to improve transparency, reduce errors and to improve customer order management (M=4.27), Serenic system is an efficient system for e-ordering (M=4.22), staff know how to attach the relevant documents in the system (M=4.16), Pathfinder uses e-ordering to prepare and send purchase orders (M=3.98) and staff knew how to electronically prepare and post purchase orders (M=3.83). This implies that e-ordering is well embraced at Pathfinder and that it relates well with organizational performance.

The findings concur with Chepkwony and Lagat (2016) that e-ordering increases supply chain performance. It was recommended that e-ordering be implemented.

**Table 4.9: Staff Opinion on E-ordering**

<b>Staff Opinion</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	68	66.0
No	35	34.0
<b>Total</b>	<b>103</b>	<b>100</b>

Survey Data (2021)

Findings on Table 4.9 show that majority of the staff members 66 percent (68) indicated that e-ordering is related to performance of organization while 34.0 percent (35) indicated that e-ordering has no relationship with performance of an organization. This implies that most staff of Pathfinder believe that e-ordering is related to performance of the organization.

**Table 4.10: Staff's Advice on Implementation of E-ordering**

<b>Staff's Advice</b>	<b>Frequency</b>	<b>Percentage</b>
Phase out manual ordering and adopt e-ordering	26	25.2
Put a proper system in which e-ordering can be made effective	20	19.5
Emphasize all procurement to be done online	15	14.6
Improve on turnaround time	12	11.6
Make it accessible to all staff for all embrace	13	12.6
Robust e-ordering system on all procurement processes	10	9.7
Consistence use of the system by employees	7	6.8
<b>Total</b>	<b>103</b>	<b>100.0</b>

Survey Data (2021)

Findings on Table 4.10 show that 25.2 percent (26) of the staff advice the organization to face out manual ordering and adopt to e-ordering, 19.5 percent (20) advices the organization to put a



proper system in which e-invoicing can be made effective, 14.6 percent (15) emphasized that all procurement be done online, 11.6 percent (12) advised the organization to improve on turnaround time, 12.6 percent (13) advised the organization to make e-ordering accessible to all staff in order for all to be able to embrace it, 9.7 percent (10) advised the organization to robust e-ordering system on all procurement and 6.8 percent (7) advised the organization to make e-ordering a consistent system by all employees. This implies that most staff of Pathfinder are interested in implementing e-ordering fully. This agrees with Anane and Kwarteng (2019) that the right procedures be used to evaluate the performance of procurement and that public procurement be completely implemented.

#### **4.3.5 E-invoicing**

The third objective sought to determine the relationship of e-invoicing to performance of Pathfinder International. The staff were asked to tick on their level of agreement on listed statements regarding e-invoicing in the organization. Findings are presented in Table 4.11.

**Table 4.11: E-invoicing**

Key: 1= Strongly disagree. 2= Disagree. 3= Not sure. 4 = Agree and 5=Strongly agree.

M=Mean. Mean (1-1.80= strongly disagree, 1.81-2.60= Disagree, 2.61-3.40= Not Sure, 3.41-4.20= Agree, 4.21-5.00= Strongly Agree)

Statements	SD		D		NS		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
E-invoicing saves time and money as compared to manual invoicing	0	0	0	0	11	10.7	15	14.6	77	74.8	4.53
E-invoicing is a secure means of archiving documents	0	0	11	10.7	5	4.9	20	19.4	67	65.0	4.38
E-invoicing is a beneficial asset to Pathfinder	6	5.8	5	4.9	0	0	36	35.0	56	54.4	4.37
Serenic is an effective system to do e-invoicing	16	15.5	10	9.7	10	9.7	37	35.9	30	29.1	3.62
I know how to prepare e-invoices and post them to Serenic	0	0	16	15.5	5	4.9	30	29.1	52	50.5	3.93

**N=103**

Survey Data (2021)

Findings in Table 4.11 show that the staff strongly agreed that; e-invoicing saves time and money as compared to manual invoicing (M=4.53), e-invoicing is a secure means of archiving documents (M=4.38) and e-invoicing is a beneficial asset to Pathfinder (M=4.37). The staff also agreed that they know how to prepare e-invoices and post them to Serenic (M=3.93), and Serenic is an effective system to do e-invoicing (M=3.62). This implies that e-invoicing is a greatly related to organization performance and that staff of Pathfinder majorly appreciate use of e-invoicing in the organization. The findings concur with Bittok (2017) that e-invoicing improved organizations performance.

