



GAUGING PERCEPTIONS OF EMPLOYEES AND CUSTOMERS ON THE IMPACT OF ADOPTION OF GOVERNMENT ELECTRONIC PAYMENT GATEWAY (GEPG) SYSTEM: THE CASE OF THE NATIONAL SOCIAL SECURITY FUND (NSSF), TANZANIA

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Abstract

This study assessed the perceptions of employees and customers on the impact of adoption of the Government Electronic Payment Gateway (GePG) System with a focus on the National Social Security Fund (NSSF). The study employed a cross-sectional survey design, and involved qualitative and quantitative research approaches. Convenience and purposive sampling techniques were adopted to select the study participants. Data were collected through a questionnaire from 97 respondents; and through interviews with 10 key informants. Data were analyzed using multiple analytical tools; thematic analysis technique was used to analyze qualitative data, while descriptive statistical technique was employed to analyze quantitative data with the aid of SPSS version 25. The study findings indicated that employees and customers had significantly positive perception on the impact of the adoption of GePG. The study findings also revealed that majority of users of GePG were familiar with the system, and this is essential for anyone involved in government financial transactions or online payments to government agencies. The study recommends that NSSF should continue promoting and educating customers about the advantages of using GePG for government payments through workshops, awareness campaigns, and targeted marketing efforts. The study further recommends that since most customers found GePG user-friendly, customer satisfaction can be increased by collecting feedback from users and implementing necessary changes to make the system even more intuitive and easy to use.

Keywords: *Employees, Customers, Perceptions, and Electronic Payment Gateway.*

1.0, Introduction

Governments all over the world need revenue to finance their expenditures. Sustainable revenue collection is necessary in promoting efficiency in the service delivery and economic development of a country (Sausi, 2021). For effective mobilization of revenue, there is the need to put in place mechanisms which enhance sustainable revenue collection. Use of automated systems has been proven to produce massive efficiencies in regard to enhanced revenue collections. Globally, governments are under pressure to deliver basic services to their citizens (Chepkoech, 2022). To fund amenities such as clean drinking water, waste management, adequate power supply and healthcare, sub-national/city administrations are under financial stress (Council, 2020). The development of an integrated revenue collection system (e-payment) provides the necessary platform to support cities and municipal administration to more efficiently collect own revenue and to assist the decision-making process through improved data collection, visual data representation, sophisticated reports and analytical metrics (World Bank, 2014).

The core characteristic nature of electronic payment is said to embrace security, universality, cost effectiveness, speed, usability, acceptability, convenience and privacy (Chandio, 2019; Nwankwo and Ajemunigbohun, 2018; Sumanjeet, 2021; Tennyson and Mercy, 2018). More so, the use of electronic payment systems improves the quality of financial report; reduces corruption; prevents forgery and illicit copying of e-cash; promotes economic growth and development, and reduces costs. It also promotes accountability and transparency; brings greater convenience and security; and promotes efficiency and effectiveness (Baley, Mengesha and Gebreal, 2019; Davis, 2022; Humphrey, Kim and Vale, 2020).



Tanzania, like any other countries in the globe, passed through challenging environment as regards revenue collection. Such challenges were seen in terms of tax exemptions, administrative incapacity, corruption, and difficulties in estimating the number of registered taxpayers (McCluskey et al. 2017). Other challenges included limited payment options, difficulties in performing reconciliation, and poor record keeping. In order to curb such challenges, the Government through the Ministry of Finance and Planning introduced the Government Electronic Payment Gateway (GePG) system. This was aimed at improving the whole cycle of revenue management. For example, with this initiative in place, as of June 2020, about 660 institutions, 28 Social Security Funds, and 6 mobile money operators were covered (Ishengoma, 2021).

The GePG system also has a number of benefits to individuals, institutions and governments as it increases transparency in all stages of the revenue collection process within the Government and its institutions (Ishengoma, 2021). The system also allows citizens to make centralized payments for government services using a control number (Alketbi, 2018); connects various commercial banks, social security funds, aggregators, and mobile money operators, providing a wide range of payment options (Muthiora, 2015). It also generates control numbers and once payment transaction is completed, it generates an electronic receipt which is sent to the payer via SMS (Alshawi, and Allegany, 2009). On the institution side, users from financial and account departments use the system to generate invoices and collect revenue based on the services they offer (Sausi, 2021). The system has a dashboard that displays various information such as collection summary, collection targets, paid and pending bills, and list of service providers such that the information about revenue collection can be seen and tracked in real-time (Almasi, 2021). It also enables generation of revenue reports, performs reconciliation, and facilitates timely transfer of revenue (Alshawi, and Alalwany, 2009).

Despite the fact that the Government of Tanzania developed the Government Electronic Payment Gateway (GePG) system to improve the whole cycle of revenue, it has been noted that institutions and agencies still face challenges in revenue collection (Sebo, 2021). For instance, TRA and TCRA failed to ensure effective collection of revenue, fees and penalties from telecoms service providers (Mwakatumbula, 2017); and also demonstrated ineffective use of Electronic Revenue Collection System (ERCS) and Telecommunications Revenue Assurance System (TRAS) by TRA to verify the correctness of the tax returns submitted by telecommunication service (Agboola, 2020). Statistics also indicate that, the Tanzania Electric Supply Company Limited (TANESCO) has been facing a substantial debt of 454.4 billion Tanzanian Shillings (TZS), which it owes to its customers and that, out of the total debt, an overwhelming amount of 205 billion TZS was attributed to unpaid electricity bills for various government institutions and agencies thereby significantly impacting on its overall performance and operations (NAOT, 2022).

