YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF MANAGEMENT STUDIES
MBA PROGRAMME

THE EFFECT OF INFORMATION SYSTEM ON USER SATISFACTION AND NET BENEFITS AT YANGON ELECTRICITY SUPPLY CORPORATION

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EMBA II-40
EMBA 19th BATCH

MAY, 2024

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ACADEMIC YEAR (2022-2024)

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"This thesis is submitted to the Board of Examiners in partial fulfillment of the requirements for the degree of Master of Business Administration (MBA)".

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ACCEPTANCE

This is to certify that the thesis prepared entitled **"The Effect of Information System on User Satisfaction and Net Benefits at Yangon Electricity Supply Corporation"** has been accepted by the Examination Board for awarding Master of Business Administration (MBA) degree.

Board of Examiners

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MAY, 2024

ABSTRACT

The objectives of this study are to analyze the effect of information system on user satisfaction and to analyze the effect of user satisfaction on net benefits at Yangon Electricity Supply Corporation. The sample size of the study is 133 employees calculated by using Yamane's method from 200 employees at YESC who conduct meter reading, billing, and accounting. Simple random sampling method is used to select 133 employees among 200 employees. Questionaire survey method are used to collect the primary data. Both descriptive statistics and linear regression analyses are used to analyze the collected data. The analysis of employee perception on information quality of the AMI system at YESC shows that employees agreed that the system provided accurate, understandable, and report effectiveness, contributing to their satisfaction. They strongly agreed that system quality is effectiveness and flexible enhancing user satisfaction. In service quality, employees strongly agreed that the reliability and empathy in delivering services, enhancing user satisfaction. In the analysis of perception on user satisfaction, employees agreed that the system's functionality, ease of use, and impact on work processes. With regard to net benefits from using the AMI system at YESC, employees strongly agreed that the benefits included easy access to power distribution, financial savings, reduced power losses and customer complaints, and preventive measures against financial abuse. When the effects of information quality on user satisfaction was analyzed, accuracy and report effectiveness have positive significant effect on user satisfaction. More over system effectiveness, and system flexibility have positive significant effect on user satisfaction. Service reliability and service empathy also positively influenced user satisfaction. User satisfaction was found to be a strong predictor of net benefits, with a significant positive relationship indicating that satisfied users contribute to organizational benefits.

ACKNOWLEDGEMENTS

I would like to extend my heartfelt gratitude to Dr. Tin Tin Htwe, the Rector of Yangon University of Economics, for granting me permission to choose my research topic as part of my Master of Business Administration degree requirements.

I am extremely grateful to my supervisor, Professor Dr. Thin Nwe Oo, who is also the Programme Director and Head of the Department of Management Studies at Yangon University of Economics, for her invaluable teaching, guidance, support, mentorship, and motivation during the writing of my dissertation.

I would like to express my heartfelt appreciation to Dr. Hla Hla Mon, Dr. Than Thu Zar, Dr. Khin Thet Htwe and Dr. Myint Myint May, who are professors in the Department of Management Studies at Yangon University of Economics, for their support in assisting me with the preparation of this study.

I am especially thanks to Associate Professors Dr. Kay Thi Soe and Dr. May Win Kyaw, as well as the teachers of the Department of Management Studies at Yangon University of Economics. Their invaluable lectures and support were instrumental in guiding, inspiring, and providing suggestions for me to complete this study.

I would like to express my gratitude to the respondents from Yangon Electricity Supply Corporation for their invaluable assistance with my thesis paper. Their willingness to volunteer their time to respond to the research survey questions was greatly appreciated.

Zaw Min Oo

EMBA II – 40

EMBA 19th Batch

2022-2024

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LIST OF ABBREVIATIONS

AMI	- Advanced Metering Infrastructure
CEO	- Chief Executive Officer
EUCS	- End-User Computing Support
IT	- Information Technology
MOEP-1	- Ministry of Electric Power No.1
TAM	- Technology Acceptance Model
UIS	- User Information Satisfaction
YESC	- Yangon Electricity Supply Corporation
YESB	- Yangon Electricity Supply Board

CHAPTER 1

INTRODUCTION

In today's digital age, information systems play a crucial role in shaping the operations and performance of organizations across various industries. Information systems encompass a range of components, including hardware, software, data, procedures, and people, all working together to facilitate the processing and dissemination of information within an organization. The effective use of information systems can lead to improved decision-making, enhanced productivity, and overall organizational effectiveness. One sector where information systems have a significant impact is the utility industry, where organizations like the Yangon Electricity Supply Corporation (YESC) provide essential services to consumers.

An information system (IS) is a set of interrelated components that collect, store, and process data to support decision-making and other organizational activities (Laudon & Laudon, 2016). Information quality refers to the accuracy, understandability, and effectiveness of the information provided by the system. Accuracy refers to the extent to which information is correct and free from errors (Lee et al., 2011). Accurate information is essential for making informed decisions and ensuring the reliability of data used in organizational processes. Understandability is defined as the ease with which users can comprehend and interpret the information provided by the system (Nguyen et al., 2014). Report effectiveness refers to the ability of information systems to generate timely and relevant reports for decision-making purposes (Chen et al., 2014). High-quality information can lead to increased user satisfaction and improved organizational performance.

System quality refers to the effectiveness and flexibility of the system in meeting the needs of the users (O'Brien & Marakas, 2018). System effectiveness is one that is reliable, efficient, and user-friendly, while a flexible system is one that can easily adapt to changes in technology, business processes, and user requirements (O'Brien & Marakas, 2018). System effectiveness involves the ability of information systems to perform tasks efficiently and reliably, while system flexibility relates to the adaptability and scalability of systems to accommodate changing requirements (DeLone & McLean, 2003). System flexibility can be defined as the ability of a power system to adjust its operating

conditions in response to changes in the supply and demand of electricity, in order to maintain stability, reliability, and efficiency (Kabir & Ahammed, 2014). A well-designed and robust information system can enhance user satisfaction by providing a seamless user experience and enabling users to accomplish tasks effectively.

Service quality refers to the reliability and empathy of the services provided to users of the information system (Turban et al., 2020). Service quality in information systems pertains to factors such as service reliability and service empathy, which reflect the responsiveness and customer-oriented approach of IT service providers. Service reliability refers to the dependability and consistency of IT services in meeting user expectations, while service empathy relates to the level of personalized support and assistance provided to users (Parasuraman et al., 1988). High service quality can foster positive user experiences and drive satisfaction with information systems.

User satisfaction is a measure of the degree to which a user's expectations about a product or service are met, and is influenced by factors such as perceived quality, reliability, and ease of use (Parasuraman et al., 1988). User satisfaction reflects users' perceptions of the effectiveness, ease of use, and overall utility of information systems. Satisfied users are more likely to engage with information systems proactively, utilize system features optimally, and recommend systems to others (Bhattacherjee, 2001). User satisfaction is closely linked to net benefits, which encompass tangible and intangible gains derived from the use of information systems, such as cost savings, productivity improvements, and competitive advantages (DeLone & McLean, 2003).

According to the Information Systems Success Model, net benefit refers to the total benefits or advantages that an organization derives from its information system investments, such as increased productivity, improved decision-making, and enhanced customer relationships (DeLone & McLean, 2003). This concept is important because it helps organizations evaluate the effectiveness of their information systems and make informed decisions about future investments. Net benefit is often measured by subtracting the costs of implementing and maintaining an information system from its expected benefits (Kumar et al., 2018).

The utility industry is characterized by a high degree of reliance on information systems to manage and deliver services efficiently. Information systems are instrumental in handling billing operations, monitoring power distribution, maintaining customer

records, and ensuring regulatory compliance. The quality and effectiveness of information systems make user satisfaction and net benefits for utility corporation. Therefore, this study aims to study the effectiveness of information system at YESC to get user satisfaction and net benefits for the organization.

1.1 Rationale of the Study

Net benefit is critical to the represent the overall gains and advantages accrued by the organization from its information system investments. User satisfaction can derive from net benefit by using effective information system. At YESC, user satisfaction is essential for fostering user engagement, loyalty, and advocacy. By studying the effect of information system on user satisfaction, there will be the areas for improvement and targeted interventions to enhance user experiences and outcomes for the YESC. The success of any organization, including the Yangon Electric Supply Corporation, largely depends on the quality of its information systems. Information systems play a crucial role in enabling organizations to efficiently and effectively manage their operations, make informed decisions, and stay competitive in today's rapidly changing business environment. Information systems with information quality, system quality, and service quality, are particularly important as they directly impact the overall performance and productivity of the organization.

One of the key factors that significantly impact the quality of information systems is information quality. Accurate and timely information is essential for organizations to make informed decisions and achieve their strategic objectives. Understandability is crucial for users to interpret and utilize data effectively. Poor information quality can lead to misinformation, errors, and inefficiencies in decision-making processes, which can ultimately affect the overall performance and profitability of the organization (Laudon & Laudon, 2016). Report effectiveness is the main product of any information systems, (Gorla et al., 2009) it is easy to understand that these products should have the basic characteristics of timeliness and reliability that effect performance. Low-quality data and reporting quality will affect negatively customers decision making and make it challenging to achieve strategic objectives and product goals (Law & Ngai, 2007)

Another factor that plays a critical role in the quality of information systems is system quality. A system with poor quality can lead to system downtime, data loss, and

user frustration, all of which can have a negative impact on the organization's operations and reputation (O'Brien & Marakas, 2018). Moreover, poor system quality and strategic can also lead to decreased employee productivity and increased maintenance costs, ultimately affecting the organization's bottom line. Furthermore, high-quality systems can provide a competitive advantage, enabling organizations to respond quickly to changing market conditions and customer needs (Kumar & Mahapatra, 2016).

Service quality is another important factor that organizations must consider when evaluating the quality of their information systems. Reliable services are essential for ensuring that users have access to the information they need when they need it, while empathy in service delivery is important for building positive relationships with users and ensuring their satisfaction with the system. Poor service quality can lead to user dissatisfaction, decreased productivity, and a negative perception of the organization (Turban et al., 2020).

Information quality, system quality, and service quality, are critically important for the success of organizations like the Yangon Electric Supply Corporation. These directly impact the overall performance, productivity, and competitiveness of the organization by ensuring that accurate and timely information is provided, that the system is effective and flexible in meeting user needs, and that high-quality services are delivered to users.

By assessing user satisfaction and net benefits at YESC, the study can identify areas of strength and weakness, and recommend strategies for maximizing organizational performance and value creation.

1.2 Objectives of the Study

The main objectives of the study are as follows:

1 To analyze the effect of information system on user satisfaction at Yangon Electricity Supply Corporation

2 To analyze the effect of user satisfaction on net benefits at Yangon Electricity Supply Corporation

1.3 Scope and Method of the Study

This study examines the effect of information systems on user satisfaction and net benefits within the Finance Department of four townships in the East District of the Yangon Electricity Supply Corporation. This study only focuses on 200 employees in Finance Department who are the main users of the AMI system. They are responsible for meter reading, billing, and accounting processes through the utilization of information systems. The sample size of 133 employees is determined using Yamane's method (1974) and selected through simple random sampling. Primary data is collected with standard questionnaires employing a 5 Point-Likert scale by using questionnaire survey method. Both descriptive and linear regression methods are used to analyze the collected data. Additionally, secondary data are sourced from various literature sources, previous studies, the corporation's website, and internal records and documents of the finance department at YESC.