**Table 4.12: Staff Opinion on E-invoicing**

<b>Staff Opinion</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	68	66.0
No	35	34.0
<b>Total</b>	<b>103</b>	<b>100</b>

Findings on Table 4.12 show that majority of the staff members 66.0 percent (68) strongly believes that use of e-invoicing improves performance at Pathfinder while 34.0 percent (35) declared that they don't think that e-invoicing improves performance at Pathfinder. This implies that performance of Pathfinder is improved by e-invoicing. This agrees with Bittok (2017) that e-invoicing improved organizations performance.

**Table 4.13: Staff's Advice on Implementation of E-invoicing**

<b>Staff's Advice</b>	<b>Frequency</b>	<b>Percentage</b>
Invoicing should be automated and shared	32	31.0
OJT and mentorship to staff to embrace e-invoicing to a higher level	20	19.4
Addressing gaps that affects e-invoicing	15	14.6
The organization should make e-invoicing mandatory	15	14.6
ICT training to all the procurement team	11	10.7
Improve the system when working to avoid hiccups	10	9.7
<b>Total</b>	<b>103</b>	<b>100.0</b>

Survey Data (2021)

Findings in Table 4.13 show that 31.0 percent (32) advised that in order to achieve e-invoicing, invoicing should be automated and shared, 19.4 percent (20) advised that OJT and mentorship to staff be done in order to embrace e-invoicing to a higher level, 14.6 percent (15) advised that

gaps that affect e-invoicing be addressed, 10.7 percent (11) advised that ICT training be done to all the procurement team and 9.7 percent (10) advised that the system be improved to avoid hiccups while working. This implies that staff of Pathfinder International are very interested in seeing e-invoicing fully embraced and in action. The findings agree with Yvanovich (2018) that e-invoicing improves the systems by offering effective archiving.

#### 4.3.6 E-payment

The fourth objective sought to examine the relationship of e-payment to performance of Pathfinder International. The staff were asked to indicate in how much they agreed with the statements that were provided in the questionnaires regarding e-invoicing in the organization.

**Table 4.14: E-payment**

*Key: 1= Strongly disagree. 2= Disagree. 3= Not sure. 4 = Agree and 5=Strongly agree.*

*M=Mean. Mean (1-1.80= strongly disagree, 1.81-2.60= Disagree, 2.61-3.40= Not Sure, 3.41-4.20= Agree, 4.21-5.00= Strongly Agree)*

Statements	SD		D		NS		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
E-payment leads to secure and safer payment transactions	0	0	0	0	6	5.8	20	19.4	77	74.8	4.69
E-payment is a convenient and credible means of making payments	0	0	0	0	6	5.8	10	9.7	87	84.5	4.67
We electronically pay all vendors and suppliers	6	5.8	5	4.9	25	24.3	32	31.1	35	34.0	3.83
I know how to post payments made electronically	0	0	26	25.2	10	9.7	32	31.1	35	34.0	3.74
Serenic is an effective system that updates all e-payments accurately	0	0	6	5.8	20	19.4	10	9.7	67	65.0	4.22

**N=103**

Survey Data (2021)

Findings in Table 4.14 show that e-payment leads to secure and safer payment transactions (M=4.69), e-payment is a convenient and credible means of making payments (M=4.67), Serenic is an effective system that updates all e-payments accurately (M=4.22). The staff strongly agreed that they electronically pay all vendors and suppliers (M=3.83) and that the staff know how to post payments made electronically (M=3.74). This implies that most staff strongly believe in e-payment system and are interested in seeing it prosper. The findings concur with Kabir, Saidin and Ahmi (2015) that e-payment systems are important mechanisms which are safer and accessible for offering online payment.

**Table 4.15: Staff Opinion on E-payment**

<b>Staff Opinion</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	77	74.8
No	26	25.2
<b>Total</b>	<b>103</b>	<b>100</b>

Survey Data (2021)

Findings on Table 4.15 show that majority of the staff members 74.8 percent (77) said that e-payment is related to performance of NGOs while 25.2 percent (26) did not believe in the statement that e-payment is related to performance of NGOs.