Furthermore, over the four financial years starting from 2015/16 to 2018/19, almost 70% of Local Government Authorities in Tanzania did not achieve their targets for revenue collection (Mgonja & Poncian, 2019). On average, more than 53% of Local Government Authorities recorded more than 20% variation from the set targets. This was despite the emphasis given to Local Government Authorities by PO-RALG that, variations in set targets and actual collection should not exceed 20% for each revenue source (Mvella, 2018). Furthermore, the audit noted a small increment of own source revenues contribution to the Local Government Authorities' budgets. From 2015/16 to 2018/19, the contribution of own source revenues decreased from 28% to 11%. This indicates that the dependency of Local Government Authorities on the Central Government increased tremendously because of the increased

gap of the funds needed in the Local Government Authorities against revenue collections from their own sources (NAOT, 2020).

The PSSSF financial statements from 2018 to 2021 indicated that property investments collected less revenues as compared to the revenues collected in financial markets (Bukwimba, 2022). The average revenue collected from property investment was 18% while the revenues collected from financial markets accounted for 67%, making a difference of 49%. For the case of NSSF, Kinyerezi and Kijichi affordable house projects had no revenues collected for the financial years 2019/20 and 2020/21. Likewise, house sales and plot projects had unsatisfactory collections as they generated losses to the Fund. The unsatisfactory performance on revenue collection was mainly caused by inadequate internal controls for revenues collection, and inadequate planning for operationalization of the invested properties (NAOT, 2022). It was against this background that the study aimed to assess the perceptions of employees and customers on the impact of GeGP on revenue management cycle using NSSF as a case study.

2.0 Theoretical Literature Review

2.1 Government Electronic Payment Gateway (GePG) and Users Satisfaction

The Government e-Payment Gateway (GePG) is a system through which users can pay for public services via cards, internet Social Security Funding and mobile money. GePG uses information and communication technologies (ICTs) to improve the activities of public sector organizations (Stephens, 2000). According to Van Heerden and Vine (2007), E-Government is the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of the government. These technologies serve different ends: better delivery of government services to citizens, improved interactions with businesses and industries, citizen empowerment through access to information, or more efficient government management (Sigwejo, 2015).

According to Contini et al. (2011), information technology has revolutionized the Social Security customers by enabling them to make payment online through Government Electronic Payment Gateway, which makes it is easier for the National Social Security Fund to raise its revenue. Traditional Social Security Funds required that customers physically visit Social Security Fund branches to make payment. Thus, the relationship between customers and their Social Security Funds was at stake since some customers could not make payment on time.

According to Jiang and Wang (2008), Social Security Funds had to evolve based on customers' needs by creating account information layers that were connected to databases interlinked with customer information that could be accessed by the Social Security Fund staff and customers. As a result, the use of Government Electronic Payment Gateway has enabled Social Security Funds to interact with customers and thus, increase customer experience with the Social Security Funds, resulting into favourable satisfaction (Bellini, 2015). The Government Electronic Payment Gateway has been implemented through internet web platforms and networks and other IT technologies have emerged as important channels that Social Security Funds can utilize to enable customers to make payment online (Wang et al., 2014). As a result, Social Security Funds are able to collect revenues from wide geographical dispersions (Rahman, 2014).

User Satisfaction includes perceived ease of use and perceived usefulness of technology or system. According to Doll and Torkzadeh (1988), user satisfaction is defined as the opinion of the user about a

specific technology application which they use. Ives et al. (1983) defined user satisfaction as the extent to which users believe the technology available to them meets their technology requirements. User satisfaction can also be a person's feelings of pleasure or disappointment that results from comparing a perceived performance of use of technology with their expectations (Kotler and Keller, 2009). As a matter of fact, user satisfaction could be the pleasure derived by someone from the use of technology. User satisfaction varies from one person to another because it is utility.

Describing utility, an old adage states that "One man's meal is another man's poison"; highlighting the fact that it is sometimes very difficult to satisfy everybody or to determine satisfaction among groups of individuals (Linders, 2012). It is the response to the evaluation of the perceived discrepancy between prior expectations and the actual performance of the technology as perceived after its use (Tse and Wilton, 1988). Therefore, the current study assessed the perceptions of employees and customer satisfaction regarding the adoption of GePG and its impact on revenue management.

2.2 Guiding Theories

This study was guided by the Negativity Theory, the Disconfirmation theory and the Innovation Diffusion Theory.

