EVALUATION OF PAYMENTS ON FINANCIAL SERVICE MODULES (EPFSM):

INTEGRATING AND ENHANCING SERVICE DELIVERY PROCESS IN THE
NAMIBIAN PUBLIC SERVICE

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
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ABSTRACT

Since their inception Finance Divisions of the Namibian Public Service (NPS) have been operating on separate payment methods that were not linked under a unified Financial Service Modules (FSM). The isolation of these modules had resulted in lack of information flow within the FSM which was necessary to ensure accuracy and validity of financial information, hence the need for reconciliation process.

The study evaluated payments on FSM in the NPS, particularly implementation of integrated financial service module that enhanced service delivery. It was important to review the payment process in order to ensure that the integrated module was step forward and that it actually produced desired results.

The study used quantitative research designs. Literature study was also carried out to explain different aspects such as definition of integration, challenges, advantages and disadvantages and identified architectural forms for integration. Data were gathered for evaluation of the FSM through questionnaires from the NPS Finance Departments and Funds Transfer (FT) Division for the Ministry of Finance.

An analysis of the quantitative data collected from staff members of the Finance Divisions of all Offices/Ministries/Agencies (O/M/As) were done using the Statistical Package for Social Sciences (SPSS) version 21. The analysis findings indicated that evaluation of payments on FSM was limited to transactions and payments of Public Service. The analysis of findings further indicated that there was a need to integrate the existing payments on FSM and further expanded the flow of information on the payment module.
The data analysis findings identified factors that influenced the implementation of integration process within the public service. Factors identified include qualified staff, systems and processes involved in the generation of payments, were some of the most identified challenges by respondents.

Besides the study findings, implementation of the integration process was recommended. The integration provided for sharing and flow of information that enhanced service delivery.

The study concluded that the integration proposed in the study met the requirements identified and serves as a solution for enhanced service delivery with the public service.
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ACRONYMS

NPS: Namibia Public Service
FSM: Financial Service Modules
DSA: Daily Subsistence Travelling Allowance
IT: Information Technology
SPSS: Statistical Package for Social Sciences
FDC: Funds Distribution Certificate
EFT: Electronic Funds Transfer
O/M/As: Offices/Ministries/Aencies.
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DEDICATION

I dedicate this study to God Almighty for the power and good health of mind. I still saw it inevitable to dedicate this work to my son, McEnroe Simataa Ntelamo and the entire Siboleka as well as Sichombe family for the support during the study.
DECLARATION

I, Lilian Siboleka, declare that this study titled “Evaluation of Payments on Financial Service Modules (EPFSM): Integrating and Enhancing Service Delivery process in the Namibian Public Service” is a true reflection of my own research, and that this work, or part thereof has not been submitted for a Degree in any other institution of higher education.

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Full Name:  Ms Lilian Siboleka

Signature:..........................

Date: .........................
1. INTRODUCTION

The chapter introduced the study by providing an overview of the research topic, statement of the problem, research objectives, and significance of the study, limitation of the study, research methodology and summary of the findings. The Chapter concluded with an outline of the Chapters of the Thesis and summary.

1.1 Orientation of the Study

Ikhide and Fitchat (2002) stated that developed countries had remodelled their payment transfer systems to support market economies and service delivery. Also, Policy Framework for Long Term National Development (2009) indicated that Namibia remodelled payment system from manual to funds transfer system in order to enhance service delivery and develop the economy. In support of the above, the Namibian Government faces continued pressure to increase their performance with the aim of improving efficiency and service delivery to their stakeholders, customers and citizens. In this work Evaluation of Payments on Financial Service Modules has been introduced and abbreviated as EPFSM.

Govender (2012) described the payment module as a system and process used to facilitate interbank transaction, clearing and settlement, resulted from various economic transactions within or between countries and ensures the circulation of money. Correspondingly, the Financial Service Modules (FSM) in Namibia facilitated bank transactions through funds transfers paid to public servants and creditors who render services to Government.

Payment modules were a core group of strategic information methods that contributed towards economic development, especially in emerging economies, and form the foundation for financial sector and national information infrastructure developments (Khiaonarong,
2010). Equally, the FSM in Namibian context was important for the operation of the country’s financial system by the improved economic system that enhanced development.

Policy Framework for Long Term National Development (2009) indicated that the manual system was faced with financial challenges of fraud and corruption. In support of the above, the Namibian Public Service (NPS) manual system was less controlled in terms of payment procedures before the commencement of the FSM. In addition, this resulted in dishonesty among officials by exploiting the situation to make payments for personal gain. Therefore, the integration of FSMS in the Namibia Public Sector was necessary in order to control fraud and corruption by strengthening payment measures. The EPFSM provided accountability for each payment generated.

Treasury Department in terms of section 23(1) of the State Finance Act (1991) implemented the FSM to phase out the manual payment method. Since then, Finance Departments of the NPS had been generating payments on isolated modules that were not connected under an integrated payment method.

Wood and Macdonald (2006) defined reconciliation as an accounting process used to compare two sets of records, namely: credit and debit to ensure the figures were in agreement and accurate. In view of the above, reconciliation in the NPS context ensured that payments generated on FSM (debits) were accounted for in the General Ledger (credits).

Therefore, evaluation of the FSM was necessary in order to integrate and improve the contribution of FSM towards enhanced service delivery. Govender (2012) defined integration as a means of combining or linking two or more things in order to become more effective. Equally, integration within the Finance Departments of various O/M/As required linking the
existing financial service modules under a unified payment module. It further required that Government changed operating procedures by redesigning advancements to reduce technical challenges and improved information flow.

Johnson (2008) explained the critical factor of success for Government to implement and operate electronic payment system as flow of funds, material and information in the payment process. Therefore, evaluation of the payments on EPFSM helped the Namibian Government obtain better information to make decisions on saving and spending of the allocated budget. It further updated transactions on payments generated.

The integrated EPFSM linked together financial service modules to update payment transaction on the accounting system. However, in order to achieve significant level of integration, Government faced challenges such as capacity building, training, and business process re-engineering and technology. Such integration was achieved within the NPS through the adoption of an architecture model set guidelines used in specifying methods of interaction. The study identified and evaluated current challenges faced in generation of payments through EPFSM and developed strategies that integrated modules.

1.2 Statement of the Problem

Payments on FSM played a critical role in the development of any economy. However, The Finance Divisions of the NPS, since its inception, had been operating on separate payment modules that were not linked under a unified FSM. The isolation of these modules had resulted in lack of information flow within the FSM which was necessary to ensure accuracy and validity of financial information, hence the need for reconciliation process.
Although the FSM was in place, the Auditor General Report (2013) observed that most O/M/As did not regularly reconcile the expenditure ledger on a monthly basis. Similarly, the NPS financial statements were not reconciled in accordance with accounting principles. Moreover, financial statements were not reconciled due to loss in source documents and mismatch of payment transactions between regional offices and the head office. Furthermore, the separation of FSMs has led to duplication as well as wrong payments. As a result of poor information flow between Finance Departments. In that way it attributed to increased volumes of manual payments in order to compensate new appointees and underpayments.

Hammermaster (2008) stated that duplicated data entry resulted in more manual errors, which had to be untangled and reconciled. He further stated that manually entering data in accounting system doubled the time it took to complete payment process. Equally, the NPS was faced with similar challenges of duplicate payments as a result of manual errors and inability of the current FSM to update transactions immediately. Additionally, lack of automated updates on the FSM attributed to unavailability of transactions into the general ledger for account analysis and reconciliation.

Furthermore, payments on separate FSMs posed a challenge of delivering effective and efficient services in a fiscally constrained country. It became difficult to obtain transactions and information about the payments generated on isolated FSMs. That attributed to O/M/As having unauthorized expenditures and balances on Financial Analysis Report at the end of the financial year that was not allocated to correct accounts.

In view of the above, the main purpose of the study was to evaluate payments on FSM. The other purpose was to identify the challenges and find solutions what could be done with
limited resources. Also, to classify which of the challenges needed to be improved and identify the ones that were lacking in order to find solutions for them. Failure to ascertain those challenges resulted in hindered progress in the integration and service delivery. Furthermore, the study aimed at developing a framework that guided Finance Departments within O/M/As when making financial decisions regarding allocated funds.

1.3 Research Objectives

The objectives of this study were as follows:

Objective 1: To evaluate the payments on Financial Service Modules (FSMs) used in the Namibian Public Service (NPS).

Objective 2: To integrate payments on existing FSMs.

Objective 3: To improve the contribution of FSMs towards enhanced service delivery by implementing the EPFSM.

1.4 Significance of the Study

The study was beneficial to the Namibian Government as it enhanced the accounting system for reconciliation by improving processing of payments in the EPFSMs under consideration. Further, it helped the NPS to reduce manual payment calculations which resulted in the overpayments and underpayments of members. Integrating the FSMs through EPFSM improved the audit process by updating necessary information and provision of easy access to
Transactions and that reduced costs. In addition, it improved data processing through elimination of redundant paper work.

Additionally, information on various payments was updated to the accounting system (General Ledger) which improved analysis of financial statements and journal updates. Hence, EPFSM enhanced the flow of information within various modules and improved service delivery.

1.5 Limitation of the Study

The purpose of the study was to evaluate payments made on the FMS in the Namibian Public Service. The activity, however, was only limited to Finance Departments of various O/M/As in Windhoek. Also, Funds Transfer Department at the Ministry of Finance responsible with posting of payments on behalf of government. Therefore, the items on the questionnaire are mainly directed to Accountants and Senior Accountants at various O/M/As.

Due to inadequate financial resources, the focus of the study was limited to head offices of various O/M/As in the Khomas region. Thus, the sample size was a major limitation as it was not a suitable representation of the target population. Access to financial data in the Government was a challenge due to the sensitivity of the information. As a result, some of the information was limited to approximations.

1.6 Research Methodology

The study made use of quantitative research designs. It was used to obtain data from the questionnaire. The data gathered was summarized, ranked and described using inferential
statistics such as Chi-square tests. The detailed analyses of graphs were also used to explore relationships between selected variables.