1.4 Organization of the Study

The study is structured into five chapters. Chapter 1 is introduction, which consists of rationale of the study, objectives, scope and method of the study and organization of the study. Chapter 2 is theoretical background of the study which consists of information system, information quality, system quality, service quality, user satisfaction, net benefits, previous studies and conceptual framework. Chapter 3 focuses on the profile and information system used in Yangon Electricity Supply Corporation which consists of profile of Yangon Electricity Supply Corporation, operating function, organizational structure, and information system used at Yangon Electricity Supply Corporation. Chapter 4 is about the analysis on effect of information system on user satisfaction and net benefits at Yangon Electricity Supply Corporation. Chapter 5 includes findings and discussions, suggestions and recommendations, and needs for further study.

CHAPTER 2

LITERATURE REVIEW

This chapter presents information system, user satisfaction, net benefits, financial performance, previous studies, and conceptual framework of the study.

2.1 Information System

According to Weber (1987), the concept of an Information System (IS) can be viewed from two perspectives. From a functional standpoint, an information system is a technology-driven platform used for recording, storing, and sharing linguistic expressions while also supporting inference making. On the other hand, from a structural perspective, an information system comprises a combination of individuals, processes, data, models, and technology that collectively serve organizational purposes. This dual perspective highlights how information system functions as a socio-technical system, where humans, behavioral rules, and technical artifacts interact to achieve specific goals.

An information system can also be technically defined as a system of interconnected components that gather, process, store, and distribute information to facilitate decision-making and control within an organization (DeLone and McLean, 1992). In addition to aiding in decision-making, coordination, and control, information system helps managers and employees analyze problems, visualize complex concepts, and develop innovative products or services. The process of creating information within an information system involves three key activities: input, processing, and output. Input involves collecting raw data, processing transforms the raw data into useful information, and output delivers the processed information to users or activities. Feedback from users is also essential in ensuring the accuracy and relevance of the information produced by the information system.

An information system encompasses a range of elements such as people, technical devices, communication channels, and data storage systems that work together to gather, store, use, and distribute information within an organization. When modeling an information system, it is crucial to consider various aspects such as management practices, implementation strategies, and impact on organization (Weber, 1987).

According to there are 10 factors contributing to IS success. Service quality, system quality, information quality, user satisfaction and system use (perceived usefulness) were used as they are more relatable to information system usage, considering the focus of the system are mainly for learning and data storage/processing. They are service quality, system quality, information quality, management support, perceived ease of use, perceived usefulness, training, user satisfaction, user involvement, some behavior intention. The four factors – service quality, system quality, information quality and user satisfaction out of ten key factors are presented in the following section.

2.1.1 Information Quality

There has been a notable increase in the research activities focused on information quality, driven by the demands of organizations seeking to assess and enhance the quality of their information resources. The research of Delone and McLean (2004), research indicated the significance of pertinent, timely, and accurate information, as highlighted in their exploration of the factors influencing the success of information systems. The concept of information quality, as defined by DeLone and McLean (1992), pertained to the quality of outcomes generated by information systems, such as reports or online displays.

(a) Accuracy

Information quality is one of the aspects of any organization's success, as it impacts decision-making processes, user satisfaction, and efficiency. Accuracy, one of the key dimensions of information quality, ensures that the information provided is consistent with real-world entities, values, or computation results (Nelson et al., 2005). Inaccurate information can lead to misguided decisions, resulting in negative consequences for the organization. Therefore, it is essential for organizations to prioritize accuracy when assessing the quality of their information.

(b) Understandability

Understandability is another important aspect of information quality that focuses on how easily information can be comprehended by users. Clear and concise information

enables users to interpret and utilize data effectively, leading to improved decision-making processes. Understanding the context and implications of the information provided is vital for making informed decisions (Wong et. al., 2009).

(c) Report Effectiveness

Report effectiveness is a measure of how well the information is communicated to users through reports or presentations. It encompasses the relevance, timeliness, and completeness of the information presented. Effective reports convey the necessary information in a clear and concise manner, enabling users to grasp the key insights and make informed decisions based on the data provided. Ensuring that reports are accurate, timely, and complete is essential for enhancing organizational efficiency and supporting decision-making processes (Delone & McLean, 2003).

Information systems processing in organizations shares similarities with production processing in manufacturing. Delays and inaccuracies in information delivery can lead to dissatisfaction among users and loss of clients. Poor data quality can impact the overall organizational efficiency and cost control, highlighting the importance of maintaining high-quality information. Organizations must prioritize accuracy, understandability, and report effectiveness to maximize the value of their information assets and ensure optimal decision-making processes (Gorla et. al., 2009).

2.1.2 System Quality

System quality is evaluating the effectiveness of a divide system. System quality is identified by assessing various factors such as the presence of errors, user interface consistency, ease of use, quality of documentation, and maintenance of the program code (Delone, 2002). They argued that high-quality systems should be perceived as easier to use and result in increased usefulness and use. Delone (2004) expanded on this concept by introducing additional dimensions such as reliability, functionality, data quality, flexibility, and integration to measure system quality. Sedera and Gable (2004) developed a comprehensive instrument with nine attributes to measure system quality, including ease of learning, system accuracy, integration, and customization. These studies emphasize the importance of system quality in ensuring that the system is user-friendly,

reliable, and well-integrated, leading to increased user satisfaction and organizational impact.

(a) System Effectiveness

Wixom and Watson (2001) highlighted the positive association between system quality in data warehousing and perceived benefits, leading to increased internal organizational efficiency. Bradley et al. (2006) demonstrated that system quality is linked to organizational impact at the operational level. Salmela (1997) emphasized the importance of system attributes such as availability of documentation and ease of use in creating satisfaction value for a firm through information systems. User-friendly and well-integrated systems with fast response times can lead to high organizational impact and user satisfaction, ultimately contributing to the overall success of the organization. The importance of user-friendly technology interfaces in presenting information effectively to users. They emphasized the role of flexible and well-integrated systems in providing relevant and up-to-date information, contributing to the high quality of information outputs. Balancing flexibility and efficiency in manufacturing systems is crucial for achieving optimal performance and meeting customer needs. The integration of flexibility and technology can provide a competitive advantage to organizations, with a focus on adapting to changing environments while maintaining efficiency. Achieving a balance between flexibility and efficiency is essential for the success of manufacturing systems in meeting customer demands and achieving long-term benefits (Gorla et al., 2009).

(b) System Flexibility

System flexibility is another important factor to consider when evaluating the effectiveness of a divide system. System flexibility refers to the ability of a system to adapt to changes in the environment, requirements, or technology without significant disruption or reconfiguration. A flexible system can accommodate new features, functionalities, or processes, allowing organizations to respond quickly to changing market conditions and customer needs. Flexibility in knowledge management systems can enable organizations to efficiently capture, store, retrieve, and share knowledge, leading to increased productivity and innovation. System flexibility can also contribute to system

effectiveness by allowing organizations to quickly respond to market demands, competitive pressures, or regulatory changes. Flexible systems can adapt to new requirements, technologies, or processes, enabling organizations to maintain a competitive edge and drive innovation (Kulkarni et al., 2006).

2.1.3 Service Quality

Grover et al. (1996) describes service quality as the discrepancy between a service receiver's expectations and perceptions of the actual service received. The importance of service quality in the field of Information Systems (IS) has grown alongside the evolution of the IS unit within organizations due to advancements in personal computing. Originally, IS departments were seen as system developers and operators, with vague definitions of IS services. However, the recognition of IS departments as service providers expanded with the introduction of personal computers, enabling more interaction with users (Pitt et al., 1995). To meet the increasing demands of data warehouse users, a variety of services such as installation assistance and technical help counters were introduced. Proper measurement of service quality should be included as part of the components of IS success (Delone, 2003).

(a) Service Reliability

Service reliability is a fundamental aspect of service quality that directly impacts customer satisfaction and loyalty (Boulding et al., 1993). According to Grover et al. (1996) that service reliability is essential for building trust and credibility with customers. When service providers consistently deliver on their promises and meet customer expectations, it fosters a sense of reliability and dependability. Customers are more likely to trust and continue doing business with providers who demonstrate a high level of reliability in their services. Service reliability is positively associated with customer satisfaction and loyalty (Parasuraman et al., 1988). Zeithaml et al. (1996) found that customers place a high value on service reliability when evaluating service quality. When customers can rely on consistent and accurate service delivery, it builds confidence in the service provider and enhances the overall service experience. In contrast, unreliable service delivery can lead to customer dissatisfaction and negative word-of-mouth,

ultimately impacting the provider's reputation and business performance (Yavas et al., 2004).

(b) Service Empathy

Service empathy, on the other hand, focuses on the human element of service delivery and involves understanding and addressing customer needs with care and compassion (Parasuraman et al., 1988). Rashid and Jusoff (2009) emphasize the importance of service empathy in building strong relationships with customers and creating memorable service experiences. Service providers who demonstrate empathy towards customers are more likely to build trust, rapport, and loyalty. Service empathy positively influences customer perceptions of service quality and satisfaction (Cronin et al., 2000). Auka (2012) found that customers value empathy in service interactions and appreciate providers who demonstrate genuine concern and understanding.

2.2 User Satisfaction

User satisfaction is a topic that has sparked numerous discussions as organizations strive to evaluate it. Depending on the situation, user satisfaction can be tied to various goods and services, making it a subjective judgment greatly influenced by user expectations. In some cases, satisfaction is related to interactions with the organization and personal outcomes. Researchers have differing views on the concept of satisfaction, with some preferring to focus on the overall user experience rather than the vague notion of satisfaction (Wreden, 2004). In order to better understand user perceptions, experts indicate that organizations concentrate on a goal more closely aligned with user equity.

In evaluating the success of an information system, five key components must be considered: content, format, accuracy, ease of use, and timeliness. The advent of Internet technology has brought about significant changes in the field of information technology, with the widespread adoption of web-based systems leading to a surge in Internet hosts and websites (Petruzzellis et al., 2006). This has allowed information to be disseminated not only locally but also across state and national boundaries.

In the public sector, user satisfaction is often linked to personal interactions with service providers and the outcomes experienced by users. According to Meinema (2005),

user satisfaction is a highly individualized assessment shaped by information gathering, expectations, direct interactions, and other influencing factors. Therefore, it is important to involve users in the design of approaches aimed at measuring and improving satisfaction levels.

The End-User Computing Support (EUCS) instrument and User Information Satisfaction (UIS) instrument are two of the most popular tools for measuring user satisfaction (Doll et al., 1994). In a study conducted by Seddon and Yip (1992), it was determined that EUCS outperformed UIS when applied to accounting information systems. Both instruments cover aspects such as system quality, information quality, and service quality, rather than solely focusing on overall user satisfaction. Interestingly, some researchers have attempted to deconstruct these instruments by separating the quality dimensions and either using a single item to evaluate overall satisfaction or utilizing a semantic differential scale (Seddon & Yip, 1992). Alternatively, some have adopted scales that measure attitude in a way that aligns with the concept of user satisfaction (Coombs et al., 2001).

Different perspectives exist on the most effective methods for gauging user satisfaction with information systems. As evidenced by a study, the EUCS tool may perform better than the UIS instrument in certain contexts, but ultimately, both instruments encompass dimensions beyond overall satisfaction. Some scholars have indicated simplifying the measurement process by using a single item or scale that focuses on the user's attitude towards a system. This approach can offer a more concise and straightforward way to assess user satisfaction (Rai et al., 2002). While instruments such as EUCS and UIS offer comprehensive assessments that include various quality dimensions, some researchers advocate for more simplified approaches to capture user satisfaction accurately.