2.2.1, Negativity Theory

This theory was developed by Gupta (2015), and suggests that any discrepancy in performance from expectations will disrupt the individual, producing negative energy. The theory states that when expectations are strongly held, consumers will respond negatively to any disconfirmation. Accordingly, dissatisfaction will occur if perceived performance is less than expectations or if the perceived performance exceeds expectations. However, this theory does not account for the direction of disconfirmation. It only indicates that any variation from what is expected will offend the user, and this will eventually lead to dissatisfaction.

2.2.2 Disconfirmation Theory

Disconfirmation theory argues that satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations (Lankton & McKnight, 2012). This theory differs from the Negative theory in that it accounts for the direction of the discrepancy between the actual experience and the expectation of the user. Szymanski and Henard (2001) found in the meta-analysis that the disconfirmation paradigm is the best predictor of user satisfaction. Based on this theory, when the National Social Security Fund informs its users to use the Government Electronic Payment Gateway, the users might compare their experience with what they envisaged. There is likely to be some form of disconfirmation; either positively or negatively. Confirmation occurs when actual experience of the Government Electronic Payment Gateway service conforms to customer expectations (Wolverton, 2020). Disconfirmation occurs when the actual experience does not conform to expectations. In the positive sense, a user gets more value and gratification than the expected from using the Government Electronic Payment Gateway service. In the negative aspect, the user gets less value or gratification than expected. Confirmation or positive disconfirmation will lead to satisfaction of the users while a negative disconfirmation will lead to user dissatisfaction (Fan, & Suh, 2014).

2.2.3 Innovation Diffusion Theory (IDT)

The Innovation Diffusion Theory (IDT) was developed by Rogers (1962). The theory originated in communication to explain how, over time, an idea or product gains momentum and diffuses through a

specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behaviour, or product. The key to adoption is that the person must perceive the idea, behaviour, or product as new or innovative. A good number of staff of Social Security Funds have taken the advantage of information communication technology in their operation in order to improve the standard of its operation. This recent innovation is achieved through massive development of websites and mobile applications that befit the needs of users of Social Security Funds. Users are availed with the opportunity to make payment to National Social Security Funds from wherever they go as long as there internet connectivity (Ferri, 2020). This means users can interface with their account freely without presenting themselves to the premises of National Social Security Fund.

2.3 Empirical Literature Review

Tella and Abdulmumin (2019) studied the Predictors of User Satisfaction with E-payment System at the University of Ilorin, Nigeria. The study used a sample of 260 academic and non-academic staff from six (6) out of 12 faculties that made up the university. Data were collected through a modified questionnaire. The study reported that a considerable percentage of the respondents (93.5%) were satisfied with the e-payment system. However, the present study assessed user satisfaction with the Government Electronic Payment Gateway at National Social Security Fund (NSSF) in Tanzania. Specifically, the study covered the extent users were aware of the GePG, the perceptions of users on the adoption of GePG, and the challenges encountered in the adoption of GePG at NSSF.

Seo (2020) conducted an empirical research in Indonesia to examine vendor satisfaction with E-government procurement systems in developing countries. The study employed a sample size of 227 vendors based on their experiences with e-government procurement systems. The study found that service convenience is negatively influenced by the presence of information, function and system failures; and that the effects of these failures varied across dimensions of service convenience. In turn, service convenience and performance failure exert opposite impact on vendor satisfaction with e-government systems. However, the study did not cover user satisfaction with the Government Electronic Payment Gateway at the National Social Security Fund (NSSF) in Tanzania. The present study extends to the extent users are aware of the GePG, the perceptions of users on the adoption of GePG, and the challenges they face in the adoption of GePG at NSSF.

3.0 Research Methodology

This study employed a cross-sectional survey design; and involved the use of both qualitative and quantitative research approach, with a sample size of 97 respondents who filled questionnaires and 10 key informants who were involved in interviews. The target population of the study included employees and customers of NSFF. This study employed purposive technique to select NSSF management cadres and employees. The purposive sampling technique was used to select respondents for the study without providing every item of the population the equal chance of selection (Vijayalakshimi and Sivapragasam, 2019). Convenience sampling technique is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher (Saunders et al, 2007). The study employed the convenience sampling technique to select NSSF customers who used Government Electronic Payment Gateway. The respondents were obtained through the assistance of the National Social Security Fund by locating their organizations. Only NSSF customers who were easily accessible and willing to participate in the study were included in the study. Questionnaire and interview methods were used to collect primary data from the respondents. Questionnaires were self-administered to customers while interview technique was used to collect information from employees. The collected data was analyzed using multiple analytical tools whereas a thematic analysis technique was used to

analyze qualitative data, while descriptive statistical technique was employed to analyze quantitative data with the aid of SPSS version 25. All ethical issues were considered by requesting research permits from relevant authorities, and using consent forms to ensure freedom of respondents during conversation.

4.0 Findings and Discussion

4.1 Demographic characteristics of the respondents

This section covers respondents' biographic information including age, gender and level of education as shown in Table 1.