1.7 Summary of the Findings

The data analysis indicated that there were challenges faced by the current FSM. Some of these challenges were attributed to lack of personnel or staff, capacity, lack of training, process and systems involved in payments. The data analysis findings further indicated that FSM was only used in Finance Departments of all O/M/As within the Public Service.

From the data analysis findings it was found that there was a need to improve the standards of the existing FSM. Also, it is important to integrate existing payment modules within the Public Service. Findings further suggested that integration process was required to enhance the contribution of FSM towards service delivery. The integrated system required by the public service included aspects of information sharing, reconciliation and automated data.

The analysis further identified a number of FSM factors that impacted on the implementation of integration within the NPS. The FSM factors such as capacity, training and skill level(s) were major factors identified by respondents to influence the implementation of integrating the PPS within the public service.

1.8 Definitions of Terms.

**Audit:** An official inspection of an organization’s accounts, typically by an independent body (Wood & Franklin, 2006).

**Capacity:** Management of the limits of organisations resources, such as labour force, office space and technology (Hiles, 2011).
**Evaluation:** To determine the significance or quality (Young, 2013).

**General ledger:** A complete record of financial transactions over the life of an organization (Wood & Franklin, 2006).

**Implementation:** Is the realization of an application or execution of a plan (Govender, 2012).

**Integration:** Combining parts so that they work together or form a whole (Hammer & Champy, 2011).

**Modules:** A self-contained component of a system (Crede, 2008).

**Payment system:** A mechanism to transfer funds from an account in bank A to another account (Goosen et.al, 2008).

**Reconciliation:** An accounting process used to compare two sets of records to ensure the figures are in agreement and accurate (Dlabay & Burrow, 2007).

### 1.9 Outline of the Thesis

The thesis was organized into the following Chapters:

Chapter 1 introduced the Evaluation of Payments on Financial Service Modules, statement of the problem, research objectives, and significance of the study, limitations, research methodology, and summary of the findings followed by the definition of terms. Chapter 2 addressed the literature review carried out for the purpose of the study. Chapter 3 discussed the research methodologies used in the study.

Chapter 4 presented the analysis of the data collected through questionnaires. Chapter 5 discussed the findings of data analysis in relation to research objectives of the Thesis.
Chapter 6 addressed and presented the design of Architecture Model for the NPS that addressed the research aim. Chapter 7 discussed the conclusion for the study and recommendations for further research.
2. LITERATURE REVIEW

The literature review presented the current knowledge available that was relevant to the research objectives outlined in Chapter One. The Chapter introduced the different descriptions of financial service modules and then discussed previous research and studies available on payments through FSM, challenges and integration. The Chapter concluded with a review of the Government of Namibia payment process and a summary.

2.1 Background of Payments on Financial Service Modules

A number of authors described the Payments on FSM in different ways focusing on different sectors such as Private and Public Sector.

According to Lixia et.al (2012), payments on financial modules are governed by law, rules and standards that linked bank accounts and provided the functionality for monetary exchange using bank deposits. Similarly, the FSM within NPS was governed by laws, rules and standards as stipulated in the Namibian Treasury Instructions. In the Namibian Public Sector context, the FSM was viewed as the infrastructure established to effect transfer of monetary value between parties in mutual obligations. Moreover, a payment may be physical in the form of a cheque or Electronic Funds Transfer (EFT). Also, each had its procedures, but what made it a method of payment was that it employed transmission of funds through payment structures.

Johnson (2008) defined payment modules as a means of making payments over an automated set-up such as internet. On the contrary, EPFSM supported the transfer of funds from the payers to the payees through debits and credits among financial institutions. In addition, processed data moved through online transaction to the server where payments were
authorized by Treasury Department, depending on whether the account number was valid and funds were available. From the descriptions of EPFSM, one common feature that was found among them all was the transfer of funds among organizations.

2.2 Evaluation of Payments on FSM and Usage within the Public Service.

Jing (2009) examined the online payments mostly used in commercial banks of Thailand and concluded that an economy cannot grow to the next level if regular evaluation on payment system was not done. He further added that the nature of a payment module determined how fast the economy grew and that the importance of the payment system could not be underestimated. Equally, in Namibia the role of Government in the economic contribution was different compared to that of the private sector. Currently, the current FSM in Namibia was developed for public sector transactions which resulted in minimal contribution to economic development.

Therefore, introduction of the EPFSM helped the NPS increase the growth rate of the economy’s total output that affected the use in amounts of factors employed such as capital and labour. It further enabled the NPS understand the role of technology in productivity and provision of services that had significant contribution to economic growth.

Hammer and Champy (2011) emphasized that in many organizations, separate Departments used different systems and procedures to perform essentially similar repetitive processes, such as paying employees and purchasing supplies. He further explained that although these procedures seemed adequate from a totally local viewpoint, doing the same work in different
ways was often inefficient. In view of the above, the NPS experienced similar situation when it came to payment of DSA, performs similar activities or processes but on different modules.

The business process of the EPFSM within NPS was critically analysed and radically designed to achieve breakthrough improvements in performance measures. As Government Departments were operating independently of each other, many processes were repeated involving duplicated and inconsistent data. Lengthy data capture and validation was carried out at every department. If those workflows were critically analysed and re-engineered, there was a marked change in processing time, and end user satisfaction. Due to the fact that process reengineering resulted in an overall simplified business process, the extent of workflows being improved determined how interrelated the functions were.

Khiaonarong (2010) stated that the payment arrangements helped reduce human intervention, default cheques and strengthened countries’ capabilities in providing financial services. In support of the above, it was important to integrate the whole set of procedures and processes to ensure that control mechanisms were in place to advance the financial services in the Namibian context. Moreover, the integration of EPFSMs solved the issues of fraud and inefficiencies, hence strengthening quality of service delivery.

Additionally, Zigiaris (2012) noted that a well-designed system provided a number of features that helped detect excessive payments, fraud and theft. However, corruption remained the biggest threat to good governance in payment methods within NPS and fighting it continued to be a challenge. Hence, EPFSM in Finance Departments was envisaged as a
better position to eliminate ghost payments and human intervention. This can be achieved through automated identification of exceptions to normal operations, patterns of suspicious activities, automated cross referencing of personal identification numbers for fraud. The EPFSM in the Namibian context solved the issues of fraud and inefficiencies hence strengthened quality of service delivery.

Reinikka and Syensson (2004) noted that fraud also took place in the private sector, often with costly results. They further added that unregulated financial systems permeated fraud to undermine savings and better foreign investments which resulted in rendering a country vulnerable to financial crisis and macroeconomic instability. In the same way, the NPS supported privatisation deepening of financial structures that strengthened regulations on payment methods. The EPFSM helped the Namibian Government detect the existence of fraud within the payment system and through computerized audits that increased auditor scrutiny. Still, the Namibian government promoted the control of fraud in the Public Service by strengthening the legal framework. The frameworks support market economy and encouraging growth of professional bodies that set standards in areas of accounting.

2.3 Integrating Payments on Existing FSM.

Young (2013) explored the advantages and limitations of payment structures, including online credit card payments and electronic cash. Equally, the benefit of integrating payment procedures was the innovation involved in the business processes. Therefore, EPFSM established new, standardized procedures within Finance Departments of various O/M/As to formalize payment descriptions and improve systems for internal and external control. Also,
Crede (2008) clearly pointed out that when payment systems of organizations with related functions were integrated, the existing business process certainly changed. On the other hand, integration in the Namibian context implied both efficiency improvement and reforms that changed existing procedures. Furthermore, it enhanced information flow within Finance Departments since payments were automatically posted to the accounting system which reduced errors and duplicated data.

Hamer and Champy (2011) stated that an integrated module assisted management in ensuring accountability for the deployment and use of public resources and improved the effectiveness and efficiency of public expenditure programmes. Similarly, the integrated module updated Funds Availability Check (FDC) report that determined the amount of money to be spent per Division. It further tracked financial events through an automated financial system. This enabled management exercise improved control over expenditure and improved transparency, accountability in the budget cycle as a whole. As a management tool EPFSM controlled aggregate spending and deficit through monitoring of updated FDC. That helped the NPS prioritize programmes and projects to achieve efficiency and equality in the allocation of resources. It further made better use of budgeted resources to achieve outcomes and produced outputs at the lowest possible cost.

Moreover, Hiles (2011) specified that an integrated payment system provided timely, accurate and consistent data for management and budget decision making. In the same way, EPFSM improved the quality and availability of information necessary at various stages of public financial management. The integrated system further enabled users within the FSM network access the system and extracted the specific information they needed in various
O/M/As. Varieties of reports were generated to address different funding, treasury cash flow, accounting, audit and day to day management concerns.

Furthermore, Johnson (2008) emphasized that the scope of a payment scheme could vary from a basic general ledger accounting application to a comprehensive system covering revenue management and payroll. Likewise, the current method in the NPS incorporated the General Ledger accounting system that covered all financial service modules. Therefore, the role of the integrated system was to connect, accumulate, process and then provided information to all parties in the payment system on a continuous basis. Hence, it was very important that the system provided required information timely and accurately, because if it did not then the available data used going to cease to fulfil central functions as a system.

Tsiakis and Nacamuli (2008) stated that a payment method improved public financial management in a number of ways, but generally sought to enhance confidence and credibility of payments through greater comprehensiveness and transparency of information. Equally, the purpose of using an integrated system within the Namibian Government was to improve planning and execution by providing timely and accurate data for management and decision making.

Furthermore, the EPFSM was underpinned by a sound legal framework governing the overall public finance system. Amongst other things, there was a clear legal guidance on the roles and responsibilities of all institutions. Some of the roles include managing, controlling, and
monitoring payment execution, authorization, commitment and release of funds that were the basis of accounting and reporting requirements.

Finally, it was emphasised that integration involved fundamental changes in operating procedures followed by detailed functional analysis of processes. Additionally, Government goals would only be achieved if integrated system supported business processes that exceeded functional, organizational and geographical boundaries. In Namibia the designed and development of a payment system was not substantial because of problems with the reporting functionality. That was due to a lack of clear specifications on the reporting requirements and separation of payment modules.