2.3 Net Benefits

There exists an approach to assess the net benefits both at an individual and organizational level. At the individual level, the most commonly used measure is perceived usefulness or job impact. However, some issues have been reported with the perceived usefulness items (Adams et al., 1992). It was revealed that the item 'works more quickly' in the usefulness factor needed to be eliminated. Furthermore, it was

found that ‘job performance’ and ‘effectiveness’ did not align well with perceived usefulness. Consequently, these two items were utilized to create a separate construct called effectiveness. The introduction of a three-factor construct comprising perceived ease of use, perceived usefulness, and effectiveness, yielded a considerably better fit compared to the original TAM model (Segars & Grover, 1993). To further elaborate on the concept of impact measurement, an instrument that gauges various dimensions of impact such as task productivity, task innovation, customer satisfaction, and management control, in addition to their EUCS instrument was devised (Torkzadeh & Doll, 1999).

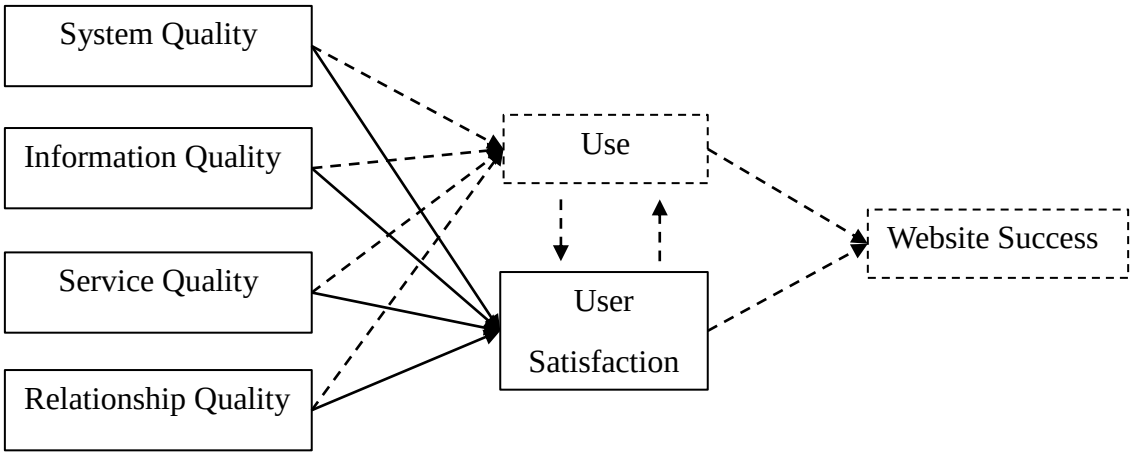
In the examination of ways to evaluate net benefits at both individual and organizational levels, perceived usefulness or job impact is commonly employed at the individual level. Utilized as a measure, these items have been found to occasionally encounter challenges (Adams et al., 1992). Segars and Grover (1993) studied using confirmatory factor analysis and discerned that the item ‘works more quickly’ within the construct of usefulness required elimination. Additionally, a misalignment was observed between ‘job performance’ and ‘effectiveness’ with perceived usefulness. These discrepancies prompted the establishment of a distinct construct known as effectiveness. The incorporation of a three-factor construct comprising perceived ease of use, perceived usefulness, and effectiveness resulted in a notably improved fit as opposed to the inadequacy of the original TAM model.

Torkzadeh and Doll (1999) devised an instrument to gauge diverse factors of impact such as task productivity, task innovation, customer satisfaction, and management control, augmenting their EUCS instrument. These refers to the extent to which an individual believes that a particular technology or innovation will improve their job performance, increase their productivity, or enhance their overall work experience (Davis, 1989). At the organizational level, the net benefits of a technology or innovation can be measured by its impact on the organization’s performance. This can include metrics such as increased productivity, improved customer satisfaction, and enhanced reputation (Kaplan & Norton, 2001). Torkzadeh and Doll (1999) developed a tool to measure how information technology (IT) impacts organizations. Profitability is typically the go-to measure at the organizational level, but using multiple measures can complicate interpreting the relationship between success constructs and net benefits.

2.4 Previous Studies

In this section, related studies about the effect of information system are discussed. The first previous study is conducted by Wu (2007). The title of research was "Extending the DeLone and McLean Information System Success Model for E-commerce Websites Success". The main purpose was to provide a comprehensive framework for e-commerce websites evaluation by extending the DeLone and McLean Information System Success Model. A new dimension "relationship quality" was proposed to the model. The study also tried to identify characteristics of e-commerce websites that impact the user's satisfaction. A comprehensive survey questionnaire was disseminated to web users, consisting of a total of 295 responses. Figure (2.1) shows the conceptual framework of Wu (2007).

Figure (2.1) Conceptual Framework of Wu



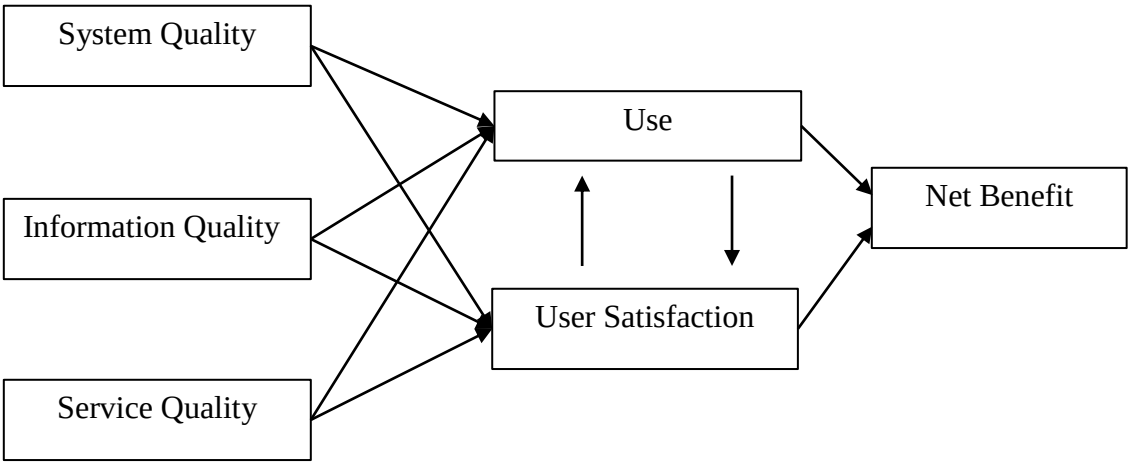
Source: Wu (2007)

The result indicated that system quality, information quality, service quality, and relationship quality affected user satisfaction, and among them. Relationship quality can be clearly defined. This indicated that there was a need to extend the model. The study also yielded a list of important characteristics that impact user's satisfaction.

The second previous study of "Influence of System Quality, Information Quality, Service Quality on User Acceptance and Satisfaction and its Impact on Net Benefits" was conducted by Rini et al., 2019. The purpose was to examine the influence of system quality, information quality, and service quality, of the lecturers at Malang State University. This study investigated the effect on user satisfaction and its impact on net benefits of users of UM information system expenses. System quality was measured by

speed, effectiveness, flexibility, tangibles, responsiveness, and download time. Information quality was measured by completeness, accuracy, timeliness, report effectiveness, understandability, usefulness, and up to date information. Service quality was measured by reliability, assurance, empathy, and following-up service. Respondents were 93 lecturers who were actively teaching. The questionnaire was distributed online. Figure (2.2) shows the conceptual framework of Rini et al. (2019).

Figure (2.2) Conceptual Framework of Rini et al.



Source: Rini et al. (2019)

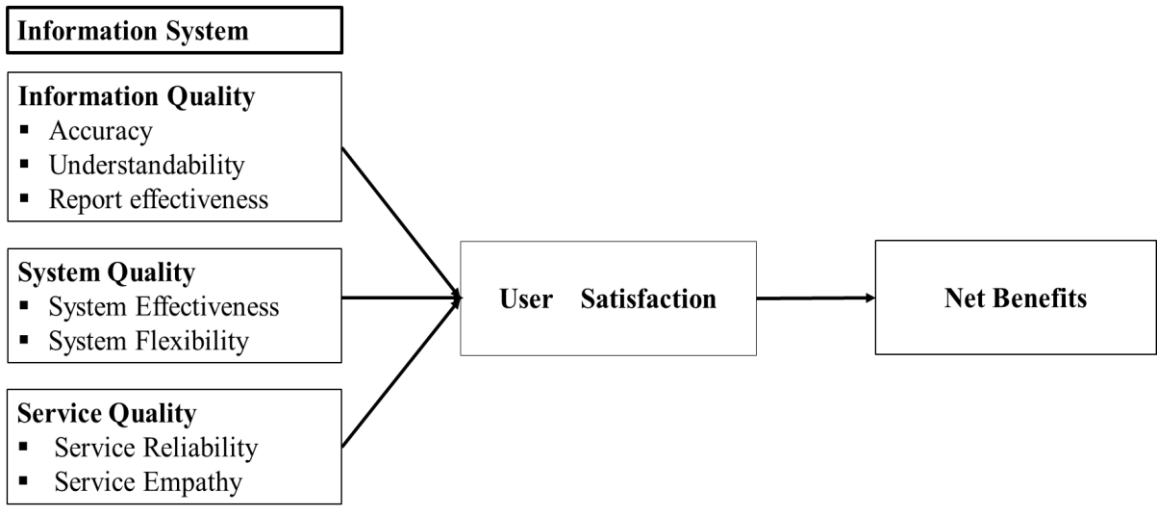
The results found that there was a positive but not significant effect between system quality, information quality and service quality on the use of the BKD system. However, there was a positive and significant influence between system quality, information quality, and service quality on the BKD system user satisfaction, between the uses of the BKD system on net benefits, and between the satisfaction of the BKD system users on net benefits.

2.5 Conceptual Framework of the Study

The conceptual framework is developed based on previous studies to analyze the effect of information system on user satisfaction and net benefits at Yangon Electricity Supply Corporation. The Figure (2.3) presents the conceptual framework of this study. In the first part of the conceptual framework, the independent variables are information system which contains accuracy, understandability, report effectiveness, system quality which includes system effectiveness and system flexibility, service quality which consists of service reliability and service empathy and dependent variables is user satisfaction.

The second part of the conceptual framework, the independent variable is user satisfaction and dependent variable is net benefits.

Figure (2.3) Conceptual Framework of the Study



Source: Own Compilation (2024)

Information quality is used to measure the desired characteristics of the system consisting of accuracy, understandability, and report effectiveness. System quality is used to measure the desired characteristics of the system consisting of system effectiveness, and flexibility. Service quality is used to measure the nature of reliability and empathy that are developed from the paper of Rini et al. (2019).

CHAPTER 3

PROFILE OF YANGON ELECTRICITY SUPPLY CORPORATION AND INFORMATION SYSTEM

In this chapter, profile of Yangon Electricity Supply Corporation (YESC), operating functions of YESC, organizational chart of YESC, information system used at YESC are described.