Table 1: Characteristics of Respondents (N=97)

Characteristics	Category	F	%
Age	18-30 years	22	23
	31-40 years	55	57
	41-50 years	5	5
	51-60years	4	12
	60 years and above	11	
		Total = 97	Total =100%
Gender	Male	77	79%
	Female	20	21%
		Total= 97	Total =100%
Educational level	Diploma	19	20%
	Certificate	11	11%
	Bachelor's Degree	45	46%
	Master's Degree	19	20%
	PhD	3	3%
		Total = 97	Total=100%

Source: Field Data (2023)

4.1.1 Age of respondents

The findings in Table 1 show that 52% of respondents were aged between 31-40 years; 23% were between 18-30 years, and 18% were aged between 41-50 years and above. The study findings implying that the majority of the surveyed employees were aged between 31-40 years. Likewise, majority of workers at NSSF were likely to have relevant experience which might have led to higher work performance. The fact that a significant number of workers were aged between 18-30 and 41-50 implied a good mix of employees with different levels of experience, which could have led to a more motivating and productive work environment. The presence of employees aged 45 and above might have also provided a sense of stability and confidence at NSSF, which helped to boost morale and motivation. The findings are in line with the study by Huang and Huang (2018), which showed that age between 31 and 40 years is associated with higher levels of work performance. The authors concluded this age range can be a significant predictor of best performers, and thus should be considered in the development of organizational policies and practices. For the current study, this suggests that employees and customers were well positioned to comprehend questions and, therefore, provided reliable and valid responses.

4.2.2 Gender of respondents

The findings revealed that 79% of the respondents were male while 21% were female as shown in Table 1. The study findings imply a gender gap in terms of access to employment opportunities. Although women are increasingly becoming more involved in employment, they still lag behind their male

counterparts in terms of access to employment. This could be due to such factors as cultural norms and gender roles in the society, lack of access to education and technology, and lack of access to training and resources. It is important that these issues be addressed in order to ensure that women have equal access to employment for income generation. NSSF also should thus consider reviewing its recruitment policy to consider female-male ratio so that the gap is reduced.

4.2.3 Education Level

The study findings in Table 1 show that 46% of the respondents had bachelor degrees, 20% had master's degrees while 20% had diploma education, 11% had certificates and 3% were PhD holders. Therefore, majority of respondents had high levels of education, and this depicts that employees at NSSF might have high job performance. This is because employees with higher educational qualifications are more likely to be motivated to perform better in their roles.

Higher educational qualifications usually lead to higher levels of knowledge, skills and abilities, which can lead to greater job performance; and a high ability to adopt new skills necessary to use GePG at NSSF. The study findings are in line with a study by Allen (2021), which found a positive relationship between educational level and job performance. Specifically, participants with higher levels of education, such as those with bachelor degrees or higher, were found to have better job performance than those with lower levels of education. The educated majority also confirms that all respondents understood the research questions, and were able to give accurate responses to the questionnaires and interviews and, therefore, they could supply more reliable data.

4.3 Empirical findings

4.3.1: Awareness of employees and customers on the adoption of GePG at NSSF

The study first assessed the awareness and familiarity of employees and customers with GePG. Table 2 illustrates the findings.

Table 2: Familiarity with GePG

Familiarity with the uses of with GePG	Frequency	Percentage
I have Never heard of it	0	0
I am aware but have never used it	6	6%
I Use it only sometimes	71	73%
I use it on daily basis	20	21%
Total	97	100%

Source: Survey Data (2023)

The study findings in Table 2 indicate that majority (91%) of respondents were aware of the adoption of GePG and had at least used it. Thus, while the majority of users of GePG at NSSF are familiar with the system, they do not use it on a daily basis. This suggests that there may be barriers or challenges to using the system regularly, despite the perceived benefits and knowledge of its use. This suggests the need for further education and support for customers to effectively utilize the system. Familiarity with the uses of GePG is essential for anyone involved in government financial transactions or online payments with

government agencies (Kemincha, 2022). During interviews, one of the respondents had the following to say:

Most of our customers are familiar with the use of GePG; also our employees are more knowledgeable about the system because they help customers to understand the benefits of the system and how to use it effectively. Furthermore, increased customer inquiries have increased the demand for both GePG hardware and software although customers do not use it on daily basis (Key informant1-June, 2023).

These findings disagree with the study by Kisoka (2020), who found a gap on the awareness on the usage of GePG between NECTA employees and NECTA customers due to unsatisfactory efforts by NECTA, government and other stakeholders. The study also found that NECTA suffered a shortage of funds, ICT technicians, and ICT devices; and had unreliable network connectivity and while it used out dated technology in its attempts to deploy e-government. The study also established that lack of funds causes other challenges.

4.3.2 Quality of GePG

Table 3: Rating the Quality of GePG

How do you rate the quality of GePG?	Frequency	Percentage
Excellent	34	35%
Very Good	56	58%
Good	7	7%
Poor	0	0%
Very poor	0	0%
Total	97	100%

Source: Survey Data (2023)

The findings in Table 3 reveal that 58% of the respondents indicated that the quality of GePG was very good, 35% indicated it was excellent and 7% indicated it was good while none rated it as poor or very poor. The study findings imply that employees and customers had positive perception on the equality of GePG. This can enhance trust by users in the system and, therefore, adoption of the system revealed more benefits in the day to day business operations. The absence of system downtime or glitches in GePG ensures that payments can be processed accurately and efficiently. This reliability is crucial as it instills trust among customers, and minimizes the risk of financial losses or disruptions in payment processing.