2.4 Challenges of Integrating the Current FSM.

Many payment system projects failed because the basic system functionality was not clearly specified from the commencement of intervention. Crede (2008) added that an integrated system was carefully designed to meet the needs and functional requirements; including the accounting and financial management tasks the system performed. Similarly, in the implementation process consideration was given to the type of system that fitted the requirements and regulations of the Namibian Government.

Jing (2009) provided evidence that when systems were integrated, improved connect ability increased the accessibility of information not only to Finance Departments but the organisation at large. He further added that organizations shared more information, an
Endeavour that was previously difficult, costly and time consuming as far as compiling none automatically was concerned. At present, communication between Departments in the Public Service was limited to manual and periodic payments. Additionally, in the Namibian context it was important to integrate the whole set of procedures and processes to ensure that control mechanisms were in place in order to improve efficiency.

Zigiari (2012) added that integrating the business process of the payment system helped in providing information that was essential to support work practices. He further stated that in addition to provide the right information it empowered staff by giving the right tools. However, the NPS was challenged by the way planning of consolidated financial reports were produced for individual Divisions or Departments.

In view of Zigiari, financial reports in the NPS were submitted on paper, which created a major task of adding up the figures to determine the projected balances of various divisions. Moreover, when such reports were changed during the payment process, staff members had to recalculate the projected results manually. Hence the need for envisaged EPFSM that helped the numerical parts of the plans and reports arrived at a consistent, electronic format consolidated format.

However, the major concern in the implementation of integrated payment system was choosing a system that operated in accordance with Public Service treasury instructions. This research examined major criteria of treasury instruction in relation to payment processing systems in the NPS and evaluated the current situation of the EPFSM.
State Finance Act (1991) of the Republic of Namibia stated that payment systems should be introduced in accordance with public service treasury instructions. In view of the above Act, this research examined major criteria of treasury instruction in relation to EPFSM in the NPS.

Tsiakis and Nacamuli (2008) explained that the level of security in each payment process was a concern because funds were transferred without direct contact between the parties involved in the posting of transactions. Equally, for EPFSM to achieve its objectives in the Public Service, it was required to put in place effective integrated payment module that ensured efficiency and effectiveness.

Therefore, evaluating the current payment method greatly improved the efficiency of payment transactions and the whole financial services. An evaluation of the EPFSM within the public service enabled the government to meet socio-economic needs of the public as well as brought about the desired level of economic development. Likewise, it was easy to track problems that failed to introduce effective control systems. Therefore it could say that the survival of every organization depended on effective control which ensured efficiency and economical utilization of resources.

Young (2013) explained that security systems used important tools for the review of accounting, financial and other operation included the reliability and integrity of information. In view of the author, the integrated modules’ protected and secured continuous operation of sound internal control methods, review and recommend improvements in systems.
Therefore, there was a need for system users within the Finance Department of various O/M/As to equip themselves with the necessary knowledge of computer security systems. This could be achieved by way of coping with the increasing challenges posed by control in organizations.

Additionally, system users also were required to equip themselves with similar challenges resulting from the computerization of accounting functions. Moreover, throughout the world Government Agencies, central banking authorities were engaged in protecting the well-being of the payment systems that supported global commerce. Lixia et al. (2012) emphasized that a good strategy in the implementation of integrated modules was a complete payment system that supported payment services and delivered good reconciliation capabilities. Similarly, a single integrated module with the complete record of all payment processing was essential within the NPS in order to improve the overall reconciliation.

Crede (2008) suggested that organizations improved service delivery by free flow of information that enabled them to facilitate payments. He further added that innovation and technological progress allowed improvements to be made in existing payment methods and allowed new services and processes to be introduced. Equally, integration on the EPFSMs allowed improvements to be made that permitted new services and processes. Additionally such processes included improving accounting entry adjustments and reversal of transactions.
Similarly, in Namibia there was diverse choice of software available for almost every occupational domain with huge amount of processing capabilities aiming at enhancing service delivery. In order to meet these challenges presented by today’s competitive atmosphere, the EPFSM ensured that the Namibian Public Sector used a global, open and distributed computational capacity that had the ability to solve problems.

Conradie (2000) stated that one way of looking at the challenges faced by the current service module development industry was by viewing the problems encountered from management and technological aspects. On the contrary, the challenge faced by the FSM was that the current method did not fulfil the requirements as far as a financial service was concerned. Hence, when there was more than one group of developers involved, the overall view of the system was bound to be neglected.

Some of the common challenges that were faced by developing countries in implementing an integrated payment module included lack of capacity. De Vaus (1993) stated that effective implementation, operation and maintenance of an integrated system required staff with necessary knowledge and skills. In the same way, lack of capacity within the NPS was regarded as one of the main causes for the delay in the implementation process experienced, whilst emphasis was put on dimension building through training.

In addition, lack of staff with knowledge and experience could not be easily remedied by training and hiring especially foreign skilled personnel. Furthermore, salary structures in the public sector were not attractive enough to compete with the private sector and to offer candidates with the required skill levels. Therefore, trained personnel also leave the
government service, often for better job opportunities. Some of the opportunities involve training and development to help staff knowledge and skills that develop talents (Taylor, 1996)

Gay et.al (2009) argued that low capacity for system implementation at sub national level, such as provincial and regional governments, was one of the major challenges in the implementation of integrated systems in developing countries. Similarly, the aspect of low capacity was relevant in the Namibian context with its fourteen regions. Also, demand that the duplication of efforts created for skills and knowledge, of which a shortage already existed. Hence, human resource development issues in Namibia needed prioritization. Furthermore, education system needed to be aligned with the corporate world demands of the country and scarce or specialized skills.

Treisman(2002) mentioned that the implementation of a payment system was complex, risky; resource intensive process that required major procedural changes and often involved high level officials. They further stated that it demanded commitment to change in technology, process and procedures, as well as changes in skills, responsibilities and behaviour. Equally, considering the nature and complexity of the project in the Namibian context it was essential for all participants to be fully aware of the magnitude of the undertaking. Moreover, decision makers had to be convinced that the benefits of the integrated modules exceeded the risks, and participating Departments recognized the need for a new system. Also, the introduction of integration involved more than only the automation of public finance tasks and processes. Also, Sekaran (2000) identified a number of institutional issues that should be anticipated and planned. Those issues included, amongst other organizational arrangements, the legal
framework and functional process. On the contrary, the introduction of an integrated system fundamentally changed the way operations were carried out and therefore required a carefully managed process. This process resulted in the creation of a new organizational culture, which was, change in the way the organization operated.

2.5 The Contribution of FSM towards Enhanced Service Delivery.

Holmstrom (2003) indicated that an integrated payment module was of importance since it held the key to unlocking effectiveness and efficiency in the service delivery. He further stated that it had potential to remove unnecessary duplication and improved the use of scarce resources, also contributing to better communications in highly complex organization.

Also, innovation and continuous improvement were essential to the sustainability of public sector transformation. However, the NPS had resisted the concept of innovation, believing that it was more relevant to the private sector. Additionally, there was some perception that, because the public sector was not operating in the competitive environment, it was therefore not subject to the bottom line criteria for success or failure which drove innovation.

With that clearly the case, the NPS needed to capture best practices from other organisations to drive innovation. Similarly, benchmarking could play a useful part in that process, helped O/M/As understand aspects of their service delivery benefited from innovation. Also, as well as how best documented and adopted new approaches helped. LeGrand (2003) stated that many countries undertook public sector reforms to improve the quality of public service delivery. The author further indicated that while the demand for better services was a
common factor, the spectrum of expectations varied from country to country. In the same way, improvement in customer services within the NPS focused on the important area such as speed. Equally, the time taken to deliver service was short, possibly for both the public and the O/M/As the service.

Also, improving public service delivery was one of the biggest challenges worldwide. Treisman (2002) indicated that public services were a key determinant of quality of life that was not measured in per capita income. Additionally, they were also an important plank of poverty reduction strategy. Similarly, organizing public service provision was deemed to be a core function of government. However, how that responsibility discharged was open to debate.

An important theme for recent research (United Nations Development Program, 2013) on public service delivery indicated that there was a need to spend resources on evaluating policies. The research further indicated that policy evaluation was a crucial part of effective public service provision where missions were too weak.

2.6 Summary

Despite significant progress made in transforming the old FSM, there also existed some obstacles and difficulties. Developing an efficient integrated financial service module will help the NPS eliminate or reduce challenges with the current FSM. Review of literature showed that the old FSM in the NPS had not gained attention by researchers, particularly key issues affecting the financial service modules. Therefore, the study gave an insight to the
researchers who were not familiar with the Namibian payment procedures. The following Chapter explained the research methodology employed for the research.
3. RESEARCH METHODOLOGY

The aim of the Chapter was to present the research methodology used in the study. The presentation of the research methodology included a discussion of the population, sample, design of research instruments, procedures, pilot study, data analysis, reliability and validity of research data, methodology for answering research objectives and research ethics. The Chapter concluded a summary.

3.1 Population

Many of options were available for the researcher to specifically identify the group to study. The research problem and the purpose of the study assisted the researchers in identifying the group to involve in the study. In research terms the group involved in the study was the population. Gay et al. (2009) indicated that a population consisted of all subjects a researcher wanted to study. Similarly, defining the population assisted the researcher in several ways. First, it narrowed the scope of the study from a very large population to one that was manageable. Second, the population identified the group that the researcher wanted to draw conclusion when the study was finalised. That helped ensure the researcher stayed on the right path during the study. Ritchie and Lewis (2003) explained that identifying the population helped the researcher generalise findings. Additionally, by defining the population, the researcher identified the group that the results applied for the conclusions of the study.
The population of analysis consisted of employees from the Finance Departments in the respective O/M/As that was directly responsible for payment services within the NPS. The population was chosen due to the fact that it gave a relatively fair representation of the various O/M/As within the NPS.