3.1 Profile of Yangon Electricity Supply Corporation

Yangon Electricity Supply Corporation, also known as YESC, is an important organization for development of the electric power sector in Yangon Region. In early 2000s, it was first established as the Yangon City Electricity Supply Board. Over the years, the organization has encountered several transformations and reorganizations to become what it is today. By providing reliable and efficient power to both domestic and commercial consumers, YESC has set objectives and operating functions to ensure the successful distribution of electric power in the region.

The establishment of the Yangon District Electric Head Office, managed by the Myanmar Electric Power Enterprise under the Ministry of Electric Power, commenced the journey of YESC. On 1st April 2006, the office was reorganized as the Yangon City Electricity Supply Board, signaling a new era for electric power management in the region.

The Ministry of Electric Power was reorganized, splitting into two separate ministries – Ministry of Electric Power No.1 (MOEP-1) and Ministry of Electric Power No.2 (MOEP-2) on 15th May 2006. MOEP-2 was constituted with one department, two enterprises, and one board, including the newly established Yangon City Electricity Supply Board.

The two ministries were merged back into the Ministry of Electric Power, forming three departments, three enterprises, and one board called the Yangon Electricity Supply Board (YESB) on 5th September 2012. This merger aimed to improve the management of electric power resources and infrastructure in the region.

The corporatization of YESB into YESC was initiated on 1st April 2015, following an official order from the president's office on 29th January 2015. The Ministry of Electric Power authorized the corporatization of YESC in accordance with the 2014 Union Act no. 44, Electricity Law, Article 8, Section (c), and Article 72, Section (b), as well as with the approval of the president's office and Cabinet Meeting/Union Government meeting on 13th August 2015. To operate with a separate budget from the state's budget, YESC was formally established on 1st July 2015 under the Ministry of Electric Power's order no. 126/2015. Since then, YESC has operated more efficiently and effectively in managing electric power distribution in the Yangon Region.

3.2 Operating Functions of YESC

The primary objectives of YESC are to oversee all functions related to electricity in accordance with government policies, provide effective and reliable power to consumers, invest in electricity infrastructures, and transition from a government-owned organization to a public-owned corporation successfully. Furthermore, YESC aims to operate as a prosperous business, adhere to market economic principles, and carry out its tasks as a sophisticated commercial entity.

To achieve these objectives, YESC performs several operating functions, including distributing electric power through various voltage distribution lines, planning for system development and improvement, maintaining the distribution system's infrastructure, implementing projects, reducing electricity losses, and collecting electricity bills accurately. The organization makes sure compliance with the Electricity Law and rules and regulations governing the electric power sector in Myanmar.

One of the key operating functions of YESC is to fulfill the annual load increase in the Yangon Region by monitoring and planning the system development and improvement. This includes upgrading high-capacity cables and lines, insulators, and transformers, and conducting operation and maintenance tasks for low voltage lines and substations. By implementing short-term and long-term project plans, YESC provides sufficient and reliable power to consumers and promotes private sector investment in electricity generation and distribution.

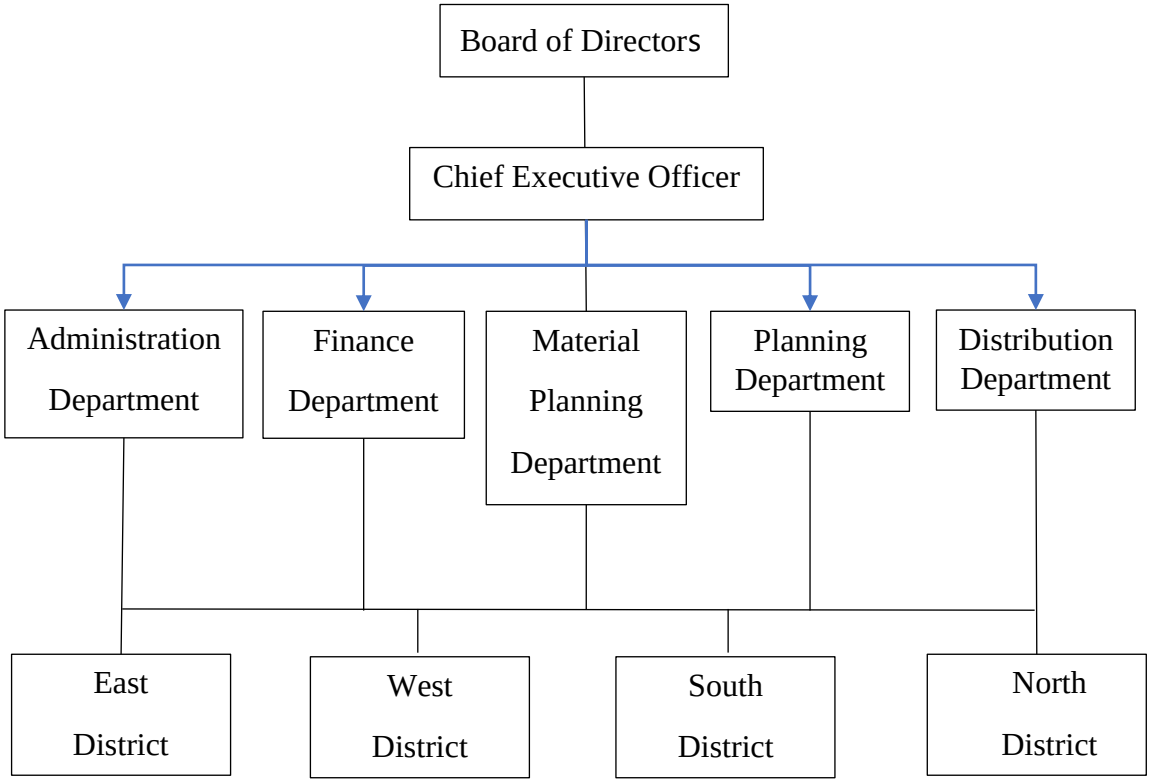
YESC currently operates in 58 townships in the Yangon Region, with franchise companies holding operations in East Dagon townships. The organization focuses on

expanding its services and enhancing the quality and reliability of electric power supply in the region to meet the growing demand from domestic and commercial consumers. As the demand for electric power continues to rise in the Yangon Region, YESC remains committed to expanding its services, reducing electricity losses, and ensuring compliance with regulatory requirements. By working to become a successful public-owned corporation and operating as a commercial entity, YESC is well-positioned to develop the electric power sector in Myanmar.

3.3 Organizational Chart of Yangon Electricity Supply Corporation (YESC)

Yangon Electricity Supply Corporation (YESC) is organized to operate efficiently and effectively in providing electricity to consumers in Yangon Region. The board of directors provide strategic direction for the organization. Under the board of directors there is Chief Executive Officer (CEO), who is responsible for management and decision-making. The four departments which have to report to the CEO are four departments - administration department, finance department, material planning department, planning department, and distribution department. Each department is important in the functioning of YESC and works collaboratively to achieve the organizational goals. The organization chart of YESC is shown in Figure (3.1).

Figure (3.1) Organizational Chart of Yangon Electricity Supply Corporation



Source: YESC (2024)

The administration department is responsible for managing staff affairs, human resource development, and supervising the land and building premises of YESC organization. They also handle tasks related to staff for international travelling, tender processes, and public relations. The department makes sure that staff comply with laws and policies and provides guidance on legal matters and documentation.

The finance department formulates the annual budget, records daily budget accounts, and develops financial reports and bank statements. They monitor income and expenditures, assess ways to increase corporation income, and managing the compensation of staff and the board of directors. The department also ensures that financial statements comply with international accounting standards to be in line with financial rules and procedures as expenditures.

The material planning department monitors material purchasing, storage, and distribution to ensure compliance with regulations. They operate the procurement process and arrange for the return of materials and equipment shipped overseas after project

completion. The department handles the repair of damaged electrical equipment and manages the entire procurement procedure to prevent waste.

The planning department conducts recording and analyzing data related to electrical infrastructure, developing project proposals, and assessing demand forecasting. They work to expand the electrical infrastructure, acquire loans and grants, and ensure quality control over project implementation. The department also provides skill improvement training for engineering staff and analyzes electrical risks to prevent accidents and ensure safety.

The distribution department focuses on negotiating sufficient electrical power supply with transmission system operators, monitoring substations and distribution lines, and testing existing infrastructure. They work to reduce electrical losses, acquire alternate power supplies under exceptional conditions, and establish a monitoring system/load control center. The department also develops plans to recover electrical power in the event of unexpected power breakdowns.

YESC performs a range of functions in Yangon Region to provide the reliable and continuous supply of electricity to consumers. These functions include developing short-term and long-term project plans to meet the electricity needs of the region, developing the electric power sector in accordance with international standards, planning for sufficient electricity supply to consumers, implementing technical and non-technical losses reduction plans, distributing continuous and reliable power to consumers, monitoring the collection of electricity bills to ensure accuracy and completeness, inspecting project implementation by assigned technicians and monitoring electricity consumption, promoting the capacity and competency of YESC staff through training and development, cooperating with government departments, national and international organizations, and stakeholders to promote YESC's tasks, and complying with the provisions of the Electricity Law and related rules and regulations.

3.4 Information System Used at YESC

The Yangon Electricity Supply Corporation (YESC) has undertaken important advancements in its information systems over the past decade, particularly in the areas of metering and billing. In 2012, Ever Meter Group (EMG) successfully manufactured Ever brand digital meters locally, which paved the way for improvements in electricity

distribution operations. These meters were not only used by YESC Yangon and MESC Mandalay, but also distributed to private power distribution operators and franchise companies.

One of the major milestones in YESC's information system journey was the implementation of an automatic billing system in 2015. This system improved the bill preparation process in cities like Pyi and Shwetaung, eliminating the need for manual collection of money and ledger account maintenance. Through a contractual agreement with the electricity distribution industry, YESC was able to efficiently manage monthly statements from 1st January 2015, to 31st March 2019.

In 2017, YESC and EMG made history by launching Myanmar's first Advanced Metering Infrastructure (AMI) system in Dawpon Township. This technological advancement marked a step towards modernizing the electricity distribution network in the country. The benefits of AMI were further expanded in 2018 when a complete system was implemented in Pabetan Township, showing YESC's commitment to strengthen efficiency and accuracy in energy management.

In 2020, YESC's AMI system has been extended to multiple townships, including Dawpon, Pabetan, South Okkalapa, Kawthmuu, Thongwa, and Coco Island. With a total of 119,290 meters installed in these areas, the corporation has been able to monitor and manage power consumption more effectively. The automatic billing system has been extended to Eastern, Western, Southern, and Northern Districts in 24 townships, covering a total of 488,385 meters.

YESC is in the process of replacing traditional meters with digital ones in South Dagon Township, Botahtaung Township, and Pazundaung Township to complete the AMI system implementation for power and communication meters. The remaining townships will continue to benefit from the automatic billing system for ensuring efficient revenue collection and statement generation. By the end of December, YESC aims to have real-time monitoring of daily cash collection status from all townships directly from its headquarters.

3.4.1 Information Quality of AMI System

The previous system used by Yangon Electricity Supply Corporation (YESC) was based on manual meter reading and billing, which was prone to errors and inefficiencies.

The system relied on human personnel to read meters, which could lead to inaccuracies and fraud. The process was also time-consuming and labor-intensive, requiring manual effort and resources. In contrast, the Advanced Metering Infrastructure (AMI) system introduced by YESC is a real-time meter reading system that uses advanced technology to accurately record electricity consumption. The system uses Radio Frequency (RF Mesh) networking to transmit data, eliminating the need for human intervention and reducing the risk of errors.