The study findings also imply that the user-friendly interface and seamless payment experience provided by GePG reduced confusion and inconvenience for users. This positively impacts customer satisfaction and encourages more users to adopt GePG as their preferred payment method. Generally, the study findings highlight the positive attributes of GePG, including its reputation for excellent quality, reliability, and user-friendly interface. These aspects contribute to the overall effectiveness and customer satisfaction with GePG as a payment solution. The use of GePG has significantly transformed and improved financial management systems in various government agencies and departments. During interviews, one of respondents testified that;

The quality of GePG is very good because it ensures data privacy and protection through secure encryption protocols. It has a high level of reliability, ensuring that payments are processed accurately and efficiently without any system downtime or glitches. It provides a user-friendly interface that is easy to navigate and understand. It offers a seamless and intuitive payment experience for users, minimizing any confusion or inconvenience during the payment process. In fact, GePG is accessible to a wide range of users, and it is compatible with different devices and

browsers, enabling users to make payments from anywhere, anytime (Key informant 2-June, 2023).

These findings disagree with the study by Kemincha (2022), which revealed that end-users of the GePG system positively perceived the quality of the GePG system; respondents were neutral with the quality of support from the GePG system support team, as they neither agreed nor disagreed, and there was a negative weak correlation between satisfaction levels and the quality of support from GePG and end-users' intention to continue using the GePG payment services. Therefore, this study concludes that despite end-users' positive perception of the quality of the GePG system, more efforts should be invested to improve it so long as technology changes from time to time.

4.3.3 Perception towards reliability of GePG

The study also determined customer perceptions towards the reliability of GePG at NSSF. Table 4 depicts the findings.

Table 4: Perception towards Reliability of GePG

Perception towards reliability	NSSF sympathy and reassurance when customers face problem	Guarantees accuracy and fast transaction GePG	GePG service provided 7 days week	Customers feel Safe in transactions through GePG
N	97	97	97	97
Mean	3.4900	3.2400	3.9000	4.0400
Std. Deviation	1.21018	1.19865	0.73168	0.69515

Source: Survey Data (2023)

The study findings in Table 4 revealed that the NSSF sympathy and reassurance when customers face problems scored the highest (Mean = 3.4900, SD = 1.21018), followed by guaranteed accuracy and fast transaction (Mean = 3.2400, SD=1.19865). GePG service is also provided 7 days a week (Mean = 3.9000, S.D = 0.73168) and that was followed by customer safety in all transactions through GePG (Mean = 4.0400, SD = 0.69515). The study found that customers perceive NSSF sympathetic; and NSSF through GePG provides its services seven days a week, while also customers feel safe in all their transactions through GePG. The study findings imply that NSSF is perceived as sympathetic and reassuring to customers when they face problems, which is likely to enhance customer satisfaction and loyalty. Additionally, the guarantee of accuracy and fast transactions provided by GePG are also valued by customers. The fact that GePG provides services 7 days a week indicates a high level of convenience for customers, which is likely to increase their satisfaction, making the organization more accessible to a wider range of customers. Furthermore, the perception that customers feel safe in all transactions through GePG suggests a high level of trust and security, which is crucial for customers when engaging in financial transactions.

The study findings are supported by the study of Mtebe & Sausi (2021), which found that the use of the system increased revenue collection by 44.28% while reducing the costs associated with revenue collection by 27.10% between 2015/2016 and 2019/2020 in the surveyed institutions. Moreover, the use of the system enhanced the trust of citizens in the government, and increased transparency and traceability in the process of revenue collection. Nonetheless, the challenge remained lack of integration

of the GePG system with institutional billing systems and the lack of self-service facility in some institutions.

Overall, these findings highlight the importance of customer service, convenience, and trust in building strong customer relationships and achieving customer satisfaction in the context of NSSF and GePG. Organizations should be sympathetic and reassuring to customer services, should guarantee accuracy and fast transactions, offer convenient service hours, and ensure customers feel safe and secure in their transactions to enhance customer satisfaction and loyalty.

4.3.4 Perceptions towards Responsiveness GePG

The study also captured customer perceptions towards responsiveness of GePG at NSSF as shown in Table 5.

Table 5: Perception towards Responsiveness GePG

Perception towards Responsiveness		Whenever customer faces any sort of GePG transaction problem	GePG is readily available on line	NSSF operates a regular and effective GePG complaint	GePG responds promptly
N		97	97	97	97
Mean		4.6900	4.7500	4.2300	4.6400
Std. Deviation		.77453	.45782	.69420	.65935

Source: Survey Data (2023)

The study findings in Table 5 reveal that whenever customers face any sort of GePG transaction problem, they were supported (Mean = 4.6900, SD = 0.77453). GePG was readily available online and could be accessed anytime (Mean = 4.7500, SD=.45782), and NSSF operated a regular and effective GePG complaint handling process (Mean= 4.2300, S.D = 0.69420). Moreover, GePG responded promptly hence preventing transaction queues (Mean = 4.6400, SD = 0.69535). The study also found that customers who faced any GePG transaction problems were effectively assisted. GePG is readily available online and can be accessed at any time, NSSF operates a regular and effective GePG complaint handling process. Lastly, GePG responds promptly, which helps in preventing transaction queues. The study findings imply that customers greatly valued the availability of GePG online, prompt response from GePG, and the effective complaint handling process to resolve any transaction problems.