3.2 Sample

The stratified random sampling technique was used to select the respondents from various O/M/As. The sampling technique was employed in order to focus the study on a specific subgroup within the population. Stratified sampling permitted the researcher to identify subgroups within a population and created a sample which mirrored those subgroups by randomly choosing subjects from each stratum (Ross, 2005). Furthermore, such a sample was more representative of the population across the subgroups than a simple random would be (Bless et.al, 2012). However, in order to have a representative sample within the finance divisions of various O/M/As purposive sampling was used to select Senior Accountants specifically from the Ministry of Finance (Funds Transfer Division).

The researcher used purposive sampling based on the knowledge of a population and the purpose of the study (Ross, 2005). Purposive sampling was a non-probability sampling technique that focused on a particular characteristic of a population that were of interest, which was best enabled researcher to answer the objectives. The sample size constituted of ninety-one (91) randomly selected staff, of which three (3) were chosen from each of the twenty nine (29) O/M/As Finance Departments. Further, four (4) Senior Accountants from Funds Transfer Division (Ministry of Finance) was selected.
3.3 Design of Research Instruments

In the research design, the researcher described how the participants were involved. The research design defined the plan according to which the researcher obtained participants and collected information from them (Sekaran, 2000). The research design was influenced by the research objectives and was compared to a blueprint of an architecture model (De Vaus, 1993). The author further stated that research design aided in assembling, organising, and interpreting of information, and results of research findings.

In the study, data was collected through a structured questionnaire that consisted of one Section completed by officials within the Finance Departments of various O/M/As. The Section completed by officials comprised of open and closed ended items. Closed ended items sought information on variables such as gender, qualifications, O/M/A they work for and experience. Further, open ended items sought information on usability challenges such as manual payments, wrong entry of journals and inadequate information. Respondents were also provided with open ended items in order to give freedom of response.

3.4 Procedures

Questionnaires were administered by the researcher to the Finance Divisions of various O/M/As within the NPS. Codes and categories for each of the questionnaire were organized and entered into a Statistical Program for Social Scientists (SPSS) by the researcher. A data cleaning process was conducted by the researcher through selection of particular entries and cross checking with the questionnaire.

3.5 Pilot study
Before the final form of the questionnaire was constructed, it was useful to conduct a pilot study to determine if the items yielded the kind of information that was needed. Treisman, 2002 indicated that a pilot study helped the researcher in developing and testing adequacy of research instruments. Additionally, it also involved pretesting or trying out, of a particular research instrument or research procedure. However, conducting a pilot study did not guarantee success in the main study but it increased the likelihood of success (Conradie, 2000). Therefore a well-designed and conducted pilot study informed the researcher on the research process and about likely outcomes of the study. In order to achieve the aims of integration and service delivery, a pilot study was conducted to determine if the study would yield the kind of information that was needed.

The researcher piloted the questionnaire by administering it to accountants in the Khomas Region for the O/M/As based at office Government Park in Windhoek, which was not part of the main study sample. Those offices were selected because of easy access in terms of transport and communication. That exercise was necessitated by the fact that ambiguities in the questionnaire items had to be identified and then disambiguated. The exercise still had to give verification as to whether or not the items required further explanations when administered to the targeted sample. The preliminary hypothesis that had been developed on the basis of Literature Review for the study was refined as a result of the information and insight gained during the pilot phase. One of the advantages of conducting pilot study was that it gave advance warning regarding weaknesses in the proposed study (Gay et.al, 2009)

3.6 Data Analysis

In Chapter one, the researcher specified how the data was analysed. The researcher then analysed the data according to the plan. The results of the analysis were then reviewed and
summarised in a manner directly related to the research objectives. In the study, the researcher compared the current usage, with the challenges, and the service delivery. Those sets of data were analysed to determine if there were differences, and if those differences were statistically significant. If the differences were statistically significant, the study validated the theory that was the focus of the study. Statistically significant in this case meant the likelihood that a result or relationship was caused by something other than mere random chance (Curwin & Slater, 2008). They further stated that the statistical hypothesis was employed to determine if a result was statistically significant.

The questionnaires were presented in numerical data. Further analysis was done using Chi-square test. The test was used to determine whether there was significant relationship and/or differences among independent and dependent variables such as qualifications, experience. Also, dependent variables such as knowledge about payments on FSM in place, qualifications and challenges. Furthermore, analysis and findings of data collected was presented in the next Chapter while the discussion was stipulated in Chapter 5 respectively.

3.7 Reliability and Validity of Research Data

The study endeavoured to achieve, among other crucial aspects, reliability and validity as discussed below.

3.7.1 Validity

The researcher needed to ensure that the validity or trustworthiness of the findings was maximised. Validity referred to whether the instruments measured accurately what they intend to measure (Ross, 2005; Hughes, 2003). Ritchie and Lewis (2003) regarded validity as the correctness of the evidence or research findings. However the researcher set out to
evaluate payments on the EPFSM within the NPS in Windhoek that focused on performance of the current modules in usage.

The questionnaires comprised of attributes that meant to measure the different variables of the study. The attributes measured whether or not the current modules supported the overall reconciliation in the NPS. The instrument, furthermore, looked at the efficiency and reliability of the current modules in terms of payment processes and tested whether or not they correlated with the challenges identified and enshrined in the Literature Review of the study.

Validity still considered data collection procedures (Bless et al, 2012). Similarly, the Heads of Finance Departments at various O/M/As first accepted a single questionnaire. This was done in order to give ample time for Head of Department to revise with accountants before the researcher delivered the whole consignment of questionnaires. The practice of Heads of Departments accepting a single questionnaire first allowed time for participants to read through the questions and understood exactly what the instrument really meant to test.

3.7.2 Reliability

In quantitative research a reliable measure was one which produced the same response to a question. Reliability was the extent to which the observable and (or empirical) measures that represented a theoretical concept were accurate and stable over repeated observations (Bless et.al, 2012). In other words, it referred to the consistencies of the results from the measuring procedures (Ross, 2005).
The consistencies lead to confirmatory of the study by an independent researcher (Ritchie & Lewis, 2003). Furthermore, in quantitative research the goals were different, could re-conceptualise reliability in order to produce good research. Similarly, a credible research is a study that had been carried out according to best practices and peer review. In addition, the goal is to confirm if the researcher correctly understood the social world.

Reliability was determined by SPSS (analysis – scales – reliabilities) and, as advised by Sekaran (2000), in the study, coefficients less than 0.6 was considered poor, coefficients greater than 0.6, but less than 0.8, was considered acceptable and coefficients greater than 0.8 was considered good.

3.8 Methodology for Answering Research Objectives

To answer the research objectives a quantitative research method was used. Quantitative research method was used to identify usability challenges faced of the current system. Also, determine whether the existing payment module supported standards of performance. The specific research approaches were employed to answer research objectives and presented in the following three Sections.

3.8.1 Methodology for Answering Research Objective One

Research objective one ‘To evaluate the payments on Financial Service Modules used in the NPS’. Ninety one (91) questionnaires were used to collect data pertaining to the usability challenges of the old FSM. Data on challenges, reliability and efficiency of the old FSM obtained were documented on excel. Documented results were grouped and analysed. Literature research was conducted to gather and analyse existing theoretical views and current performance of the old FSM.
3.8.2 Methodology for Answering Research Objective Two

Research objective two ‘integrate payments on existing FSMs’ was answered by combining existing theoretical views and knowledge with the requirements of Namibian Public Service. Questions on attributes of inefficiency were used to determine whether there was a need to integrate various financial service modules within the Finance Department of various O/M/As. Furthermore, the questionnaire was used to establish whether the current payment system met minimum standards of performance according to the State Finance Act. The documented data was combined, analysed and mapped to existing theoretical views. From the data analysis, conclusions were drawn that led to the formulation of the integration system, in the study named EPFSM.

3.8.3 Methodology for Answering Research Objective Three

Research objective three ‘to improve the contribution of EPFSM towards enhanced service delivery’. Theoretical reviews were conducted to establish the contribution of EPFSM towards enhanced service delivery. Data on the current performance of old FSM was gathered through questionnaires. Statistical analysis was also performed using SPSS to determine the level of service delivery.

3.9 Research Ethics

The researcher obtained permission from relevant authorities before interacting with respondents. Permission to conduct the research was sought from the Office of the Director for the various O/M/As, Khomas Region, and the response to this request was given in
writing. Letters seeking for school permission were made to the supervisors and their response simply depended on the approval by the Head of division.

3.9.1 Informed consent rules

Informed consent ensured that each participant had a complete understanding of the purpose and methods used in the study, the risks involved, and the demands of the study (Conradie, 2000). Similarly, the participants were officially and formally asked to be a part of the study through their supervisor well in advance of the commencement of the study. Furthermore, the researcher approached the Head of Department during working hours and discussed what the request was all about. A single Questionnaire was handed over to the Head of Department who then discussed the contents of its items with the accountants under the division.

The consent of the participants was telephonically communicated through their supervisors and the consignment of questionnaires was then handed over to the Head of Department. Participants were informed about the purpose of the study and assured that results remained anonymous. The strategy assisted in ensuring that people were open and honest with their comments, without fear of being identified. Taylor (1996) indicated that interested parties often claimed access to information obtained during the research. He argued that regardless of how much such requests were intended, it was unethical to disclose such information to them. The study ensured the standard that the person must have all the information that might reasonably influence their willingness to participate in a form that they understand.
3.9.2 Respect Confidentiality and Privacy

The right to privacy and anonymity was assured during the study. Privacy involved the right of an individual to control distribution of personal information (Taylor, 1996). Similarly, the researcher had the responsibility to make clear to the participant what the research entail and ensured that participants fully understood what they were being asked to do. In addition, upholding participant’s rights to confidentiality was crucial for every researcher. However, many privacy issues were unusual to the research population.

On the question of anonymity, the researcher guaranteed total confidentiality of information and that the information in the questionnaire was used only for research purposes. The researcher finally made commitment to provide all O/M/As that took part in the study with the hard copy of the printed final version of the study.