The AMI system provides accurate and timely information on electricity consumption, allowing for efficient billing and accounting processes. The system also enables real-time monitoring of electricity usage, enabling YESC to identify and address any issues promptly. The accuracy of the system ensures that financial statements are auditable and that there is no possibility of temporary financial abuses.

The AMI system is designed with a user-friendly interface and Union font, making it easy to use and navigate. The system is designed to provide clear and concise information on electricity consumption, making it easy for customers to understand their usage patterns and make informed decisions about their energy consumption. The real-time data provided by the AMI system also enables customers to monitor their electricity usage in real-time, allowing them to adjust their consumption habits accordingly. The AMI system provides detailed reports on electricity consumption patterns, helping YESC to better understand customer behavior. This information can be used to improve customer services. The system also enables YESC to identify areas of high electricity consumption, allowing them to provide targeted advice to customers to reduce their energy usage.

The AMI system provides a wide range of reports that enable YESC to effectively manage its operations and make data-driven decisions. The system provides real-time data on electricity consumption, allowing YESC to monitor energy usage in real-time and respond promptly to any issues. The system also provides detailed reports on energy usage patterns, enabling YESC to identify trends and anomalies in energy consumption. The AMI system eliminates the need for stationery and printing costs, reducing the need for storage space for records. The system also reduces the risk of human error, as all transactions are automated and recorded electronically.

3.4.2 System Quality of AMI System

The AMI system also provides remote monitoring capabilities, allowing YESC to monitor electricity consumption remotely. The system is designed with security features to prevent unauthorized access and ensure data integrity. The system is also designed to be scalable, allowing it to accommodate a large number of meters and users. The AMI system reduces the need for physical maintenance visits, as it can be monitored remotely. The system also reduces the need for manual meter reading, as it can be read remotely making cost savings and improved efficiency.

The AMI system monitors real-time electricity consumption, enabling YESC to detect any anomalies or irregularities in the system quickly. This allows for prompt action to be taken to resolve issues before they escalate into major problems. The remote monitoring capabilities also enable YESC to identify areas of high energy consumption, allowing for targeted interventions to reduce energy waste. The AMI system also reduces the need for physical maintenance visits, as it can be monitored remotely. This reduces the time and resources required for maintenance, resulting in cost savings and improved efficiency. The system's ability to monitor electricity consumption remotely also reduces the need for manual meter reading, freeing up staff from this task and allowing them to focus on more critical issues.

The AMI system is scalable, allowing it to accommodate a large number of meters and users. YESC can easily add new meters and users to the system as needed, without having to upgrade or replace existing infrastructure. The AMI system also provides flexible pricing options for customers, allowing them to choose from different tariff plans that suit their needs. YESC offers different tariffs for residential, commercial, and industrial customers, or offer special tariffs for customers who use energy-efficient appliances. The system is flexible as YESC can respond quickly to changes in demand or supply, such as during peak usage periods or during maintenance shutdowns. The real-time monitoring capabilities allow YESC to adjust its supply accordingly, reducing the risk of power outages.

3.4.3 Service Quality of AMI System

The AMI system at YESC provides users with convenient and efficient services. The system allows users to pay their electricity bills using their mobile phones, reducing

waiting times at township electricity offices. This eliminates the need for users to physically visit the office, making it a more efficient and reliable option. The online services provided by the AMI system enable users to view their current electricity consumption unit online, allowing them to monitor their usage in real-time. This eliminates the need for manual meter reading, reducing errors and inaccuracies that may occur during manual readings. The AMI system has also improved the billing process, making it more efficient and reliable. With the ability to view their current electricity consumption online, users can accurately track their usage and make informed decisions about their energy consumption. This reduces disputes over billing and ensures that users receive accurate and timely bills. Furthermore, the system provides real-time monitoring of electricity consumption, allowing YESC to identify and address any issues promptly.

The ability to pay bills remotely using mobile phones is a convenient option for users who may have busy schedules or limited mobility. YESC understands the importance of user convenience and is willing to go above and beyond to provide services that meet their needs. The online services provided by the AMI system allow users to access information about their electricity consumption at any time and from any location. This flexibility shows that YESC is committed to providing services that are accessible and user-friendly. The AMI system has also shown empathy towards users by reducing waiting times at township electricity offices. With the ability to pay bills remotely and access online services, users no longer need to visit physical offices to conduct routine transactions. This reduces congestion at offices and eliminates long wait times, making it a more convenient and empathetic service. The system provides e-Government services that allow users to view their current status of their meter online.

CHAPTER 4

ANALYSIS ON EFFECT OF INFORMATION SYSTEM ON USER SATISFACTION AND NET BENEFITS AT YANGON ELECTRICITY SUPPLY CORPORATION

This chapter presents demographic profile of respondents, research methodology, reliability analysis, employee perception on information system quality, user satisfaction and net benefits, analysis on effect of information system quality on user satisfaction and analysis on the effect of user satisfaction on net benefits at YESC.

4.1 Demographic Profile of Respondents

In this study, the 133 employees of YESC who carry out meter reading, billing and accounting processes are surveyed about the utilization of information systems. The demographic factors of respondents are shown in Table (4.1).

Table (4.1) Demographic Profile of Respondents

Sr. No.	Particular	Number	Percentage
1	**Gender**		
	Male	54	40.6
	Female	79	59.4
2	**Age (Years)**		
	Under 21	1	0.8
	21-30	30	22.6
	31-40	34	25.6
	41-50	40	30.1
	51-60	27	20.3
	Under 62	1	0.8
3	**Marital Status**		
	Married	90	67.7
	Single	43	32.3
4	**Education (Level)**		
	Under Graduate	28	21.1
	Graduated	105	78.9
5	**Occupation**		
	Ledger Staff	57	42.9
	Billing Staff	12	9.0
	Meter Reader	60	45.1
	Assistant Manager	4	3.0
6	**Duration of new information system used (**years)		
	Less than 1	7	5.3
	1-2	42	31.6
	2-3	51	38.3
	More than 3	33	24.8
7	**AMI system used at YESC**		
	AMI and PMMS	60	45.1
	MEB	61	45.9
	AMI, PMMS and MEB	12	9.0
	Total	**133**	**100.0**

Source: Survey Data (2024)

According to Table (4.1), the demographic profile of the respondents reveals some interesting insights. The majority of respondents were female, constituting 59.4 percentage of the total sample. This could be indicative of the gender distribution within the organization or the field in which the study was conducted. The age distribution of the respondents shows a diverse range, with most percentage falling in the 31-40 years age group. This indicates that the study had participation from employees across various age groups. The majority of respondents were married, comprising 67.7 percentage of the sample. The vast majority of respondents were graduates, indicating a high level of education among the participants. The distribution of respondents across different job roles within the organization is diverse, with varying percentages of employees from different departments.

This implies that the respondents are employees of Yangon Electricity Supply Corporation (YESC) working in various roles and departments. The duration for which respondents have been using the new information system varies, with a significant portion using it for 2-3 years. This could provide insights into the long-term effects and benefits of implementing information systems within the organization. Yangon Electricity Supply Corporation provides additional training and support to enhance the technical proficiency of employees. This indicates a commitment to employee development and could potentially result in higher user satisfaction and net benefits from using information systems. The distribution of respondents using different systems at YESC shows a mix of AMI, PMMS, and MEB systems.

This variation in systems used could offer insights into the effect of different information systems on user satisfaction and net benefits. These systems are used by YESC for various purposes such as metering, energy management, billing, and monitoring. AMI system is used to collect, store, analyze and present energy usage data by providing the system user the ability to monitor electricity. AMI system is a real-time meter reading system from the central control center obtaining accurate usage units. As PMMS system, it is a kind of software which calculates meter unit. As MEB system, it tests calculating electricity bills, printing meter bills, receiving payments and extracting monthly statements.

The Table reveals a diverse range of employees from various age groups, job roles, and departments. The majority of respondents are female, married, and have a high level of education. The study found that YESC provides additional training and support to

enhance employee technical proficiency, which could result in higher user satisfaction and net benefits from using information systems. The analysis also explores the use of different information systems at YESC, including AMI, PMMS, and MEB systems, which are used for various purposes such as metering, energy management, billing, and monitoring.

4.2 Research Methodology

In this study, the structured questionnaire is developed to collect the primary data. The questionnaire consists of four parts: demographic profile of respondent, information system which includes information quality, system quality and service quality, user satisfaction and net benefits. The question items are organized in Likert-type 5-point scale format. For information quality of information system, four question items are identified for accuracy, four question items are identified for understandability and four questions items are identified for report effectiveness. For system quality, five question items are identified for system effectiveness and four question items are identified for system flexibility. For service quality, five question items are identified for service reliability and three question items are identified for service empathy. To assess user satisfaction, eight question items are used, and to assess net benefits, eight question items are used.

The questionnaires are distributed to selected 133 employees at YESC. All employees replied to the questionnaires. For data analysis, for descriptive analysis, Best (1977) identification is based. According to Best (1977), the mean scale of 1.00 – 1.80 is for Strongly Disagree, 1.81 – 2.60 for Disagree, 2.61 – 3.40 for Neutral, 3.41 – 4.20 for Agree and 4.21 – 5.00 for Strongly Agree. For data analysis, the descriptive and regression analysis are applied. For regression analysis, data reliability is tested in advance.

4.3 Reliability Analysis

The reliability concerning with a measure is established by testing for both consistency and stability. Consistency means that how well the items measuring a variable of concept hang together as a set. Cronbach's alpha is a reliability coefficient that indicates how closely related a set of items.

According to Sekaran and Bougie (2009), the coefficient alpha ranges from 0 to 1, with higher values indicating greater reliability. Based on this scale, the reliability level can be classified as follows: a coefficient alpha of more than 0.9 is considered “Excellent”, indicating a high degree of reliability; a score between 0.80 and 0.89 is considered “Good”, indicating moderate reliability; a score between 0.70 and 0.79 is considered “Acceptable”, indicating some reliability issues; a score between 0.60 and 0.69 is considered “Questionable”, indicating significant reliability concerns; a score between 0.50 and 0.59 is considered “Poor”, indicating low reliability; and finally, a score of less than 0.59 is considered “Unacceptable”, indicating that the items are not reliable for measuring the intended variable.

Table (4.2) shows that the validity test results of all variables which are information quality in accuracy, understandability and report effectiveness, system quality in system effectiveness and system flexibility, service quality in service reliability and service empathy, user satisfaction and net benefits of AMI system for YESC.

Table (4.2) Results of Cronbach's Alpha Value

Scale	No. of Items	Cronbach's Alpha	Reliability Level
Accuracy of information quality	4	0.791	Acceptable
Understandability of information quality	4	0.712	Acceptable
Report effectiveness of information quality	4	0.821	Good
System effectiveness of system quality	5	0.893	Good
System flexibility of system quality	4	0.886	Good
Service reliability of service quality	5	0.909	Excellent
Service empathy of service quality	3	0.806	Good
User satisfaction	8	0.828	Good
Net Benefits	8	0.902	Excellent

Source: Survey Data (2024)

The Cronbach's alpha values for all scales exceed 0.7, indicating excellent internal consistency and reliability within the scale. The scales used to measure accuracy, understandability, report effectiveness, and system flexibility of information have acceptable levels of internal consistency, the scale used to measure system effectiveness, service empathy and user satisfaction has a good level of internal consistency and while the scale used to measure service reliability and net benefits have an excellent level of internal consistency.