**Table 4.16: Staff's Advice on Implementation of E-payment**

<b>Staff's Advice</b>	<b>Frequency</b>	<b>Percentage</b>
Improve the system to work fully to avoid challenges and delays when making payment	28	27.2
More training to staff on e-procurement	26	25.2
Link the ERP system to the Bank	23	22.4
Putting up a robust system that encourages e-payment	16	15.5
Make e-payment mandatory	10	9.7
<b>Total</b>	<b>103</b>	<b>100.0</b>

**Survey Data (2021)**

Findings in Table 4.16 show that 27.2 percent (28) advised the organization to improve the system to work fully in order to avoid challenges and delays when making payments, 25.2 percent (26) advised that more training be done to staff on e-procurement, 22.4 percent (23) advised that ERP system be linked to the banks, 15.5 percent (16) said that a robust system that encourages e-payment be put up and 9.7 percent (10) advised that e-payment system be made mandatory. This implies that Staff of Pathfinder are positive about e-payment and they are interested in seeing it work perfectly to improve performance. The findings concur with Kabir, Saidin and Ahmi (2015) that e-procurement improves performance of an organization.

**Table 4.17: Effect of E-payment on Performance**

<b>Effect of payment</b>	<b>Frequency</b>	<b>Percentage</b>
Speedy payment	32	31.0
Timely payment	24	23.3
Accurate auditing	18	17.5
Transparency in accounting	16	15.5
Saves banking costs	13	12.7
<b>Total</b>	<b>103</b>	<b>100.0</b>

Survey Data (2021)

The findings on Table 4.17 show that 31.0 percent (32) feel that e-payment leads to speedy payments, 23.3 percent (24) thought that e-payment led to timely payment, 17.5 percent (18) felt that e-payment led to accurate auditing, 15.5 percent (16) said that e-payment leads to transparency in accounting and that 12.7 percent (13) think that e-payment saves banking costs. This implies that staff of Pathfinder are very positive with the way e-payment is conducted in the organization and their wish is to see it prosper even more to continue improving performance. The findings concur with Fatonah, Yulandari and Wibowo (2018) that e-payment makes it very easy to do business transactions among vendors and users.

In order to examine the performance of the NGO, staff were directed to tick on the extent by which they agreed or disagreed with statements related to performance in the organization. Findings are presented in Table 4.18

**Table 4.18: Organization Performance**

*Key: 1= Strongly disagree. 2= Disagree. 3= Not sure. 4 = Agree and 5=Strongly agree.*

*M=Mean. Mean (1-1.80= strongly disagree, 1.81-2.60= Disagree, 2.61-3.40= Not Sure, 3.41-4.20= Agree, 4.21-5.00= Strongly Agree)*

Statements	SD		D		NS		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Performance can be measured in terms of operations efficiency	0	0	0	0	0	0	41	39.8	56	54.4	4.43
Performance can be measured through how staff are retained	0	0	0	0	0	0	15	14.6	77	74.8	4.39
Performance improves rate of employee's satisfaction	0	0	0	0	6	5.8	52	50.5	45	43.7	4.38
Pathfinder values employees' suggestions and feedback	0	0	0	0	0	0	88	85.4	15	14.6	4.15
Pathfinder conducts training to improve performance	0	0	6	5.8	30	29.1	42	40.8	25	24.3	3.81

**N=103**

Survey Data (2021)

Findings in Table 4.18 show that performance can be measured in terms of operations efficiency (M=4.43), performance can be measured through how staff are retained (M=4.39), performance improves rate of employee's satisfaction (M=4.38), Pathfinder values employee's suggestions and feedback (M=4.15) and that Pathfinder conducts training to improve performance (M=3.81). This means that a high number of staff members of Pathfinder International are very positive and interested in seeing the organizations performance progress. The findings agree with Latif, Ahmad and Naeem (2013) that satisfaction of employees is very important as it makes the organization perform in a better and an efficient manner.



**Table 4.19: Recommendations to Improve Performance**

Staff's Recommendations	Frequency	Percentage
Smart working, learning & new systems usage	21	20.4
Adopt and embrace computer technology in all aspects to enhance performance	10	9.8
Build more trust and train at jobs to improve motivation and work excellence	26	25.4
Procedure's improvement and target achievement	26	25.3
Finance and programs departments to offer each other immense support	10	9.8
Quality at work/Loyalty benefits and funding sourcing to enhance performance	10	9.8
<b>Total</b>	<b>103</b>	<b>100.5</b>

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**Survey Data (2021)**

Findings in Table 4.19 show that 20.4 percent (21) recommended that the organization implements smart working and introduced new systems usage to enhance performance, 9.8 percent (10) advised that adoption of computer technology be embraced, 25.4 percent (26) recommended that trust be build and that on-the-job training be done to improve motivation and work excellence, 25.3 percent (26) advised that procedures be improved for easier achievement of targets, 9.8 percent (10) advised that both Finance and Programs department to offer one another support in order to improve on performance and 9.8 percent (10) recommended that Loyalty benefits, funding and quality at working be improved to enhance performance. This implies that staff at Pathfinder are interested in seeing the organization perform well and prosper. This agrees with Puckett (2019) that training, appreciating and accepting efforts is an important aspect in performance of NGOs.