3.9.3 Plagiarism

In research, the scholar may fail to convey quotations or observations that contradict or raised questions about their conclusions (Conradie, 2000). Similarly, in this study information obtained from other sources was acknowledged. In addition it was the responsibility of the researcher to appropriately cite or quote the material used in the study. Also, appropriate citation applied whether the material was written by another author.
3.10 Summary

The Chapter addressed the population, sample, design of research instruments, procedures, pilot study, data analysis, reliability and validity of research data, methodology of answering research objectives and research ethics. The research design described the quantitative research approach that was followed to answer the research objectives. The quantitative research conducted used questionnaires to gather information from the population sample.

The population sample consisted of staff members (Accountants) selected from the Finance Departments of all O/M/As and selected Senior Accountants from the Ministry of Finance (Fund Transfer Division). A number of research instruments were developed to guide and assist in the processing of the data gathered. The following Chapter discussed data analysis conducted in relation to the research objectives and presented the findings of the analysis process.
4. DATA ANALYSIS FINDINGS

The Emphasis in the Chapter was on the analysis of the data gathered through questionnaires. Analysis of the data was presented within three sections which related to the research objectives. The Chapter concluded with a summary of the Chapter.

4.1 Introduction

The Chapter presented results of data collected from employees at various ministries through a self-administered questionnaire. Data collected in the study were exclusively quantitative and were presented in form of bar graphs, pie charts and frequency tables.

4.2 Data Management

All completed questionnaires administered to the respondents were collected. Data from these questionnaires were electronically entered into SPSS. The data was then analysed using the same software and Excel where necessary. The graphs and tables presented below were generated.

4.3 Data Analysis

The Chapter presented the findings of the research from data that was collected via completed questionnaires of the study. A total of 91 government employees were given the questionnaires which were self-administered. The data analysis was based on the 91 questionnaires that were distributed even though five (5) were not fully completed and had sections left unanswered.
4.4 General Questions:

4.4.1 Demographic Characteristics of Respondents

The demographic information contained in the study form the background and indicated variation between characteristics.

![Figure 4.1: Proportion of Respondents by Ministry](image)

Figure 4.1 showed a total of 91 Government employees from the Finance Departments of respective O/M/As in the NPS. The sample mainly covered Accountants within the Finance Departments and additional Senior Accountants from the Ministry of finance responsible for postage of payments to the Bank of Namibia.
Figure 4.2: Proportion of Respondents by Gender

From Figure 4.2 it observed that the majority of the respondents among government employees in the study where male (57%) while a portion of 43 percentages are male.

Figure 4.3: Number of Respondents by Qualification

From the results collected it was evident that 52% of respondents possess Bachelor Degrees, followed by 20% of those who held tertiary Diplomas and lastly, 8% holed Master Degrees.
Meanwhile tertiary certificates obtained 7% with senior secondary certificate scoring the least with 5%, lastly 2 individuals opted to remain silent.

![Figure 4.4: Number of Respondents by Duration on Current Position](image)

Figure 4.4 indicated that most (35%) of the graduates served in the public service for the period of between 0 to 2 years, meanwhile between 3 and 5 years it was assumed that staff had acquired necessary skills and moved on. Whereas from 6 years onwards members held on for promotional positions that required 5 years and more years of experience. Finally, the majority of more than 11 years were the senior accountant group.
The majority of respondents were on operational level, which was accountant; senior accountant positions were few due to the hierarchy and structure of government levels. More accountants were considered for the study due to the fact that they were more involved with operational activities, whereas senior accountants were more of supervisory role.

Figure 4.5: Proportion of Respondents by Position Held
Figure 4.6: Proportion of Respondents by Department Employed

The Finance Department obtained 97% of the respondents because the study only covered the population of system users of the FSM within the Finance Department only of the NPS. Furthermore, 4 senior accountants from the Funds Transfer division within the Ministry of Finance that were involved with the postage of payments to the Central Bank for clearance.

4.5 Specific Questions:

Figure 4.7: Are there Challenges Identified with the Current Payments on EPFSM?
The majority of respondents (53%) indicated that there were challenges identified with the current Payments on financial service modules. While 47% indicated that the current module in use was inefficient and unreliable.

![Figure 4.8: If Yes, What Attributes these Challenges?](image)

Lack of dedication and quality service was identified as the most (17) contributing factor to the inefficiencies of the old FSM. It was however believed that service providers did not equip staff members with necessary training and understanding of the system. Additionally, processes and systems (13) involved in the payment process within the public service attributed to lack of information flow within the Finance Departments. On the other hand, about (10) respondents indicated that lack of staff turnover and qualified staffs in right positions were some of the challenges affecting service delivery.
Figure 4.9: Do You Think the FSM was Reliable?

Most respondents (65%) indicated that the current FSM was indeed a reliable module. However, as indicated above the challenges identified were as a result of service providers, staff, systems and processes within the public service. Similarly 35% of the respondents disagreed in terms of reliability factors of the EPFSM.
According to Figure 4.10 seven (7) respondents indicated factors attributing to payments on FSM not reliable were slow and wrong payment not reversible on the system. Furthermore, seven (7) respondents indicated that most of the information implemented on the system was not updated immediately. Similarly, nineteen (19) respondents indicated easy to update but it took time to effect on the old EPFSM.
Majority (60%) of respondents expressed that the current EFT used in the NPS was efficient in terms of security and standard. However, 40% indicated that EFT was inefficient, in other words they were in favour of the manual payment system by cheque.

Lack of training (12 respondents) was identified as a major challenge in improving service delivery. Additionally capacity (10 respondents), manpower (4 respondents) and experience
(4 respondents) were some of the challenges that dominated in terms of respondents. That was due to the fact that funds allocated for training and skill development were not used for the intended purpose, for some line ministries rather diverted to other projects.

**Figure 4.13: Do you think there is a need to integrate FSM?**

Most Accountants (52%) indicated that there was a need to integrate various modules within the Finance Department of the NPS. While 47% were satisfied with the old FSM and 1% opted to remain silent.
Figure 4.14: If Yes, Why Do You Think There was A Need to Integrate Modules?

Some of the advantages identified by respondents in the integration of modules were mainly for better reconciliation process (13 respondents), flow of information (12 respondents) and improved service delivery (9 respondents). Factors that scored least respondents were easy to monitor transactions (5 respondents), reduce time consuming (2 respondents) and coordination (4 respondents).
Figure 4.15: Does the Current Module Support Overall Reconciliation of the NPS?

The old existing FSM according to respondents did not support the overall reconciliation within the NPS, hence there was a need to integrate. Almost 70% of respondents indicated that the current FSM did not support the reconciliation process, whereas 29% said the existing system did support reconciliation process and 1% did not comment.
Table 4.1: If No, Which One of These Challenges Occurred Most Frequently? (You can choose more than one)

<table>
<thead>
<tr>
<th>Response</th>
<th>Proportion</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrong entry of journals.</td>
<td>4.6%</td>
<td>3</td>
</tr>
<tr>
<td>Wrong payments not reversed</td>
<td>3.1%</td>
<td>2</td>
</tr>
<tr>
<td>Inadequate information/Wrong entry of journals</td>
<td>1.5%</td>
<td>1</td>
</tr>
<tr>
<td>Inadequate information/Wrong entry of journals.</td>
<td>3.1%</td>
<td>2</td>
</tr>
<tr>
<td>Manual payments not updated on the system</td>
<td>7.7%</td>
<td>5</td>
</tr>
<tr>
<td>Manual payments not updated on the system/Inadequate information</td>
<td>16.9%</td>
<td>11</td>
</tr>
<tr>
<td>Manual payments not updated on the system/Wrong entry of journals</td>
<td>3.1%</td>
<td>2</td>
</tr>
<tr>
<td>Wrong payments not reversed/Inadequate information</td>
<td>7.7%</td>
<td>5</td>
</tr>
<tr>
<td>Wrong payments not reversed/Inadequate information/Wrong entry of journals</td>
<td>3.1%</td>
<td>2</td>
</tr>
<tr>
<td>Wrong payments not reversed/Manual payments not updated on the system</td>
<td>10.8%</td>
<td>7</td>
</tr>
<tr>
<td>Wrong payments not reversed/Manual payments not updated on the system/Inadequate information</td>
<td>26.2%</td>
<td>17</td>
</tr>
<tr>
<td>Wrong payments not reversed/Manual payments not updated on the system/Wrong entry of journals</td>
<td>4.6%</td>
<td>3</td>
</tr>
<tr>
<td>Wrong payments not reversed/Wrong entry of journals</td>
<td>7.7%</td>
<td>5</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td><strong>65</strong></td>
</tr>
</tbody>
</table>

Figure 4.5.10 indicated that 26.2% of the challenges were attributed to wrong payments not reversed/manual payments not updated on the system/inadequate information. While 16.9% of the respondents indicated manual payments were not updated on the system/inadequate information. Also 10.8% indicated wrong payments not reversed/manual payments not updated on the system respectively.

4.6 Statistical Inferences

The study made use of inferential statistics to analyse the coded data by using SPSS Version 21. Inferential statistics are tests that helped determine whether the observed results in the participants could be generalized to the entire population by examining whether the results were powerful enough (Dörnyei (2007). Inferential statistics, namely, chi-square tests and
detailed analysis of graphs were used to explore relationships between the selected variables. Chi-square test for independence, also called Pearson’s chi-square test, was used to discover if there was a relationship between two categorical variables (Curwin and Slater, 2008).

The notion of significance in statistics was measured by using a probability coefficient, which was symbolized by p and its range was between 0 and +1 ((Dörnyei (2007) and the results were normally ‘expressed in a correlation coefficient’ (Curwin and Slater, 2008). In the social and human sciences, a p of < .05 was acceptable, which meant that there was a 95% probability that the outcomes were not to chance. A significant level of 5% formed the basis for determining whether the hypothesis was supported or not. Thus the p value must be less than < or equal to ≤ .05 for it to be considered statistically significant. The higher the correlation, the closer the relation between the two variables and the more accurate were predictions based on the relation (Gay et al (2009).