The findings suggest that these factors contribute to a positive customer experience and satisfaction with GePG. It also highlights the importance of a reliable and efficient complaint handling process in addressing any issues that customers may face. Furthermore, the findings indicate that GePG's prompt response helps to prevent transaction queues, which is another key factor for customers. Overall, these findings suggest that providing online accessibility, responsive customer service, and effective complaint handling can enhance the overall experience of customers with GePG.

The findings relate with a study done by Kemincha (2022), which found that in Tanzania, end-users of the GePG system positively perceived the quality of the GePG system. Based on the PCA analysis, respondents were neutral about the quality of the support they received from the GePG system support team, as they neither agreed nor disagreed. The study found a negative weak correlation between satisfaction levels with the quality of support from GePG and end-users’ intention to continue using the GePG payment services. Therefore, the study concluded that despite end-users’ positive perception of the quality of the GePG system based on ease “of use and responsiveness”, end-users of the GePG system were neutral about the quality of the support they received from the GePG support team.

4.3.5 Perception towards Assurance in the use of GePG

The study also examined perception towards assurance in the use of GePG at NSSF. The study found that positive perceptions towards assurance in the use of GePG at NSSF. Table 6 summarizes the findings.

Table 6: Perception towards Assurance in the Use of GePG

Perception towards Assurance		GePG gets adequate support from NSSF	All employees at NSSF have strong knowledge to answer enquiries about GePG and the operations	Employees at NSSF are consistently courteous with customers who use GePG	The behaviour of all employees at NSSF instills confidence in customers using GePG
N		97	97	97	97
Mean		4.0700	4.2300	4.3000	4.2300
Std. Deviation		.67052	.67950	.54123	.75015

Source: Survey Data (2023)

The study findings as depicted in Table 6 revealed that GePG users get adequate support from NSSF, and this aspect scored the highest (Mean = 4.0700, SD = 0.67052), followed by sufficient knowledge of all employees at NSSF to answer enquiries about GePG and the operations (Mean = 4.2300, SD 0.67950). Employees at NSSF are also consistently courteous with customers who use GePG, and the aspect scored (M = 4.300, S.D = .54123). Lastly, the behavior of all employees at NSSF instilled confidence in customers using GePG (M = 4.2300, SD =0.75015).

The study findings imply that GePG has facilitated streamlined and efficient financial processes at NSSF. By automating financial transactions, GePG might have reduced the risk of errors and delays in payments, contributing to improved operational efficiency. Moreover, GePG has also proven to be cost-effective for NSSF. With the implementation of GePG, the company has reduced manual administrative tasks, saving time and resources. Additionally, GePG has helped in minimizing fraud and leakage of funds, resulting in significant cost savings for NSSF.

In addition to its security and efficiency as accrued benefits, GePG might have also contributed to the digital transformation at NSSF. By adopting this digital payment system, NSSF has embraced modern technology and kept pace with the ever-evolving digital landscape. This has enabled NSSF to stay at the forefront in technological advancements in the financial sector, ensuring its relevance and competitiveness in the industry. Overall, the study findings demonstrate that GePG has had a profound impact on the operations of NSSF. It has not only enhanced the security, transparency, and accountability of financial transactions but also operational efficiency and reduced costs. As a result, NSSF has positioned itself as a trusted and reliable institution, committed to meeting the needs of its stakeholders and providing a secure and efficient financial ecosystem.

During interviews, one of the respondents had the following to say:

The perception towards assurance in the use of GePG at NSSF is largely positive. This is because the GePG offers many benefits to NSSF, including increased security for its operations, better efficiency for data collection and management, and improved data accuracy. GePG also provides assurance of accuracy and reliability for financial transactions and processes. Most importantly, GePG allows NSSF to improve transparency and accountability of its operations, which is vitally important for the organization to remain compliant. Additionally, GePG is seen as a reliable and trusted technology that is well suited for use in the financial sector. This is why most customers of NSSF trust and value the assurance that GePG offers. (Key Informant 3-June, 2023).

These findings are supported by the work of Sausi, Mtebe & Mbelwa (2021) who found that trust in system, information quality, and perceived usefulness had a significant positive impact on users' satisfaction with GePG system, whilst service quality had a significant negative impact. In contrast, system quality did not have an effect.

4.3.6 Perception towards empathy shown by employees when they serve customers on use of GePG

The study intended to examine perceptions towards the empathy shown by employees when they served customers on the use of GePG. In order to understand the perceptions and level of empathy displayed by employees when they interact with customers regarding the use of GePG, it should be noted that GePG is a digital payment system used by governments and public institutions to collect various types of payments, such as taxes, fines, fees and utility bills. Table 7 is illustrative.