## 4.4 Inferential Statistics

### 4.4.1 Coefficient of Correlation

The study employed Karl Pearson's coefficient of correlation ( $r$ ). Correlational help researchers determine the direction and strength of the relationship between different variables. A correlation value of  $\pm 0.5$  shows a strong correlation,  $\pm 0.30$  to  $\pm 0.49$  medium correlation while  $\pm 0.29$  is a small correlation. Significance is at less than 0.05. A strong high correlation implies that the study variables have a strong relationship while a small weak correlation means that the variables are not related (Orodho, 2013). Findings are presented in Table 4.20.

**Table 4.20: Correlation Analysis**

Variables		NGO performance	E-sourcing	E-ordering	E-invoicing	E-payment
NGO performance	Pearson Correlation	1				
	Sig. (2-tailed)					
E-sourcing	Pearson Correlation	.670**	1			
	Sig. (2-tailed)	.000				
E-ordering	Pearson Correlation	.512**	.655	1		
	Sig. (2-tailed)	.000	.000			
E-invoicing	Pearson Correlation	.783**	.428	.219	1	
	Sig. (2-tailed)	.000	.000	.000		
E-payment	Pearson Correlation	.779**	.763	.744	.653	1
	Sig. (2-tailed)	.000	.000	.000	.000	

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

Survey Data (2021)

According to the results as indicated in Table 4.20, there was a strong significant relationship between e-sourcing and performance ( $r = 0.670$ ,  $p\text{-value}=0.000$ ), a medium significant

relationship between e-ordering and performance ( $r = 0.512$ ,  $p\text{-value}=0.115$ ) a strong significant relationship between e-invoicing and performance ( $r = 0.783$ ,  $p\text{-value}=0.000$ ) and a strong significant relationship between e-payments and performance ( $r = 0.779$ ,  $p\text{-value}=0.000$ ). This means that electronic invoicing was highly related to organization performance, followed by e-payment, e-sourcing while e-ordering had the lowest effect on organization performance. Findings also imply that the e-invoicing is the dominant e-procurement practice and have a great effect on organization performance.

#### 4.4.2 Analysis of variance

An analysis was performed on the relationship between e-sourcing, e-ordering, e-invoicing, e-payments and performance. The F-ratio in the ANOVA tests whether the overall regression model is a good fit for the data.

**Table 4.21: Analysis of Variance Results**

	<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	54.627	4	13.657	203.503	.000 <sup>b</sup>
	Residual	6.577	98	.067		
	Total	61.204	102			

*Predictors: (constant) e-sourcing, e-ordering, e-invoicing, e-payments.*

*Dependent variable: performance*

Survey Data (2021)

Results in Table 4.21 shows that the independent variables statistically and significantly predict the dependent variable,  $F(4, 98) = 203.50$ ,  $p(.001) < .05$ . Therefore, the regression model is a perfect fit of the data.

#### 4.4.3 Coefficient of Determination Results

The coefficient of determination was conducted to assess how well the statistical model was expected to predict future results. Table 4.22 presents the Model Summary.

**Table 4.22: Model Summary.**

<b>Model</b>	<b>R</b>	<b>r<sup>2</sup></b>	<b>Adjusted r<sup>2</sup></b>	<b>Std. Error of the Estimate</b>
<b>1</b>	0.945	0.893	0.888	0.259

*Predictors: (constant) e-sourcing, e-ordering, e-invoicing, e-payments.*

Survey Data (2021)

Adjusted R squared demonstrates the variance in the independent variable because of changes in the dependent variables, from the results in the Table 4.22, of the four independent variables that were studied (e-sourcing, e-ordering, e-invoicing, e-payments), they contribute 88.8 percent of NGO performance as represented by the adjusted ( $r^2$ ) at 95 percent confidence level. This means that other factors that this study did not focus on contributed to 11.2 percent to NGO performance.