The two key assumptions to be considered when performing the chi-square tests were:

1. The two variables must be measured at an ordinal or nominal level.
2. The two variables should consist of two or more categorical, independent groups.

The chi-square test was summarised as follows:

1. $H_0$: Null hypothesis: there was no association between the two sets of answers.
2. $H_1$: Alternative Hypothesis: there was an association between the two sets of answers.
3. Test statistic:

**Formula for Testing Statistic**

$$\chi^2 = \sum \frac{(\text{Observed} - \text{Expected})^2}{\text{Expected}}$$
4.7 Chi-Square Tests;

4.7.1 H\(_0\): There was no association between the duration at current position and challenges with the EPFSM.

H\(_1\): There was an association between duration at current position and challenges with the EPFSM.

Results:

\[ \chi^2 = 4.189, \ P\approx 0.523 \] (see Table 4.1), therefore P-value of 0.525 was greater than the accepted level of significance 0.05. Then it failed to reject the null hypothesis. In other words, there was no statistically significant difference in the duration at current position and the challenges identified. Analysis on Figure 4.7 revealed that majority of respondents indicated that there were challenges with the current payments on the old FSM, while the least of respondents revealed that there were no challenges with the current payments on FSM.

4.7.2 H\(_0\): there was no association between training on EPFSM and respondents highest qualification.

H\(_1\): There was association between training on EPFSM and respondents highest qualification.

Results

\[ \chi^2 = 50.253, \ P\approx 0.012 \] (see table 4.2), therefore we reject the null hypothesis and conclude that there was a relationship between training on EPFSM and respondents highest qualification. Analysis Figure 4.8, showed that majority of respondents indicated that there
was lack of training on EPFSM. While the least indicated their highest qualification as Grade 12 senior certificates with experience

4.7.3 \( H_0: \) There was no association between subdivision within the Finance department and the O/M/A that the respondents work for. 
\( H_1: \) There was an association between subdivision within the Finance department and the O/M/A that the respondents work for.

**Results**

\[ \chi^2 = 2.229, P \approx 0.898 \text{(see table 4.3)}; \] the P-value was greater than accepted level of significance 0.05. It failed to reject the null hypothesis. In other words, there was no statistically significant difference between subdivision within the Finance department and the O/M/A that the respondents work for. Analysis of Figure 4.9 indicated that most of the respondents that participated in the study were from Salaries and D.S.A of various O/M/As, while the remaining from funds transfer division. That attributed to the composition of the sample of government O/M/As where accountants dominated the sample.

7.3.4 \( H_0: \) there was no association between attributes to the challenges and reasons for inefficiency.
\( H_1: \) there was an association between attributes to the challenges and reasons for inefficiency.
Results

\[ \chi^2 = 48.409, \ P \approx 0.081 \] (see table 4.4), therefore, the hypothesis was not rejected and concluded that there was no relationship between attributes to the challenges and reasons for inefficiency. The analysis on Figure 4.10 indicated that majority of the respondents outlined easy and fast to use as reasons for inefficiency while the least reason was that the system could shut down any time.

7.3.5 \( H_0 \): there was no association between the challenges for reconciliation and the accounting/reconciliation skills. 
\( H_1 \): there was an association between the challenges for reconciliation and the reconciliation /accounting skills.

Results

\[ \chi^2 = 30.016, \ P \approx 0.465 \] (see table 4.5), therefore, could not reject the null hypothesis and concluded that there was no relationship between the challenges for reconciliation and the reconciliation /accounting skills. The analysis for Figure 4.13 showed that major challenges for reconciliation identified by respondents included wrong payments not reversed/ manual payments not updated on the system/ inadequate information, while the least was wrong entry of journals/ inadequate information.

4.8 Conclusion

The analysis of the data gathered from questionnaires was presented in the Chapter in various Sections. Data analysis focused on the respondents knowledge and understanding of the old
FSM, integration and factors that would impact integration adoption within the public service.

The next Chapter focused on answering the research objectives in relationship to the analysis findings of the current state of the old FSM.
5. DISCUSSION OF DATA ANALYSIS FINDINGS

The chapter, addressed research objectives by address the data analysis findings. The Chapter discussed the findings for each research objectives separately and concluded with a brief Chapter summary.

5.1 Introduction

In Chapter 4, the data analysis presented was on the old FSM, challenges identified and the integration process was discussed in relation to the research objectives in the Thesis. The study evaluated the payments on FSM with the aim of integrating and enhancing service delivery within the NPS. It revealed the challenges identified in the payment process that influenced the performance of EPFSM.

5.2 Demographic Information

Respondents indicated that 57% of female officials were employed within the Finance Departments of various O/M/As. That was attributed to the fact that the Government of Namibia implemented affirmative action and gender balance. The affirmative action sought to re-address past discrimination through active measures to ensure equal opportunity in education and employment. While gender equality ensured equal representation of women and men and be accorded equal opportunity.

Furthermore, 52% of the respondents within the finance divisions of various O/M/As were in possession of tertiary Degrees. That meant graduates from tertiary institutions opt for public sector as first employers. The reasons being that majority of students at tertiary education were sponsored by Government with contractual obligation of joining the NPS upon
completion for the number of years financed. Moreover, other contributing factors for high tertiary Degree in the NPS were that most of the employees of the public sector benefited from financial assistance within their various O/M/As to improve academic levels.

Figure 4.4 indicated that 35% of graduates served in public sector for a period of 0-2 years, followed by 26% for 3-5 years. The less period of service was attributed to the training and development in the public sector emphasizing value for money. They further joined the private sector after 5 years because of training and development. The private sector was critical to success of the organisation and officials were trained to become experts in their fields supported to do professional qualification.

5.3 Specific Questions:

5.3.1 Research Objective One: ‘to Evaluate the Payments on FSM Used in the NPS’.

The information source for research objective one was the data analysis conducted on the current state of the FSM within the public service. The results of the data analysis were recorded in Section 4.7 of Chapter 4.

The data analysis results of Section 4.7 showed that 53% of the respondents indicated that there were challenges identified with the current payments on FSM. Results of the study revealed that the performance of payments on the old FSM was attributed by certain factors identified during the study.

Table 4.1 and 4.2, showed an $\chi^2 = 4.189$ and $P \approx 0.523$ indicated how the key variables were scored by the participating accountants. Lack of support from service providers in terms of understanding and usage of the current system were some of the major contributing factors to the challenges identified. The results also indicated that 65% of the respondents specified that the current FSM was reliable in terms of usage. This attributed to the fact that
64% of the respondents were accountants with duration of 0-2 years on current position with tertiary Degrees. Hence, the use of technology was high compared to respondents with duration of more than 11 years. Furthermore, the processes and systems used in generating payments were long and slow to effect transaction on the general ledger. That meant to confirm the study of Jing (2009) which concluded that an economy cannot grow to the next level if regular evaluation on payment system was not done. He further added that the nature of a payment module determined how fast the economy grew and that the importance of the payment system could not underestimated.

The results from the data analysis showed that there was lack of training programmes to equip staff members with necessary skills. A comprehensive training was required and important within the NPS for productivity and could be compiled as early as possible each financial year. Training was the best way to ensure productivity. In order to build the necessary capacity, it was important to create the learning environment and treated the whole process of learning opportunity with training being part of the on-going process. Given the known fact that the performance of the old FSM within the O/M/As was not evaluated regularly, and it was easy to think that supervision had an impact on performance by the old FSM. However, the researcher saw the need to link or prove linkage between duration at current position and the challenges identified.

It was the desire of the researcher to prove whether or not duration at current position had indeed created the challenges under study. Therefore, the characteristics of the effectiveness of the EPFSM were correlated to the independent variable to determine their Degree of relationship and determined whether such characteristics had an impact on the performance.
5.3.2 Research Objective Two: ‘to Integrate Payments on Existing Old FSMs.

The information source for the research objective two was the data analysis conducted for the need to integrate and reconciliation process. The results of the data analysis were recorded in Section 4.13 of Chapter 4. The objective was designed to implement the integration of the old FSM. The implementation looked at the relation to whether or not would enhance service delivery.

The data analysis findings indicated that there was a need to integrate payments on EPFSM. While some staff (47 %) indicated that integration was not necessary within the NPS, rather the government should concentrate on skill development and capacity building. Further 52 % of respondents confirmed that the current payments on the old FSM could be integrated in order to improve the overall reconciliation of the NPS. The flow of data was therefore required internally within Finance Departments of various O/M/As. To solve the challenges identified in Section 4.5.10, integration of finance service modules was proposed. The integration provides the Finance Department to access data needed for government planning and reconciliation.

Furthermore, findings to the study on Table 4.3 and 4.4 revealed the attributes to challenges and reasons for inefficiencies. The result concurred with that of Hiles (2011) which specified an integrated payment system that provided timely, accurate and consistent data for management and budget decision making.

Furthermore, increasing the level of technology used in an organisation provided a better working environment. It actually meant that there would be more time that could be spent on non-tech activities like face to face customer interactions. That made it easier for staff to do
their work and cleared up time for more meaningful work. Integration enabled staff to run operations more efficiently, saving time. Hammer and Champy (2011) stated that an integrated module assisted management in ensuring accountability for the deployment and use of public resources and improved the effectiveness and efficiency of public expenditure programmes.

5.3.3 Research Objective Three ‘to Improve the Contribution of EPFSM Towards Enhanced Service Delivery’.

The data analysis findings indicated that there was a need to improve the contribution of the old FSM towards enhanced service delivery. Holmstrom (2003) indicated an integrated payment module was of importance since it held the key to unlocking effectiveness and efficiency in the service delivery. He further stated that it had potential to remove unnecessary duplication and improve the use of scarce resources, also contributing to better communications in highly complex organization. Similarly, with EPFSM, it will be easy to address enquiries by having information that finance officers need on hand. It will further improve efficiency across various O/M/As. Also, within the NPS there are key processes that may be encountered in daily operations such as cash collections and financial consolidations. Automating and integrating such processes will position staff members to activities that help an organisation to grow.