Table 7: Perceptions towards Employees' Empathy regarding the Use of GePG

Perception towards empathy	NSSF give search customer individualized	Employees at NSSF respond politely	GePG at NSSF operates at hours convenient	All employees at NSSF understand	Whenever request for GePG service NSSF
N	97	97	97	97	97
Mean	4.3900	4.3100	4.3400	4.3800	4.3800
Std. Deviation	.56667	.61455	.57243	.64792	.48783

Source: Survey Data (2023)

The study findings as depicted in Table 7 revealed that NSSF gives each customer individual attention to solve GePG-related issues, and the aspect scored the highest (Mean= 4.3900, SD = 0.56667), followed by employees' polite response, humbleness and friendliness when customers enquire about GePG service (Mean = 4.3100, SD= 0.61455). GePG at NSSF operates at convenient hours to all customers, and the aspect scored (Mean = 4.3400, S.D = 0.57243). All employees at NSSF understand customer-specific needs with GePG (Mean=4.3800, SD=0.6492), and also whenever customers requested for GePG service, NSSF staff gave them individual attention (Mean = 4.3800, SD = 0.48783). In order to consolidate the findings with qualitative data, respondents were consulted through interviews; and one of them had this to share;

The perception towards the empathy shown by employees on the use of GePG is generally quite positive. Most employees find that GePG offers an efficient way to solve problems; and that people who provide support are welcoming and understanding. Employees also appreciated the friendly approach taken towards problem-solving and the speedy resolution of any issues encountered. Overall, the perception of GePG and its employees is quite positive” (Key Informant 4-June, 2023).

Generally, these findings imply that NSSF and its employees effectively demonstrate empathy towards customers when it comes to using the GePG service. This positive perception of empathy contributes to overall customer satisfaction and trust in the organization. This suggests that NSSF has a supportive and customer-oriented approach as employees are accommodating and understanding towards customer needs. This can lead to increased customer loyalty and positive word-of-mouth recommendations for NSSF and its GePG service. The findings also highlight the importance of providing convenient operating hours and individual attention to customers, as these factors contribute significantly to the positive perception of the empathy shown by employees.

The findings concur with Jovin (2021), who found that LGAs were equipped with e-government tools such as redundant internet link, business applications for all services rendered and integrated with Government Electronic Payment Gateway (e-GA 2021). Some citizens are illiterate and hence, they cannot use e-government systems; while customers had budget constraints to purchase gadgets and internet bundles (Jovin, 2021). Areas which need improvement include increasing e-government awareness budget from 2% of the total budget of LGA to at least 20% so as to cover training for both officers and customers. By doing this, the two groups will no more fear to using electronic transaction services; and will eliminate the criticism of using electronic business systems especially the ones related to internet security (Glover & Benbasat, 2010). Overall, the study findings suggest that NSSF has successfully implemented a customer-centric approach, and has established positive relationships with customers through their empathetic behavior on the use of GePG.

4.3.7 Perceptions of challenges in the adoption of GePG and way the forward

The third objective was to assess challenges in the adoption of GePG at NSSF and the way forward. The study examined power stability, internet signals, and ICT skills in the adoption of GePG as well as the way forward towards the adoption of GePG.

4.3.7.1 Power outage

The study found that power outage was one of the challenges facing NSSF in the adoption of GePG. Table 8 shows the summary of the findings.

Table 8: Challenges Facing the Adoption of GePG

Challenges on the adoption of GePG	Power outage hindering the adoption of GePG
N	97
Mean	4.3900
Std. Deviation	0.56667

Source: Survey Data (2023)

The results of descriptive statistics in Table 8 revealed that power outage hinders the adoption of GePG at NSSF (Mean = 4.3900, SD = 0.56667). The findings suggest that NSSF is unable to fully implement and utilize the GePG system due to unreliable power supply. The reliance of the GePG system on electricity to operate efficiently makes it vulnerable to interruptions caused by power outages. These interruptions not only disrupt the smooth functioning of the system but also hinder users' ability to access social security services online, and to carry out payment processes effectively.

Consequently, the incapacity to fully implement and utilize the GePG system due to power supply unreliability compromises the efficiency and effectiveness of the NSSF's payment procedures and overall service delivery. During interviews, one of the respondents had the following to say:

The National Social Security Fund (NSSF) used to face power outages as in other parts of Tanzania; and this poses a significant challenge to the successful implementation of the Government Electronic Payment Gateway (GePG) system. The GePG system is a crucial tool in streamlining and modernizing payment processes within the NSSF. It allows for automated electronic payments, enabling employers and employees to conveniently make contributions and access various social security services online. However, the power outages that NSSF used to face hinder smooth operation of this system. (Key Informant 5-June, 2023).

The study findings are consistent with the study by Akello (2014), which revealed irregular power supply as challenging the Uganda Revenue Authority (URA) in the provision of effective e-services. It is crucial to address the challenge of power outages for the NSSF to fully leverage the benefits offered by the GePG system. By ensuring a stable and reliable power supply, the NSSF can enhance the efficiency of their operations, streamline payment processes, and provide seamless access to social security services for their users.

4.3.7.2 Poor Internet Signal

The study found that NSSF was also facing the challenge of poor internet signals in the adoption of the GePG system. Table 9 shows the summary of the findings.