4.4 Employee Perception on Information System Quality of AMI System at YESC

The employee perception on information quality which include accuracy, understandability and report effectiveness, system effectiveness which contains system effectiveness and system flexibility, service quality which contain service reliability and service empathy are analyzed with descriptive analysis by calculating the mean values for each question items of each variable.

4.4.1 Perception on Information Quality

The information quality of AMI system at YESC is approached from three aspects as accuracy, understandability and report effectiveness.

(a) Accuracy of Information Quality

In this study, accuracy of information quality has four items. The result of mean values is as shown in Table (4.3).

Table (4.3) Accuracy

No.	Description	Mean	Standard Deviation
1	Trust the accuracy of the information provided by AMI system.	4.21	.591
2	AMI system is well-organized.	3.80	.736
3	The information provided by the AMI system is complete.	4.32	.558
4	AMI system is well-integrated.	3.95	.882
	Overall Mean	**4.07**	

Source: Survey Data (2024)

Based on the Table (4.3), the mean values (including overall mean) for accuracy are between 3.41 and 4.20 at agree level and some are between 4.21 and 5.00 which are at strongly agree level. This shows that employees agree the accuracy of AMI system. In

addition, employees agree that AMI system is well-organized and well-integrated. On another side, they strongly agree that they trust the accuracy of information and received complete information provided by AMI.

(b) Understandability

Understandability consists of four items in this study. The result of mean values is shown in Table (4.4).

Table (4.4) Understandability

No.	Description	Mean	Standard Deviation
1	It is easy to understandable the information provided by AMI system.	4.05	.555
2	The information provided by AMI system is clear and comprehensible.	3.90	.968
3	AMI system can be easily compared to past information.	4.42	.781
4	System is easy to learn.	4.17	.634
	Overall Mean	**4.14**	

Source: Survey Data (2024)

According to the Table (4.4), the mean values (including overall mean) for understandability are between 3.41 and 4.20 at agree level and some are between 4.21 and 5.00 which are at strongly agree level. It indicates that users agree that the AMI system at YESC provides clear and concise information, making it easy to comprehend and utilize. The respondents generally agree with understandability of information system at YESC. In addition, users at YESC strongly agree that the system makes it easy for them to compare current information to past information as it is easier to track changes and trends. Furthermore, the users find the system intuitive and user-friendly, which is essential for effective decision-making and problem-solving. Another side, they strongly agree that AMI system can be easily compared to past information.

(c) Report Effectiveness

Report effectiveness of information quality is identified in four items in this study. The result of mean values is shown in Table (4.5).

Table (4.5) Report Effectiveness

No.	Description	Mean	Standard Deviation
1	The information of AMI system is timely manner.	3.58	.917
2	Employees rely on the reports provided by AMI system to make informed decisions.	3.75	.908
3	AMI system is reliable.	3.95	.742
4	AMI system is up-to-date.	4.14	.649
	Overall Mean	**3.85**	

Source: Survey Data (2024)

The Table (4.5), the mean values (including overall mean) for report effectiveness are between 3.41 and 4.20 are at agree level. It shows that it meets the needs of system users and provide them with the necessary support to achieve their goals. Respondents agree that the AMI system is up-to-date, which is a major factor contributing to user satisfaction at YESC. This is due to the fact that an up-to-date system provides users with access to the latest information and tools, enabling them to work more efficiently and effectively.

4.4.2 Perception on System Quality

The system quality of AMI system at YESC is approached from two aspects of system effectiveness and system flexibility

(a) System Effectiveness of System Quality

System effectiveness includes five items in this study. The result of mean values is shown in Table (4.6).

Table (4.6) System Effectiveness

No.	Description	Mean	Standard Deviation
1	AMI system makes easier to do the job.	4.42	.781
2	AMI system enhances problem-solving ability.	4.17	.875
3	AMI system improves modernization of working methods.	4.20	.612
4	AMI system reduces process costs.	4.38	.693
5	AMI system reduces process times.	4.22	.810
	Overall Mean	**4.28**	

Source: Survey Data (2024)

The Table (4.6) shows that the mean values (including overall mean) for system effectiveness are between 3.41 and 4.20 at agree level and some are between 4.21 and 5.00 which are at strongly agree level. Users strongly agree that AMI system simplifies job tasks at Yangon Electricity Supply Corporation (YESC), making it easier for users to complete their work and reduces process costs and times. Moreover, users are convinced that the system is successful in enhancing efficiency, as it has made processes smooth and reduced manual errors. Furthermore, users believe that the AMI system has resulted in cost savings and time savings. Then, users strongly agree that in the system effectiveness across various areas, including efficiency, problem-solving, modernization, cost-saving, and time-saving. On another side, they agree that AMI system can be problem solving and improves modernization of their working methods.

(b) System Flexibility

System flexibility contains four items in this study. The result of mean values is shown in Table (4.7).

Table (4.7) System Flexibility

No.	Description	Mean	Standard Deviation
1	AMI system is easy to customize.	4.14	.641
2	AMI system can be easily maintained.	4.23	.585
3	AMI system can be easily upgraded.	4.39	.672
4	AMI system is responsive to meet changing needs.	4.47	.531
	Overall Mean	**4.31**	

Source: Survey Data (2024)

According to the Table 4.7, the mean values (including overall mean) for system flexibility are between 3.41 and 4.20 at agree level and some are between 4.21 and 5.00 which are at strongly agree level. It indicates that users are strongly agree that the system's flexibility, which is reflected in their positive feedback regarding the AMI system's ability to meet their evolving needs and expectations. The majority of users strongly agree that the Advanced Metering Infrastructure (AMI) system at Yangon Electricity Supply Corporation is responsive to their changing needs, because the system has the ability to quickly adapt to changes in user demand, flexibility in scheduling and planning, and capacity to accommodate new services and technologies. The only one statement that AMI system is easy to customize their work is in agree level because it is in the range of 3.4 - 4.20.

4.4.3 Perception on Service Quality

The service quality of AMI system at YESC is approached from two aspects as service reliability and service empathy.

(a) Service Reliability of Service Quality

The reliability of service of AMI is identified in five items in this study. The result of mean values is shown in Table (4.8).

Table (4.8) Service Reliability

No.	Description	Mean	Standard Deviation
1	Ever Meter Group provides a sufficient variety of services.	4.38	.486
2	Ever Meter Group provides cost effective services.	4.25	.434
3	Ever Meter Group supports that in case of emergency.	4.25	.434
4	Ever Meter Group responds in a timely manner.	4.49	.502
5	Ever Meter Group provides valuable services.	4.34	.727
	Overall Mean	**4.34**	

Source: Survey Data (2024)

According to above Table (4.8), the mean values (including overall mean) for service reliability are between 4.21 and 5.00 which are at strongly agree level. It states that the employees are at strongly agree for service reliability of Ever Meter Group. They strongly agree that Ever Meter Group's prompt response and reliable services are satisfactory. Moreover, respondents strongly agree that the company's ability to respond quickly to their needs, which make confidence in their ability to provide timely and effective solutions. Respondents strongly agree that Ever Meter Group's reliable services, such as their consistent performance and dependable maintenance, contributed to their satisfaction.

(b) Service Empathy

Service empathy of service quality is structured in three items of this study. The result of mean values is shown in Table (4.9).

Table (4.9) Service Empathy

No.	Description	Mean	Standard Deviation
1	Ever Meter Group understands specific needs of users.	4.17	.634
2	Ever Meter Group helps users become skillful to user the system.	4.38	.486
3	Training programs of Ever Meter Group covers specific needs for users.	4.25	.434
	Overall Mean	**4.27**	

Source: Survey Data (2024)

According to Table (4.9) describes that the mean values (including overall mean) for service empathy are between 3.41 and 4.20 at agree level and some are between 4.21 and 5.00 which are at strongly agree level. This implies that users strongly agree that Ever Meter Group helps users become skillful and covers specific needs for users. Respondent strongly agree that Ever Meter Group helps them develop the skills necessary to effectively use the system, which is a factor in their positive perception. The presence of dedicated training programs and support systems demonstrates a genuine commitment to user development, allowing staff to better understand and respond to customers' needs. This commitment is reflected in the overall mean score for service empathy, which highlights that users perceive the company as being attentive to their needs and providing adequate support. On another side, users agree that Ever Meter Group understands their specific needs.

4.5 User Satisfaction and Net Benefits

The perception of user satisfaction and net benefits of using AMI system at YESC are analyzed with descriptive analysis by calculating the mean values for each question items. The descriptive analysis results are shown in Table (4.10) to Table (4.11).

4.5.1 User Satisfaction

The perception of user satisfaction on the information system of YESC is analyzed with descriptive analysis. The result of mean values is described in Table (4.10).

Table (4.10) User Satisfaction

No.	Description	Mean	Standard Deviation
1	The services provided by AMI system meet user expectations.	3.87	.913
2	Using the AMI system with detailed description of the meter units.	4.35	.593
3	Using the AMI system that supports customization of service.	3.70	.870
4	Using the AMI system that can trust the accuracy of information.	3.87	.913
5	Using the AMI system that can well communicate between meter reading and billing.	4.42	.781
6	The AMI system has eased user work processes.	4.34	.589
7	Satisfied with the function of the AMI system.	4.49	.502
8	Satisfied with the overall services provided by AMI system.	3.90	.968
	Overall Mean	**3.88**	

Source: Survey Data (2024)

Base on the Table (4.10), the mean values (including overall mean) for user satisfaction are between 3.41 and 4.20 at agree level and some are between 4.21 and 5.00 which are at strongly agree level. This means that users are satisfied with the functionality of the AMI system at Yangon Electricity Supply Corporation. Respondents agree that user-friendly interface and intuitive navigation of the AMI system make it easy for employees to use and understand. Furthermore, the system's ability to provide real-time data and accurate meter readings has improved the efficiency and accuracy of meter maintenance tasks. Then, the AMI system's automated features have reduced the

workload of employees, allowing them to focus on more critical tasks. Another side, they strongly agree AMI system provides detailed description of meter units, linkages between meter reading and billing, and easy work process.

4.5.2 Net Benefits

The perception of users on net benefits for using AMI system at YESC is analyzed with descriptive analysis. The result of mean values is described in Table (4.11).

Table (4.11) Net Benefits

No.	Description	Mean	Standard Deviation
1	The AMI system easy access to power distribution.	4.20	.612
2	The AMI system easy access to accounting and distribution.	4.05	.555
3	Using the AMI system increases the organization's revenue.	3.90	.968
4	By using the AMI system, the workforce can be reduced.	4.42	.781
5	Using the AMI system can reduce power losses.	4.22	.595
6	Using the AMI system can reduce customer complaints.	4.38	.693
7	Using the AMI system can reduce the paper-based system.	4.22	.810
8	Using the AMI system can prevent financial abuse.	4.42	.781
	Overall Mean	**4.23**	

Source: Survey Data (2024)

According to Table (4.11) indicates that the mean values (including overall mean) for net benefits are between 3.41 and 4.20 at agree level and some are between 4.21 and 5.00 which are at strongly agree level. It highlights that users strongly agree that the AMI

system reduces workforce, power losses, customer complaints, paper-based system, and prevents financial abuse. It is evident that the system's automation capabilities have led to efficiency gains and reduced the need for manual labor. The system's ability to monitor and prevent financial abuse has reduced concerns about fraudulent activities, resulting in a strong sense of agreement among users regarding its benefits. On another side, users agree that AMI system easy access to power distribution, accounting, and increases the revenue of Yangon Electricity Supply Corporation.