Therefore, automation was important in making timely informed decisions. When information is accessed instantly from almost everywhere within the NPS, it enables employees to achieve better and accurate decisions. Also, it reduces costs of wasting resources on data extraction and trying data from different sources. Accelerated growth within the NPS was necessary to enable integrated modules expand to regional offices of
various O/M/As. That improved the payment process involved and accomplishes a lot faster because of unified accounting management process and data.

LeGrand (2003) stated that many countries had undertaken public sector reforms to improve the quality of public service delivery. The author further indicated that while the demand for better services was a common factor, the spectrum of expectations varied from country to country. Similarly, the NPS had undertaken public sector reforms to improve the quality of public service delivery. However, while the demand for better services was a common factor in Namibia, expectations varied from ministry to ministry. The time taken to deliver a service should be the shortest possible for both the client and the organisation delivering the service.

Furthermore, mechanism was put in place to address variation in meeting service levels and drive changes in the service delivery organisations. Therefore, the service delivery mechanism was integrated. That enabled the O/M/As to have multiple channels for service delivery, so that clients had channels of choice depending on specific needs at specific times. Also, personalisation of service was necessary to ensure that client’s experiences were on a par with what they used to receive from other Ministries.

5.4 Summary

The data analysis findings of Chapter 4 were discussed and presented in relationship to the three research objectives. The following Chapter discussed the architecture model created from the data analysis findings and relevant literature.
6. PROPOSED ARCHITECTURE FOR FINANCIAL SERVICE MODULES IMPLEMENTATION IN THE NPS

The Chapter presented the proposed architecture that adopted the integration of payments on EPFSM within the NPS. Each component of the architecture was explained in full detail.

The Chapter concluded with a summary.

![EPFSM Architecture Diagram]

**Figure 6.1** EPFSM Architecture

### 6.1 Introduction

Treasury Department in terms of section 23(1) of the State Finance Act (1991) implemented the FSM to phase out the manual payment method. Since then, Government divisions such as Salaries, Creditors, Daily Subsistence and Travelling Allowance (DSA) within the Finance Departments of the NPS have been generating payments on separate modules that are not
linked under a unified payment process. The establishment of an architecture model was a key solution in unlocking data that was required to enable public sector reconciliation.

Zigiaris (2012) added that integrating the business process of the payment system helped in providing information that was essential to support work practices. He further stated that in addition to provide the right information it empowered staff by giving the right tools. However, the sharing and exchange of information among divisions would be controlled by the extent to which payments were captured as well as the manner in which information was accessed between departments. In the study, the architecture model was discussed which was developed to meet the challenges identified. The model in particular addressed the research aim of the study which was:

*Integrating and enhancing service delivery process in the Namibian Public Service.*

### 6.2 Government Offices /Ministries /and Agencies (O/M/As)

The various O/M/As were the users of the of the financial service modules. In addition to having a reliable connection they should also have the capacity in terms of skills required. There were many different kinds of users and each had different responsibilities. The finance officers involved were equipped with the induction and basic training course that enabled them to perform their duties. Several capacities were involved in the various stages of the payment processes. The O/M/As had the necessary capacity in terms of skilled manpower helped implement and maintain the integrated modules. There was a need for highly trained system administrators that were capable of designing and modifying the necessary processes
to run the services being offered. Information technology technicians were available to ensure maintenance and operation of the modules.

6.3 Integrated Financial Service Modules.

The public sector payment processes was designed to be tightly controlled. This meant that, if structures were to be transformed, fundamental changes would often need to be made to suit Government treasury instructions. Some Government agencies addressed this situation by putting in place institutional structures designed to empower client’s needs.

The transformation involved empowering people in the form of re-engineering the processes and systems within which public sector employees operated. The reengineering of processes in the public sector was an important condition for the realization of benefits, as well as for achieving the objective of enhanced service delivery. However, for some time then, this did not result in any visible improvement in service. More recently, the focus had been on changing the fundamental process. That reduced the time taken in the generation of payments.

6.4 Electronic Funds Transfer (EFT)

The Section provided an overview of payments and deposits on the financial service modules. A deposit consisted of all payments that were being processed. Therefore, the EFT was a standard method for online payments entry. The payment status changed as the payment moved through the system. The status determined which payment information could be
changed and which options were available to work with the payment. The Section also provided an overview of direct journal payments, lists common elements used.

6.5 General ledger

The main task of the general ledger in NPS was the overall presentation of financial accounting. The general ledger was the complete record of all transactions captured within the NPS, and thus represented the main and current element in the rendering of accounts. Consolidation component in the general ledger defined the group chart of accounts for each item. That ensured the account numbers was a required entry field in the chart of accounts. To be able to integrate the payments on EPFSM into the general ledger, it was important to ensure that planning periods were open for each financial year. Posting periods were opened in order to post the general ledger transactions. The posting document types required were provided in the standard system, and were configured to meet each line ministry requirement.

6.6 Cash Management

When statements were received, payments were reconciled by matching the amount of each sum received with the amount that was received in the bank. The cash management process involved reconciling payments electronically or use bank reconciliation application to reconcile books. The reconciliation available at that level varied depending on the information that the bank provided. Accounts were reconciled at the same level as that of the bank provided on the bank statement.
6.7 Developing a Clear Strategy for the Integration Process

6.7.1 Better Regulation

Legal frameworks such as the state finance act, treasury instructions could limit the public sector as they sought to undertake the transformation needed to deliver services. But those frameworks if amended could also be strong drivers of change. The reduction of the administrative burden through better regulation was considered to be a key instrument for enabling efficiency improvement in the public services.

6.7.2 Long Term Planning

With ever changing expectations driving public sector transformation, it was important for every public sector organization to set about identifying, and planning for future trends in client service requirements. Such planning supported public sector bodies as they sought to balance the pressure between their obligations as providers within delivering services to the majority of citizens. Development strategies were put in place as they were a key to ensuring that the necessary capabilities for delivering these new services were operating throughout Government.

6.7.3 Technology

The delivery of effective public services could not be achieved through technology alone, nor be achieved simply by imposing a policy and regulatory framework. It required wider transformation and identified those changes that could be utilised to deliver benefits and key features to improve performance. However, while technology was used primarily as enabler of transformation, there were an increasing number of public sector leaders trusted in it in
order to align public sector service delivery with customer needs. The level of commitment to the Government objectives, combined with technology, helped to ensure the delivery of improved service. It was also noted that the benefits of technology could not be fully realized without re-engineering the processes involved in delivering the service. Also, desired changes in the quality of service delivery could not be achieved simply by applying technology to inefficient processes.

6.7.4 Skills and Talent Management

The reform of public services to deliver improved services could only be achieved with the commitment of a highly motivated, flexible, diverse and skilled workforce, capable of providing high quality public service. If the Namibian Government was to implement innovative service delivery models, people required new skills. That requirement to generate new skills came at a time in most countries when there was undersupply of the necessary highly skilled people to support such change and when significant numbers of skilled people in the public sector were retiring. That required the NPS to take a focused approach to talented management, from recruitment through training and development, to appropriate reward and good management.

One of the barriers to effective service delivery was the lack of requisite skills. In addition to this, there may be no progressive career path available to employees, meaning that they were unlikely to be motivated in what they did. Making the NPS a preferred workplace could be a powerful driver for public sector empowerment. That meant creating environments in which the brightest and best of each generation want to work in public service. Staff must not be denied the opportunity to demonstrate their potential and should be given sufficient
responsibility at an early stage. Incentives must be provided for innovation, collaborative working and excellent service delivery. Irrespective of how much the NPS intended to outsource or take assistance from outside agencies, there should be a minimum capacity within the organization to handle new initiatives.

In recruiting to meet these challenges, public service employers needed to: Understand why people wanted to work in public service and focus on effective job design that recognized the motivation of potential recruits. Attracted staff with the right skill sets by building a positive, modern image of public services, with strong branding of the service values. Collaborated with other employers to attract and retain staff. Also, making the best use of retained skills in the workforce and use individual abilities of a field effectively.

As part of the process of grooming internal talent within the NPS it was important to manage transformation and ensured that these personnel were alerted to the targets that set for service delivery.

6. 8 Internal Validation

The architecture was validated against the requirements of the NPS payment process. The various elements that were tested are listed below: To establish data sharing and exchange between two or more subdivisions within the NPS, Facilitate the overall reconciliation of the O/M/As, Facilitate the journal imports and updates on the modules.

The validation of the integrated module was performed by the expert group in the Finance Department for the Ministry of Finance. The feedback obtained from the expert group during
consultations was incorporated into the architecture model. The updated version of the architecture model was submitted for final review to the treasury department.

6.9 External Review

Figure 6.1 was reviewed by Silnam Consultants in the Department of Payment Services. The aim of having the architecture reviewed by externally was to determine the performance and flexibility of the module.

6.10 Summary

The Chapter provided a comparison for the flow of transactions within the NPS and the proposed flow of payments on integrated EPFSM on the findings. The architecture consisted of multiple dimensions that focused on the generation of payments, consolidated statements and accounting entry in the general ledger.

The proposed model served as a guiding tool for the enhancement of service delivery and integration within the EPFSM. The distribution and flow of payments on the model provided a flexible structure that was used in any structures.
7. Conclusion and Future Research

The Chapter presented the summary of the conclusions of the identified research objectives. The Chapter concluded the achievements and suggestions for the future research.

7.1 Introduction

The research focused on the state of payments on the old EPFSM within the NPS. The research also investigated the challenges or factors that influenced the implementation of integrated processes.

The Chapter discussed in particular the objectives of the research. It highlighted some similarities with results of previous findings noted in the Literature Review and dealt with the interpretation and implications of significant research findings. Further, Chapter proposed some measures that helped improve the performance of the envisaged EPFSM. The study recommended the areas of improvements for effective payment processes in relation to the scores made by accountants who took part in the study. The scores were still used to make suggestions of improvements for the underperforming functions of the modules. The research objectives guided the research and data analysis.