#### 4.4.4 Multiple Regression Analysis Model Results

The main aim of multiple regression is to better understand the association between e-procurement and NGO performance. The study used SPSS to enter and code responses from the respondent to assist in computing the extent to which a unit changes in a given independent variable cause a change to dependent variable. Table 4.23 presents the multiple regression.

**Table 4.23: Regression Coefficients**

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
Constant/Y Intercept	1.523	.202		7.523	.000
E- sourcing	.187	.060	.273	3.093	.003
E- ordering	.169	.093	.095	2.812	.005
E-invoicing	1.673	.160	.508	10.435	.000
E-payments	.453	.089	.291	5.085	.000

Survey Data (2021)

The beta coefficient is the degree of change in the outcome variable for every 1-unit of change in the predictor variable. Unstandardized coefficients show how much the dependent variable changes with an independent variable when all other independent variables are held constant.

The regression coefficient provides the expected change in the dependent variable (NGO performance) for a one-unit increase in the independent variable (e-procurement practices).

Organization performance = 1.153 + 0.187 (e-sourcing) + 0.169 (e-ordering) + 1.673(e-invoicing) +0.453(e-payment).

The table 4.23 also presents that the coefficient of NGO Performance is 1.523 (B). The t statics for this coefficient is 7.523 (t) with a p-value of 0.000 which is less than 0.05 therefore it is statistically significant. This means that; for every unit increase in e-sourcing, there is an 0.187 change in NGO performance, a unit change in e-ordering increases NGO performance by a value of 1.169, a unit change in e-invoicing increases NGO performance by a value of 1.673 and a unit change in e-payments increases NGO performance by a value of 0.453. All variables are significant since the p value is less than 0.05.

Standardized coefficients measures how much the outcome variable increases (in standard deviations) when the predictor variable is increased by one standard deviation assuming other variables in the model are held constant. The highest contributing predictor is e-invoicing (.508), followed by e-payment (.291), e-sourcing (.273), and e-ordering (.095) to explain NGO performance. This means that involvement of e-procurement in matters relating to organizational performance are key and that e-invoicing relates to organizational performance at a great extent followed by e-payment, e-sourcing and lastly e-ordering which affects performance of the organization with little extent.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This section summarizes, concludes and recommends the findings by also providing and finding out what could be the possible suggestions and actions to conduct any future research.

#### **5.2 Summary of Study**

##### **5.2.1 Electronic Procurement and Organizational Performance**

The study sought to establish the relationship between e-procurement and performance of non-governmental organizations in Kenya at Pathfinder International. Majority found out that systems used for e-procurement at Pathfinder were of high quality and that the organization had fully implemented e-procurement. However, a section of the study found that the organization should continue improving systems to achieve great performance in the organization. It also found that enough training on e-procurement was not conducted to improve performance of Pathfinder.

##### **5.2.2 Electronic Sourcing and Organizational Performance**

Findings established the majority believed that the organization had clearly established use of e-sourcing as a means of identifying potential suppliers, e-sourcing was adopted to reduce costs adopted to reduce costs associated with outsourcing, e-sourcing improved speed in negotiation which improved efficiency, that effective use of e-sourcing improved performance of the organization and that the users know how to use Serenic system effectively. However, a section of the study was of the opinion that more effort be employed in order to improve e-sourcing. It

was felt that e-sourcing was not effective enough to improve speed in negotiation. The study advised the organization to ensure that there is stable internet in site offices.

### **5.2.3 Electronic Ordering and Organizational Performance**

The findings pointed out that majority knew how to electronically prepare and post purchase orders in the system, they confirmed that Pathfinder uses e-ordering to improve transparency reduce errors and to improve customer order management. The findings also revealed that Serenic System is an efficiency system. However, the study also revealed that e-ordering was not fully operational and advised that this be considered in order to fully implement e-ordering. It was also advised that a proper ERP system be made effective and that the organization completely face out any manual ordering activities that maybe happening in the organization and adopt e-ordering.

### **5.2.4 Electronic Invoicing and Organizational Performance**

The findings established a strong relationship between e-invoicing and performance at Pathfinder. Majority indicated that e-invoicing was found to saves time and money as compared to manual invoicing. E-invoicing was established to be a secure means or archiving documents and a great beneficial asset to Pathfinder. However, the research advised that invoicing be fully automated. It stated that the gaps facing e-invoicing should be addressed. The study stated that e-invoicing be made mandatory and frequent training be provided to the team.