4.6 Analysis on the Effect of Information System on User Satisfaction

In this section, the regression analysis between information system on user satisfaction are described.

4.6.1 Analysis on the Effect of Information Quality on User Satisfaction

Multiple linear regression analysis is performed to reveal the effect of the independent variable (information quality of accuracy, understandability and report effectiveness) on dependent variable (user satisfaction). The result of the linear regression is illustrated in the following Table (4.12).

Table (4.12) Effect of Information Quality on User Satisfaction

Dependent Variable: User Satisfaction	Unstandardized Coefficients		ß	t	Sig.	VIF
	B	Std. Error				
(Constant)	.608	.202		3.001	.003	
Accuracy	.529***	.092	.553	5.764	.000	3.902
Understandability	.078	.080	.081	.970	.334	2.971
Report Effectiveness	.205***	.056	.264	3.686	.000	2.166
R Square	.695					
Adjusted R Square	.688					
F Value	98.197***					
Durbin Watson	.887					

Source: Survey Data (2024)

Statistically significant indicate *** at 1%, ** at 5%, and * at 10% level

Table (4.12) shows the effect of information quality (accuracy, understandability, and report effectiveness) on user satisfaction at the Yangon Electricity Supply Corporation. The overall model fit is quite good, adjusted R Square value of 0.688, indicating that 68.8% of the variation in user satisfaction can be explained by information quality analyzed in the regression model. The F Value of 98.197 indicates that the overall regression model is statistically significant. The Durbin Watson statistics of 0.887 describes that there is no significant autocorrelation.

Accuracy has a statistically significant positive effect on user satisfaction (p = 0.000). This means that the more accurate the information provided by the system, the higher level of user satisfaction because accurate information allows users to make informed decisions and perform their tasks more efficiently. The accuracy of the information system can reduce errors and inaccuracies in data, which can lead to a decrease in user frustration and an increase in satisfaction. With accurate information,

users can allocate resources more effectively, leading to increased productivity and efficiency. This can contribute to higher user satisfaction.

Report effectiveness has a statistically significant positive effect on user satisfaction ($p = 0.000$). This states that the effectiveness of reports generated by the system enhance user satisfaction. Users may find it easier to comprehend and use information presented in reports that are efficient and well-designed. A high-quality information system can facilitate effective communication between different stakeholders, including users, management, and other departments. This improved communication can lead to increased user satisfaction.

The VIF values for both variables are below 10, there is no multicollinearity. In conclusion, accuracy and report effectiveness have significant and positive effect on user satisfaction. AMI system provides accuracy, understandability, and effective report information.

4.6.2 Analysis on the Effect of System Quality on User Satisfaction

Multiple linear regression analysis is performed to reveal the effect of the independent variable (system quality of system effectiveness and system flexibility) on dependent variable user satisfaction. The result of the linear regression is illustrated in the following Table (4.13).

Table (4.13) Effect of System Quality on User Satisfaction

Dependent Variable: User Satisfaction	Unstandardized Coefficients		ß	t	Sig.	VIF
	B	Std. Error				
(Constant)	.492	.232		2.121	.036	
System Effectiveness	.182**	.077	.219	2.356	.020	3.007
System Flexibility	.605***	.093	.604	6.512	.000	3.007
R Square	.628					
Adjusted R Square	.622					
F Value	109.792***					
Durbin Watson	.628					

Source: Survey Data (2024)

Statistically significant indicate *** at 1%, ** at 5%, and * at 10% level

Table (4.13) shows the effect of system quality on user satisfaction at the Yangon Electricity Supply Corporation. The results indicate that both system effectiveness and system flexibility have a significant positive effect on user satisfaction.

System effectiveness is statistically significant at the 5% level. This means that as system effectiveness increases, user satisfaction also increases. The system's effectiveness in providing real-time information and easy access to services can lead to a better user experience, which is essential for customer satisfaction.

Similarly, system flexibility has a positive effect on user satisfaction and is statistically significant at the 1% level. This indicates that the more flexible the system is, the higher the level of user satisfaction. The system's ability to adapt to changing user needs and preferences can lead to increased user satisfaction, as users are satisfied when their needs are met. The system's flexibility in integrating with other systems and technologies can lead to improved data sharing and collaboration, which can contribute to increased user satisfaction.

The F Value of 109.792 indicates that the overall regression model is statistically significant. The Durbin Watson statistics of 0.628 describes that there is no significant autocorrelation. The overall model fit is quite good, adjusted R Square value of 0.622, indicating that 62.2% of the variation in user satisfaction can be explained by system quality analyzed in the regression model. Therefore, it can be concluded that a high-quality information system, characterized by both effectiveness and flexibility, has a positive effect on user satisfaction at the Yangon Electricity Supply Corporation. In addition, AMI system supports effectiveness and flexibility system.

4.6.3 Analysis on the Effect of Service Quality on User Satisfaction

Multiple linear regression analysis is performed to reveal the effect of the independent variable (service quality of service reliability and service empathy) on dependent variable user satisfaction. The result of the linear regression is illustrated in the following Table (4.14).

Table (4.14) Effect of Service Quality on User Satisfaction

Dependent Variable: User Satisfaction	**Unstandardized Coefficients**		**ß**	**t**	**Sig.**	**VIF**
	B	**Std. Error**				
(Constant)	.390	.261		1.491	.138	
Service Reliability	1.645***	.133	1.407	12.378	.000	5.178
Service Empathy	.858***	.135	.723	6.356	.000	5.178
R Square	.676					
Adjusted R Square	.671					
F Value	135.317***					
Durbin Watson	1.024					

Source: Survey Data (2024)

Statistically significant indicate *** at 1%, ** at 5%, and * at 10% level

Table (4.14) shows the effect of service quality on user satisfaction at Yangon Electricity Supply Corporation. The results of the regression analysis indicate that service

reliability has a positive and statistically significant effect on user satisfaction with a significance level of 0.000. This reveals that as service reliability increases, user satisfaction also increases. A reliable information system is one that provides accurate and timely information, which is important for users to make informed decisions. Timely information enables users to respond quickly to changes in their environment, reducing delays and costs.

Service empathy also has a statistically significant effect on user satisfaction with a significance level of 0.000. This indicates that AMI users value the ability of service providers to understand and respond to their needs and concerns. Therefore, developing an information system that allows for effective communication and feedback between users and service providers could lead to increased user satisfaction.

The F Value of 135.317 indicates that the overall regression model is statistically significant. The Durbin Watson statistics of 1.024 describes that there is no significant autocorrelation. The overall model fit is quite good, adjusted R Square value of 0.671, indicating that 67.1% of the variation in user satisfaction can be explained by service quality analyzed in the regression model.

4.7 Analysis on the Effect of User Satisfaction on Net Benefits

Linear regression analysis is performed to reveal the effect of the independent variable (user satisfaction) on dependent variable (net benefits). The result of the linear regression is illustrated in the following Table (4.15).

Table (4.15) Effect of User Satisfaction on Net Benefits

Dependent Variable: Net Benefits	Unstandardized Coefficients		ß	t	Sig.	VIF
	B	Std. Error				
(Constant)	.917	.221		4.144	.000	
User Satisfaction	.855***	.057	.797	15.090	.000	1.000
R Square	.635					
Adjusted R Square	.632					
F Value	227.720***					
Durbin Watson	.706					

Source: Survey Data (2024)

Statistically significant indicate *** at 1%, ** at 5%, and * at 10% level

Table (4.15) shows the results of the regression analysis on the effect of user satisfaction on net benefits at Yangon Electricity Supply Corporation. The coefficient for user satisfaction is 0.855, which is statistically significant at the 1% level. This means that there is a strong positive relationship between user satisfaction and net benefits. As user satisfaction increases, net benefits also increase. The R square value of 0.635 indicates that 63.5% of the variation in net benefits can be explained by user satisfaction. This indicates that user satisfaction is a significant predictor of net benefits at Yangon Electricity Supply Corporation. The F Value of 227.720 indicates that the overall regression model is statistically significant. The Durbin Watson statistics of 0.706 describes that there is no significant autocorrelation.

User satisfaction has significant and positive effect on net benefits. Yangon Electricity Supply Corporation has increased net benefits because AMI system provides easy access to power distribution, reduce power losses, eliminates manual meter reading errors, meter tamper detection, increase efficiency, improve billing accuracy, and reduce customer complaints.

CHAPTER 5

CONCLUSION

This conclusion chapter presents findings and discussions drawn from the results of data analysis pertaining to the effect of information system on user satisfaction and net benefits at Yangon Electricity Supply Corporation. Then, suggestions and recommendations and the needs for further studies are also described.

5.1 Findings and Discussions

The study aims to analyze the effect of information system on user satisfaction at Yangon Electricity Supply Corporation and to analyze the effect of user satisfaction on net benefits at Yangon Electricity Supply Corporation. The findings reveal that the demographic profile of the respondents at Yangon Electricity Supply Corporation (YESC) shows a diverse range in gender, age, marital status, education level, occupation and, duration of new information system usage. The majority of respondents were female, and the highest percentage fell in the 31-40 years age group. Most respondents are married and graduates, with a variety of occupations within the organization. The duration of using the new information system varied, with a significant portion using it for 2-3 years. The distribution of respondents using different systems at YESC also varied. This demographic profile provides a comprehensive overview of the respondents participating in the study.

In the analysis of accuracy, employees agree the accuracy of AMI system as they trust the accuracy of information and received complete information provided by AMI. According to the analysis of understandability, respondents at YESC agree that the system makes it easy for them to compare current information to past information as it is easier to track changes and trends. With report to effectiveness, respondents agree that the AMI system is up-to-date because only an up-to-date system provides users with access to the latest information and tools, enabling them to work more efficiently and effectively. In system effectiveness, respondents strongly agree that AMI system simplifies job tasks at Yangon Electricity Supply Corporation (YESC), making it easier for users to complete their work and reduces process costs and times. With flexibility of

system, the majority of system users strongly agree that the Advanced Metering Infrastructure (AMI) system at Yangon Electricity Supply Corporation is responsive to their changing needs as the system has the ability to quickly adapt to changes in user demand, flexibility in scheduling and planning, and capacity to accommodate new services and technologies.

Concerning with service reliability, employees strongly agree that Ever Meter Group's prompt response and reliable services are satisfactory since the company responds quickly to their needs, which make confidence in their ability to provide timely and effective solutions. About the analysis of service empathy, employees strongly agree that they are satisfied with Ever Meter Group as the group helps system users become skillful and covers specific needs for users. Concerning with user satisfaction, employees agree that they are satisfied with the functionality of the AMI system at Yangon Electricity Supply Corporation as AMI system provides detailed description of meter units, linkages between meter reading and billing, and easy work process. According to the analysis of net benefits, employees strongly agree that the AMI system reduces workforce, power losses, customer complaints, paper-based system, and prevents financial abuse since the system's automation capabilities have led to efficiency gains and reduced the need for manual labor.