7.1.1 Research Objective One: To Evaluate Payments on EPFSM Used in the NPS

Based on the discussion of Chapter 6, evaluation of payments on existing modules was established on current performance. The overall level of standard for EPFSM used by the Public Service was at fairly low standard at the time of investigation. The study identified challenges that affected the performance of the financial service modules. These were: lack of training, capacity, manpower and experience. The research also indicated that there was
still a huge of work to be done before the integrated financial service a module was implemented in the Namibian public service. Service delivery seemed to be good but was difficult to measure in the absence of indicators to avoid speculation. Systems existed in the various O/M/As but Information Technology (IT) infrastructure at Finance Departments needed a constant check as they were found to be inadequate.

7.1.2 Research Objective Two: To Integrate the Various Existing Financial Service Modules.

The discussion of the data analysis indicated that there was a need to integrate payments on the old FSM. The findings suggested that the various modules within the Finance Department of NPS were to be integrated to allow flow of information. Through the data analysis, the was a need to improve reconciliation process of the Public Service. Performance, monitoring and evaluation and management needed to be improved across the directorates. Training also needed to be improved at all levels to ensure staff development across the Finance Department. In conclusion, the Namibian Government required a standardized payment module which improved information sharing at an integrated level.

7.1.3 Research Objective Three: To Improve the Contribution of EPFSM Towards Enhanced Service Delivery.

The Public Service was increasingly becoming aware of the need to become integrated within and between line Ministries. The third research objective aimed at looking at ways in which EPFSM could be improved. The transition from the current state to the desired state of integration was influenced by a number of factors such as capacity, training and commitment
to change. That was done by means of holding more training and workshops targeting accountants within the finance divisions of the NPS.

The results from the data analysis yielded some interesting and useful findings. In many areas it was evident that there was room for improvement. In conclusion, there was a need for management to work out a strategy that addressed some challenges pointed out in the study. Finance Departments within NPS developed an operational plan within a performance management model. Furthermore, it is important to educate the entire Public Sector in Namibia regarding the importance of integration.

7.1.4 Summary of the Proposed Architecture Model

Based on responses through the questionnaire processed, the Architecture Model (AM) was proposed in Chapter 6 to facilitate the sharing of information. The designed AM proposed that information sharing be coordinated through integrated EPFSM that linked the various Finance Service Modules. That type of architecture model provided an efficient and economical way of reconciling financial statements.

In conclusion, the proposed model in the study met the architectural requirements and serves as a guide for achieving the desired performance for the payments on the EPFSM. The study achieved what it was set out to accomplish by providing the Public Service with integrated payments on EPFSM and enhanced service delivery processes.

In defining the architecture model, three core areas of concern were studied that focused on the current state of the payment system, required state of payment system and integration. The analysis findings and discussions provided insight into the standards and levels of
integration required by the Public Service of Namibia. The study of the current and required state of payments on EPFSM indicated that there was a need to link the payments on various modules to a level of compliance within the Public Service Treasury Instructions.

7.4 Future Work

Although the results presented demonstrated the effectiveness of the integrated EPFSM, it could further be extended to cover the population of regional offices and other divisions within the NPS. The study conducted primarily focused on the evaluation of old FSM with the aim of implementing an integrated module that improved and enhanced service delivery. This could be extended in the future to other Divisions such as Inland Revenue, Customs and Excise Division. Also, the study could for example look at integrating Tax live and Asycuda payment systems of regional offices and payment processes within the Public Service. The study narrowly focused on the Public Service of Namibia; this could be extended to the local and regional Government levels. Such a study could focus on integration of central, regional and local Governments within Namibia.

7.5 Recommendations

In as much as the study was highly instrumental to the integration and enhancements of service delivery, however, it did not explore completely all areas of the old FSM. It was therefore suggested that further investigations be carried out in similar or different contexts. The areas suggested for further inquiry were as follows:
It was suggested that further studies be done, to determine how accounting principles were significantly related to effective service delivery and impact on overall performance of reconciliation.

- Sample for the study were drawn from the O/M/As so it was recommended that a similar study be done in state owned enterprises (SOE) to determine the service delivery on the performance of payment process in Windhoek only. That could help clarify the differences between public and private financial services.

- The study also recommended that performance management systems should be introduced as a matter of priority and O/M/As should improve systems, rules and procedures to facilitate effective performance.

REFERENCES


Namibia


APPENDIX A: RESEARCH QUESTIONNAIRE

Questionnaire


Purpose: To help collect data for the study.
All responses are anonymous and confidential

Section A: Namibian Public Service Employees

*Please tick where appropriate or write your responses in the spaces provided.*

1. Name of the employer

2. Gender: Male □ Female □

3. Highest Qualification

4. Duration at current position

5. Position: IT □ Accountant □ Senior Accountant □

6. Subdivision

7. Are there challenges identified with the current Financial Service Modules (FSM)?
   Yes □ No □

8. If Yes, do you think these challenges in question 7 are attributed to:
   - Staff □
   - Service provider □
   - Processes and systems □

9. Do you think the FSM is reliable?
   Yes □ No □

10. If NO, why do you think the current Financial Service Modules are not reliable?

............................................................................................................................................
11. Are the Financial Service Modules methods of payment efficient?
   Yes ☐  No ☐

12. If No, do you think the inefficiencies in question 11 are attributed to;
   Manpower ☐  capacity ☐
   Experience ☐  lack of training ☐

13. Do you think there is a need to integrate various modules e.g. salaries, creditors, daily subsistence and travelling allowance?
   Yes ☐  No ☐

14. If yes, why do you think there is a need to integrate modules?
   ........................................................................................................................................

15. Does the current system support overall reconciliation of the NPS?
   Yes ☐  No ☐

16. If No, which one of these challenges occurs most frequently? (Choose more than one).
   - Wrong payments not reversed ☐
   - Manual payments not updated on the system ☐
   - Inadequate information ☐
   - Wrong entry of journals. ☐
## APPENDIX B: CHI SQUARE TEST RESULTS

### Table 4.1 (a) Duration at current position and challenges with the EPFSM.

<table>
<thead>
<tr>
<th>Duration at current position</th>
<th>Challenges with the FSM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>(0-2 Years)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>(3-5 Years)</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>(6-8 Years)</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>(9-11 Years)</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>&gt;11 Years</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>48</td>
</tr>
</tbody>
</table>

### 4.1 (b) Chi square tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>4.189*</td>
<td>5</td>
<td>.523</td>
</tr>
<tr>
<td>Continuity Correction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>4.630</td>
<td>5</td>
<td>.463</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i) 6 cells (50.0%) have expected count less than 5. The minimum expected count is .47.
### 4.2 (a) Training on EPFSM and respondent’s highest qualification.

<table>
<thead>
<tr>
<th>Highest qualification</th>
<th>Grade 12 with experience</th>
<th>National diploma</th>
<th>Bachelor’s degree</th>
<th>Postgraduate diploma</th>
<th>Master’s Degree</th>
<th>Professional qualifications</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training at current position</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Customer care</td>
<td>14</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>9</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Public sector accounting</td>
<td>13</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Payment process</td>
<td>8</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Problem solving</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Initiation skills</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>12</td>
<td>13</td>
<td>1</td>
<td>12</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>
4.2 (b) Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>50.253a</td>
<td>30</td>
<td>.012</td>
</tr>
<tr>
<td>Continuity Correction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>44.839</td>
<td>30</td>
<td>.040</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3 (a) The subdivision within the Finance Department and the O/M/A that the respondent work for.

<table>
<thead>
<tr>
<th>Count</th>
<th>Employer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ministry</td>
<td>Offices</td>
</tr>
<tr>
<td>subdivision employed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>2</td>
</tr>
<tr>
<td>salaries</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>D.S.A</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Creditors</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Suspense accounts</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Finance</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Finance and administration</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>3</td>
</tr>
</tbody>
</table>
4.3(b) Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>2.229a</td>
<td>6</td>
<td>.898</td>
</tr>
<tr>
<td>Continuity Correction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>3.145</td>
<td>6</td>
<td>.790</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i) 9 cells (64.3%) have expected count less than 5.
The minimum expected count is .03.

4.4 (a) Reasons for the inefficiencies and the attributes to challenges identified.

<table>
<thead>
<tr>
<th>Attribute to these challenges</th>
<th>Reasons for the Inefficiencies of the EPFSM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capacity</td>
<td>Experience</td>
</tr>
<tr>
<td>Processes and systems</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Service provider</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Service provider/processes and systems</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Staff</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff/processes and systems</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Staff/service provider</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>13</td>
</tr>
</tbody>
</table>
4.4 (b) Chi square tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>48.409</td>
<td>36</td>
<td>.081</td>
</tr>
<tr>
<td>Continuity Correction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>46.283</td>
<td>36</td>
<td>.117</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i). 44 cells (89.8%) have expected count less than 5. The minimum expected count is .03.
4.5(a) Challenges identified and accounting/reconciliation skills.

<table>
<thead>
<tr>
<th>Challenges that occur most frequently</th>
<th>Journal entry</th>
<th>Experience in financial accounting</th>
<th>Basic reconciliation</th>
<th>Payment processes</th>
<th>Processing of Journals</th>
<th>Public sector accounting</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual payments not updated on the system/Wrong entry of journals</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wrong payments not reversed</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Wrong payments not reversed/Inadequate information</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Wrong payments not reversed/Manual payments not updated on the system/Inadequate information</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Wrong payments not reversed/Manual payments not updated on the system/Wrong entry of journals</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
<td><strong>13</strong></td>
<td><strong>8</strong></td>
<td><strong>4</strong></td>
<td><strong>17</strong></td>
<td><strong>11</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>
4.5(b) Chi square tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>30.016*</td>
<td>30</td>
<td>.465</td>
</tr>
<tr>
<td>Continuity Correction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>33.484</td>
<td>30</td>
<td>.302</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i) 36 cells (85.7%) have expected count less than 5. The minimum expected count is 0.07.