### **5.2.5 Electronic Payment and Organizational Performance**

Findings established that that e-payment led to secure and safer payment transactions, e-payment was a convenient and credible means of making payments and that Pathfinder electronically pays all vendors. The findings also established that majority knew how to post payments made electronically and that Serenic is an effective system that updates all e-payments accurately.



However, the study raised that e-payment should be improved in order to work fully avoiding challenges and delays. The study indicated that not all who fully knew how to operate the ERP system used at Pathfinder in transacting payment processes.

### **5.3 Conclusion**

The researcher was able to achieve the study objectives whereby the study established that electronic procurement and performance of organizations was indeed related. However, the extent to which these relationships were established differed in some aspect. Through evaluation of how e-sourcing related to performance at pathfinder, the findings in the study showed that pathfinder utilized the e-sourcing tool to identify suppliers, reduce costs and to improve speed, performance and efficiency. This concluded that e-sourcing is related to performance.

Through the assessment of how e-ordering relates to performance of the organization at pathfinder, this study concluded that e-ordering was related to performance since it showed that the organization used e-ordering to reduce errors, improve transparency and customer order management in order to achieve performance. In the process of determining the relationship of e-invoicing and performance of organization at pathfinder, the study concluded that use of e-invoicing is related to performance because the tool proved to be a secure, faster and economical means of archiving documents which improved performance.

In the extensive examination of how e-payment is related to performance at pathfinder, the findings concluded that use of e-payment is greatly related to performance at pathfinder since use of e-payment led to secure, safer, convenient and credible means of processing payments. These factors greatly improve performance. The findings concluded that the team believed Pathfinder had fully implemented e-procurement adding that full support was offered to the team with the

goal of achieving e-procurement. It was concluded that the systems used were of high quality and that Pathfinder supports many Grantees who are community based.

#### **5.4 Recommendations**

Based on the findings of this research study it shows that E-procurement at Pathfinder is being used with the use of e-sourcing, e-ordering, e-invoicing and e-payment with relationship to performance of the organization. Recommendations were offered to ensure performance at pathfinder was met. To evaluate the relationship between e-sourcing and performance at pathfinder, it was recommended that the organization ensures that remote offices have stable internet to support all users, that staff members are well trained about the online platform, certify that Serenic is embraced fully and made end to end to ensure excellent outcome.

To assess the relationship between e-ordering and performance at pathfinder, it was recommended that, manual ordering be phased out and e-ordering be adopted. It was recommended that proper systems be implemented in order to make e-ordering effective. It was also recommended that e-ordering be made accessible to all staff in order to make them embrace the system. The system be made consistent by employees and emphasize on all procurement activities being done online. Turnaround time also to be improved on e-ordering. Robust e-ordering system on all procurement processes be identified and consistency in use of the system by employees be embraced.

To determine the relationship between e-invoicing and performance at pathfinder, it was recommended that the organization makes use of e-invoicing mandatory in all its procurement activities. It was recommended that the system be shared to all for use and both OJT and ICT training be performed to the procurement team to ensure that staff are able to use the system

efficiently. It was further recommended that all gaps that effect e-invoicing to be always addressed, frequently and swiftly to improve the system and avoid hiccups while working.

During examination of the relationship between e-payment and performance of pathfinder, it was discovered that there was need to improve e-payment. It was recommended that the serene system be upgraded to enable it function fully while avoiding challenges and delays when processing payments. It was also recommended that, more training be offered to the procurement team, the ERP system be linked to the bank, a robust system that encourages e-payment be put in place and e-payment tool be made mandatory in order to achieve efficiency in Pathfinder.

### **5.5 Suggestion for Further Research**

The researcher suggested that a closely related or a similar study in other industries like the profit-making sector or the governmental sectors be conducted for comparison purposes to test on how electronic procurement and performance of non-governmental organization are related to each other.

The researcher also suggested that a study be conducted on other aspects relating to organizational performance on financial sustainability, motor pool management, asset management and logistics management in organizations to measure how they are all related to performance of an organization.

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## **APPENDIX I: Cover Letter**

Florence Muthoni,  
P.O Box 8777-00300,  
Nairobi.

15/08/2020

The Human Resource Manager,  
Pathfinder International,  
Kenya.