The regression analysis which are conducted to investigate the effects of information quality, system quality, and service quality on user satisfaction revealed that significant positive effects. Accuracy, report effectiveness, system effectiveness, and system flexibility had a significant effect on user satisfaction, highlighting the importance of a high-quality information system in enhancing employee satisfaction. Service reliability and service empathy positively influenced on user satisfaction. User satisfaction was found to be a strong predictor of net benefits, with a significant positive effects indicating that satisfied users contribute to organizational benefits.

5.2 Suggestions and Recommendations

To enhance user satisfaction, YESC should maintain AMI system that is accurate, reliable, and up-to-date. YESC should implement measures to prevent data corruption and ensure that the system is regularly updated. YESC needs to integrate the AMI system with other systems to provide a comprehensive information system that can meet all the

information needs of users. To respond to changing needs, YESC should use the AMI system that is designed to be flexible and adaptable. This can be achieved by implementing a system that can be easily modified or customized to meet new requirements.

To improve efficiency and accuracy, YESC needs to invest in automated features that can automate processes such as data collection and processing. It is essential to provide prompt response, reliable services, and satisfactory support. This can be achieved by implementing measures to ensure that YESC is responsive to customer needs. To reduce manual errors and improve efficiency, YESC should automate data collection and processing processes. This can be achieved by implementing an automated system that can collect and process data in real-time.

To improve decision-making, it is recommended to provide real-time data that can be used to make informed decisions. It is essential to provide adequate training as YESC to users on how to use the AMI system effectively. This can be achieved by implementing a comprehensive training program that covers all aspects of the system.

The net benefits derived from the information system, such as financial savings and reduced power losses, are directly linked to user satisfaction. YESC should align organizational goals with user needs by ensuring that the information system meets employee requirements and enhances their work processes. By focusing on user-centric design and implementation, YESC can drive greater user satisfaction and organizational benefits.

5.3 Needs for Further Studies

While the study provided a comprehensive overview of the demographic profile of respondents at YESC, further research could explore how demographic factors affect user satisfaction. This could help in identifying specific demographic groups that may have different perceptions or needs regarding the information system. The study focused on the AMI system at YESC, but future research could compare the effectiveness of different information systems in terms of user satisfaction and net benefits. By examining multiple systems or technologies, researchers can gain insights into the unique features or functionalities that contribute most to user satisfaction and organizational outcomes. While the study provided the relationship between information system quality, user

satisfaction, and net benefits, longitudinal studies could track changes over time. By conducting follow-up surveys or assessments, researchers can observe how user satisfaction and benefits evolve as employees become more familiar with the system or as new features are introduced. While the study utilized quantitative measures to assess user satisfaction, further research could incorporate qualitative methods such as interviews or focus groups to capture the subjective experiences of employees.

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APPENDIX A

QUESTIONNAIRE

Dear Respondents,

This questionnaire is an academic survey to explore the effect of information system on user satisfaction and net benefits at Yangon Electricity Supply Corporation in Yangon. This research paper is to understand the information system provided at Yangon Electricity Supply Corporation, the satisfaction of user and the net benefits the user enjoy All responses will be kept highly confidential and used for academic purposes only. Thank you for your participation and giving precious time.

Yours Faithfully,

…….

Zaw Min Oo

Roll No-40

EMBA-II (19th Batch, On Campus)

Section (A)

Demographic Profile

Please put a tick mark on the racket of the correct answer to the following questions.

1. Gender:

☐ Male ☐ Female

2. Age:

☐ Under 21 years ☐ 21 - 30 years ☐ 31-40years

☐ 41-50years ☐ 51-60 years ☐ Under 62 years

3. Marital Status:

☐ Married ☐ Single

4. Education:

☐ Under Graduate ☐ Graduated ☐ Post graduate

5. Occupation:

☐ Ledger Staff

☐ Billing Staff

☐ Meter Reader

☐ Assistant Manager

6. Duration of new information system used:

☐ less than 1 year

☐ 1 - 2 years

☐ 2 – 3 years

☐ more than 3 years

7. Which system are you using?

☐ AMI and PMMS

☐ MEB

☐ AMI, PMMS and MEB

Section (B)
Information System

Please tick (√) in the box to indicate how agreeable you are with the following.
1 = Strongly Disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly Agree

I. Information Quality		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
	(a) Accuracy					
1	Trust the accuracy of the information provided by AMI system.					
2	AMI system is well organized.					
3	The information provided by AMI system is complete.					
4	AMI system is well integrated.					
	(b) Understandability					
1	It is easy to understandable the information provided by AMI system.					
2	The information provided by AMI system is clear and comprehensible.					
3	AMI system can be easily compared to past information.					
4	System is easy to learn.					

	(c) Report Effectiveness					
1	The information of AMI system is timely manner.					
2	Employees rely on the reports provided by AMI system to make informed decisions.					
3	AMI system is reliable.					
4	AMI system is up-to-date.					
	II. System Quality					
	(d) System Effectiveness					
1	AMI system makes easier to do the job.					
2	AMI system enhances problem-solving ability.					
3	AMI system improves modernization of working methods.					
4	AMI system reduces process costs.					
5	AMI system reduces process times.					
	(e) System Flexibility					
1	AMI system is easy to customize.					
2	AMI system can be easily maintained.					
3	AMI system can be easily upgraded.					
4	AMI system is responsive to meet my changing needs.					

	III. Service Quality					
	(f) Service Reliability					
1	Ever Meter Group Provides a sufficient variety of services.					
2	Ever Meter Group provides cost effective services.					
3	Ever Meter Group supports me in case of emergency.					
4	Ever Meter Group responds in a timely manner.					
5	Ever Meter Group Provides valuable services.					
	(g) Service Empathy					
1	Ever Meter Group understanding specific needs of users.					
2	Ever Meter Group helps users become skillful to user the system.					
3	Training programs of Ever Meter Group covers specific needs for users.					

Section (C)

User Satisfaction

Please tick (√) in the box to indicate how agreeable you are with the following.

User Satisfaction		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
1	The services provided by AMI system meet user expectations.					
2	Using the AMI system with detailed description of the meter units.					
3	Using the AMI system that supports customization of service.					
4	Using the AMI system that I can trust the accuracy of information.					
5	Using the AMI system that can well communicate between meter reading and billing.					
6	The AMI system has eased user work processes.					
7	Satisfied with the function of AMI system.					
8	Satisfied with the overall services provided by AMI system.					

Section (D)

Net Benefits

Please tick (√) in the box to indicate how agreeable you are with the following.

Net Benefits		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	The AMI system easy access to power distribution.					
2	The AMI system easy access to accounting and distribution.					
3	Using the AMI system increases the organization's revenue.					
4	By using the AMI system, the workforce can be reduced.					
5	Using the AMI system can reduce power losses.					
6	Using the AMI system can reduce customer complaints.					
7	Using the AMI system can reduce the paper-based system.					
8	Using the AMI system can prevent financial abuse.					

APPENDIX B
SPSS OUTPUT

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.791	.808	4

Item Statistics

	Mean	Std. Deviation	N
A1	4.21	.591	133
A2	3.80	.736	133
A3	4.32	.558	133
A4	3.95	.882	133

Grand Mean = 4.07

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.712	.746	4

Item Statistics

	Mean	Std. Deviation	N
U1	4.05	.555	133
U2	3.90	.968	133
U3	4.42	.781	133
U4	4.17	.634	133

Grand Mean = 4.14

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.821	.830	4

Item Statistics

	Mean	Std. Deviation	N
RE1	3.58	.917	133
RE2	3.75	.908	133
RE3	3.95	.742	133
RE4	4.14	.649	133

Grand Mean = 3.85

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.893	.895	5

Item Statistics

	Mean	Std. Deviation	N
SE1	4.42	.781	133
SE2	4.17	.875	133
SE3	4.20	.612	133
SE4	4.38	.693	133
SE5	4.22	.810	133

Grand Mean = 4.28

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.886	.891	4

Item Statistics

	Mean	Std. Deviation	N
SF1	4.14	.641	133
SF2	4.23	.585	133
SF3	4.39	.672	133
SF4	4.47	.531	133

Grand Mean = 4.31

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.909	.925	5

Item Statistics

	Mean	Std. Deviation	N
SR1	4.38	.486	133
SR2	4.25	.434	133
SR3	4.25	.434	133
SR4	4.49	.502	133
SR5	4.34	.727	133

Grand Mean = 4.34

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.806	.825	3

Item Statistics

	Mean	Std. Deviation	N
SEmp1	4.17	.634	133
SEmp2	4.38	.486	133
SEmp3	4.25	.434	133

Grand Mean = 4.27

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.828	.861	8

Item Statistics

	Mean	Std. Deviation	N
US1	3.87	.913	133
US2	4.35	.593	133
US3	3.70	.870	133
US4	3.87	.913	133
US5	4.42	.781	133
US6	4.34	.589	133
US7	4.49	.502	133
US8	3.90	.968	133

Grand Mean = 3.88

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.902	.904	8

Item Statistics

	Mean	Std. Deviation	N
NB1	4.20	.612	133
NB2	4.05	.555	133
NB3	3.90	.968	133
NB4	4.42	.781	133
NB5	4.22	.595	133
NB6	4.38	.693	133
NB7	4.22	.810	133
NB8	4.42	.781	133

Grand Mean = 4.23

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.834[a]	.695	.688	.294960	.695	98.197	3	129	.000	.887

a. Predictors: (Constant), REM, UM, AM

b. Dependent Variable: USM

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.630	3	8.543	98.197	.000[b]
	Residual	11.223	129	.087		
	Total	36.853	132			

a. Dependent Variable: USM

b. Predictors: (Constant), REM, UM, AM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.608	.202		3.001	.003		
	AM	.529	.092	.553	5.764	.000	.256	3.902
	UM	.078	.080	.081	.970	.334	.337	2.971
	REM	.205	.056	.264	3.686	.000	.462	2.166

a. Dependent Variable: USM

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.793[a]	.628	.622	.324684	.628	109.792	2	130	.000	.628

a. Predictors: (Constant), SFM, SEM

b. Dependent Variable: USM

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.148	2	11.574	109.792	.000[b]
	Residual	13.705	130	.105		
	Total	36.853	132			

a. Dependent Variable: USM

b. Predictors: (Constant), SFM, SEM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.492	.232		2.121	.036		
	SEM	.182	.077	.219	2.356	.020	.333	3.007
	SFM	.605	.093	.604	6.512	.000	.333	3.007

a. Dependent Variable: USM

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.822[a]	.676	.671	.303293	.676	135.317	2	130	.000	1.024

a. Predictors: (Constant), SEmpM, SRM

b. Dependent Variable: USM

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.895	2	12.447	135.317	.000[b]
	Residual	11.958	130	.092		
	Total	36.853	132			

a. Dependent Variable: USM

b. Predictors: (Constant), SEmpM, SRM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.390	.261		1.491	.138		
	SRM	1.645	.133	1.407	12.378	.000	.193	5.178
	SEmpM	.858	.135	.723	6.356	.000	.193	5.178

a. Dependent Variable: USM

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.797[a]	.635	.632	.34394787157 8622	.635	227.720	1	131	.000	.706

a. Predictors: (Constant), USM

b. Dependent Variable: NBM

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.939	1	26.939	227.720	.000[b]
	Residual	15.497	131	.118		
	Total	42.437	132			

a. Dependent Variable: NBM

b. Predictors: (Constant), USM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.917	.221		4.144	.000		
	USM	.855	.057	.797	15.090	.000	1.000	1.000

a. Dependent Variable: NBM