Table 9: Challenges Facing the Adoption of GePG at NSSF

Challenges in the adoption of GePG	Poor internet signal hindering adoption of GePG
N	97
Mean	4.3100
Std. Deviation	0.61455

Source: Survey Data (2023)

Results of descriptive statistics as depicted in Table 9 revealed that poor internet signal hindered the adoption of GePG (Mean = 4.3100, SD=0.61455). The findings imply that NSSF faced difficulties in fully adopting and utilizing the GePG system due to poor internet signals. This challenge hindered

seamless integration and utilization of GePG in the NSSF operations. The descriptive statistics also confirmed that poor internet signals were a significant factor hindering the adoption of GePG. During interviews, one of the respondents had the following comments:

The National Social Security Fund (NSSF) is currently confronting a significant obstacle in its efforts to adopt the Government Electronic Payment Gateway (GePG); and this is the poor internet signal. This challenge has become a hindrance to the seamless integration and utilization of GePG in the operations of the NSSF. (Key Informant 6-June, 2023).

The study findings are in line with the study by Akello (2014), which revealed that poor internet signals have been challenging the Uganda Revenue Authority (URA) in the provision of effective e-services. The study findings also imply that in order for the NSSF to fully benefit from the GePG system, improvements need to be made to address poor internet signals. This could include investing in infrastructure to improve internet connectivity, working with service providers to enhance signals or exploring alternative solutions such as satellite internet or mobile networks. By addressing this challenge, NSSF will be able to overcome this barrier and successfully adopt the GePG system, leading to more efficient and streamlined payment processes.

4.3.7.3 Lack of ICT Skills

The study found that, National Social Security Fund (NSSF) was facing lack of ICT skills among its employees which hindered adoption of Government Electronic Payment Gateway (GePG) system. Table 10 has a summary of the findings;

Table 10: Challenges Facing Adoption of GePG

Challenges in the adoption of GePG	Lack of ICT skills hindering adoption of GePG
N	97
Mean	4.3800
Std. Deviation	.64792

Source: Survey Data (2023)

Results of descriptive statistics as depicted in Table 10 reveal that lack of ICT skills hindered adoption of GePG as the aspect scored the Mean of 4.3800, and S.D = 0.64792. The study findings imply that the ability of employees to understand and utilize the GePG system effectively hinders the ability of the Fund to fully adopt the system and take advantage of its benefits, such as streamlined payment processes. This insight highlights the importance of not only implementing a technologically advanced payment system like GePG but also ensuring that employees are equipped with the necessary skills and knowledge to effectively operate it. Without this proficiency, the potential of the system cannot be fully harnessed, thereby limiting the efficiency and effectiveness of the Fund's payment processes. By not fully grasping the functioning and intricacies of the GePG system, employees might encounter challenges while using it, leading to errors and delays in payment transactions. These hindrances, in turn, jeopardize the seamless flow of funds within the organization, potentially impacting its overall financial management and operational efficiency.

Furthermore, the study findings also highlight the importance of thorough assessment and planning before implementing new systems or technologies. It is crucial for organizations to identify any potential gaps in skills and develop strategies to address them prior to introducing new tools or platforms. By

doing so, organizations can ensure smooth adoption and thus maximize the benefits from such systems. During interviews, one of the respondents had the following comments:

The National Social Security Fund (NSSF) was experiencing difficulties in adopting the Government Electronic Payment Gateway (GePG) system due to lack of information and communication technology (ICT) skills among its employees... Employees were unable to understand and utilize the GePG system effectively. This hindered the Fund's ability to adopt the system fully and take advantage of its benefits, such as streamlined payment processes” (Key Informant 7-June, 2023).

The study findings concur with Muita (2010), who revealed that the Kenya Revenue Authority (KRA) had been facing the problem of enough experts to manage e-services successfully so as to meet customer demands, and majority of its customers were computer illiterate, and thus it became difficult for KRA to provide e-services to all of its customers.

5.0 Conclusion and Recommendations

The study concludes that NSSF employees and customers had a positive perception of the GePG adoption since the GePG automates government payments, reducing time and costs associated with manual payments. It also enables users to securely make payments to vendors and contractors, improving budgeting and financial operations. The study also concluded that most GePG customers are satisfied as the system was user-friendly and reliable. Customers appreciated the convenience and security of electronic payments; and the excellent customer services provided by NSSF staff. They also felt confident in the security of the system, and appreciated the transparency and control it offered in tracking contributions and payments.

Recommendations on the study findings

The study recommends that NSSF should continue promoting and educating customers about the advantages of using GePG for government payments. This can be done through workshops, awareness campaigns, and targeted marketing efforts. While most customers found GePG user-friendly, there may be areas for improvement. Collecting feedback from users and implementing necessary changes to make the system even more intuitive and easy to use can help increase customer satisfaction and adoption. It is equally crucial to continue investing in training and development programmes for staff, and ensuring that they possess the necessary skills and knowledge to assist customers effectively. It is also equally important to underscore the fact that due to the changes posed by fast advancement in science and technology, the system should be reviewed so as to capture new features that support emerging technologies.

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