Dear Madam,

### **Re: Permission to collect data from the organization**

I am a student at Kenyatta University pursuing a degree in Master of Business Administration specializing in Procurement and Supply Chain Management and I'm in the process of conducting a research on Electronic Procurement and Performance of NGOs in Kenya.

Your organization has been identified to be used in data collection for this study. I therefore request to be granted permission to administer questionnaires to the employees of pathfinder international. Participation in the filling of the questionnaires will in no way interfere with employees working hours. The questionnaires will be distributed during lunch hour break and will take approximately 20 minutes to be administered. You have my guarantee that the information provided will only be used for academic reasons only.

Your faithfully,

Florence Muthoni

## **APPENDIX II: Introductory Letter**

Florence Muthoni Ndei,  
P.O Box 8777-00300,  
Nairobi.

15/08/2020

To Whom it May Concern,

**Dear Respondent,**

### **RE: Request for your participation in collection of data**

I, Florence Muthoni Ndei a student at Kenyatta University, I'm conducting a research project which is a partial fulfilment of the requirement of master's degree in Business Administration. The purpose of this study is to identify the relationship of Electronic Procurement and Performance of NGOs in Coast here at Pathfinder International.

You have been identified as a participant and you are kindly requested to assist in providing the information by filling in the questionnaire in the very honest way possible. In the questionnaire you are required to identify your answer through ticking on the close ended questionnaires and give a brief answer where you are required to give views in the open-ended questions.

Yours faithfully,

Florence Muthoni,

### APPENDIX III: Questionnaire

The survey took approximately 20 minutes to complete and was available for 14 working days. Respondents were encouraged to answer without pressure for there is no wrong answer in research. For clarifications regarding the survey the researcher advised the respondents to reach her on [flossymuthoni@gmail.com](mailto:flossymuthoni@gmail.com)

**SECTION A: General Information** - Please tick (✓) in the box appropriately

**1. Kindly tick your gender**

Male ( )

Female ( )

**2. What is your age group?**

20 – 30 Years ( )      31 – 40 Years ( )

41 – 50 Years ( )      51 – 65 Years ( )

**3. How many years have you been employed at Pathfinder International?**

Between 0yrs and 5 years ( )

Between 6 years and 10 years ( )

Between 11 years and 15years ( )

Between 16years and 20years ( )

Between 16 years and 20years ( )

Between 21years and 30years ( )

**4. How far have you reached in your education?**

Secondary Certificate ( )

Certificate Level ( )

Diploma Level ( )

Undergraduate ( )

Postgraduate ( )

Any other (specify)

.....

**5. In which category do you belong at Pathfinder International?**

Procurement Department Main Office ( )

Finance & Administrative Department ( )

Mombasa Grantees Procurement Department ( )

Kilifi Grantees Procurement Department ( )

Kwale Grantees Procurement Department ( )

Taita-Taveta Grantees Procurement Department ( )

**6. How much do you agree on the listed statements related to Pathfinder International? Tick**

(✓) in the box appropriately.

**Key:** Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5).



STATEMENT	1	2	3	4	5
	SD	D	NS	A	SA
Pathfinder has fully implemented e-procurement					
Pathfinder provides full support to enhance e-procurement					
Systems used at Pathfinder International are of high quality				1	
Pathfinder is an NGO who is an umbrella to many local NGOs					
Pathfinder has fully supported 16 Grantees who are community based					

**SECTION B: Electronic Sourcing and Organizations Performance**

7. How much do you agree on the listed statements related to E-sourcing and Organizations Performance at Pathfinder International? Tick (✓) in the box appropriately.

**Key:** Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5).

STATEMENT	1	2	3	4	5
	SD	D	NS	A	SA
Pathfinder makes use e-sourcing to identify potential suppliers					
E-sourcing was adopted to reduce costs associated with outsourcing					
E-sourcing improves speed in negotiation which improves efficiency					
Effective use of e-sourcing improves performance of the organization					
I know how to effectively use Serenic System					

8. Do you think that Pathfinder has fully implemented e-sourcing?

Yes ( )

No ( )

9. If no, what do you advice the organization to do to fully implement e-sourcing?

.....

**SECTION C: Electronic Ordering and Organizations Performance**

10. How much do you agree with the listed statements related to E-ordering and Organizations Performance at Pathfinder International? Tick (✓) in the box appropriately.

**Key:** Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5).

STATEMENT	1	2	3	4	5
	SD	D	NS	A	SA
I know how to electronically prepare and post purchase orders					
Pathfinder fully uses e-ordering to prepare and send purchase orders					
Pathfinder uses e-ordering to improve transparency, reduce errors and to improve customer order management					
Serenic System is an efficient system for e-ordering					
I know how to attach all relevant documents in the system					

11. Does use of e-ordering have any relationship with performance at Pathfinder?

Yes ( )

No ( )

12. If yes, what do you advice the organization to do to accomplish e-ordering?

.....

**SECTION D: Electronic Invoicing and Organizations Performance**

13. How much do you agree on the listed statements related to E-invoicing and Organizations Performance at Pathfinder International? Tick (✓) in the box appropriately.

**Key:** Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5).

STATEMENT	1	2	3	4	5
	SD	D	NS	A	SA
E-invoicing saves time and money as compared to manual invoicing					
E-invoicing is a secure means of archiving documents					
E-invoicing is a beneficial asset to Pathfinder					
Serenic is an effective system to do e-invoicing					
I know how to prepare e-invoices and post them to Serenic					

**14. Do you think that use of e-invoicing improves performance at Pathfinder?**

Yes ( )

No ( )

**15. If yes, what do you advice the organization to do to accomplish e-invoicing?**

.....

**SECTION E: Electronic Payment and Organizations Performance**

**16.** How much do you agree with the listed statements related to E-Payment and Organizations Performance at Pathfinder International? Tick (✓) in the box appropriately.

**Key:** Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5).

STATEMENT	1	2	3	4	5
	SD	D	NS	A	SA
E-payment leads to secure and safer payment transactions					
E-payment is a convenient and credible means of making payments					
We electronically pay all vendors and suppliers					
I know how to post payments made electronically					
Serenic is an effective system that updates all e-payments accurately					

**17. Do you think that use of e-payment is related to performance of NGOs?**

Yes ( )

No ( )

**18. If yes, what do you advice the organization to do in order to accomplish e-payment?**

.....

**What is your advice to the organization regarding implementation of e-payment?**

.....

**How else do you think e-payment is related to performance of NGOs?**

.....

**SECTION F: Organizational Performance**

**19.** Using below Likert scale, state the extent to which you agree on the statement related to performance at Pathfinder. Please tick (✓) in the box appropriately

**Key:** Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5).

<b>STATEMENT</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<b>SD</b>	<b>A</b>	<b>NS</b>	<b>A</b>	<b>SA</b>
Performance can be measured in terms of operations efficiency					
Performance can be measured through how staff are retained					
Performance improves rate of employee's satisfaction					
Pathfinder values employees' suggestions and feedback					
Pathfinder conducts training to improve performance					

## APPENDIX IV : Authorization Letter



KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 810901 Ext. 4150

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

Internal Memo

FROM: Dean, Graduate School

DATE: 11<sup>th</sup> November, 2020

TO: Florence Muthoni N.  
C/o Management Science Dept.

REF: D53/OL/CTY/39307/2017

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge receipt of your revised Research Proposal as per our recommendations raised by the Graduate School Board of 21<sup>st</sup> October, 2020 entitled "Electronic Procurement and Performance of Non-governmental Organizations in Kenya. A Case of Pathfinder International Kenya"

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and Progress Report Forms per semester. The forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

A handwritten signature in black ink, appearing to read 'Harriet Ifaboke'.

HARRIET IFABOKE  
FOR: DEAN, GRADUATE SCHOOL


C.c. Chairman, Department of Management Science


Supervisors:

1. Dr. Morrisson Mutuku  
C/o Department of Management Science  
Kenyatta University

HI/lnn


**APPENDIX V : Research Permit**

  
**REPUBLIC OF KENYA**

  
**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

Ref No: **560721** Date of Issue: **24/November/2020**


**RESEARCH LICENSE**




**This is to Certify that Ms. FLORENCE Muthoni NDEI of Kenyatta University, has been licensed to conduct research in Kilifi, Kwale, Mombasa, Taita-Taveta on the topic: ELECTRONIC PROCUREMENT AND PERFORMANCE OF NON-GOVERNMENTAL ORGANIZATIONS IN KENYA. A CASE OF PATHFINDER INTERNATIONAL KENYA for the period ending : 24/November/2021.**

License No: **NACOSTI/P/20/7864**

Applicant Identification Number: **560721**

  
Director General  
**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

Verification QR Code



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