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**The Role of the Customer's Perception of Service
Quality (CPSQ) in the Relationship between
Information Technology Competence (ITC) and
Customer Satisfaction (CS),**

A field study applied on government sector

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Abstract

the present research aimed to test the significant relationship between information technology Competence represented in two dimensions: IT knowledge and IT skills on the one hand and customer satisfaction represented in two dimensions: on employees and on services on the other hand, as well as the Mediating role of customers' perception of service quality represented in four dimensions: reliability, assurance responsiveness, and empathy in this relation, the relationships between the variables are suggested by a theoretical framework deriving four hypotheses examined through structural equation modeling applied to a sample of 308 clients in the government sector, the findings pointed to the direct relationship between information technology competence and customer satisfaction, supported the direct relationship between information technology competence and customer perception of service quality, As well as the findings showed a positive correlation between customer perception of service quality on the one hand and customer satisfaction on the other hand, the results also showed an improvement in the strength of the relationship between information technology competence and customer's satisfaction through the mediating role of customer perception of service quality as intermediate variables. finally, the government sector should not only provide the facilities that enable employees to perform the tasks assigned to them but should also improve their competence in doing so which lowers customer concerns about possible paper and document loss or disabling their services.

Keywords: Information Technology Competence, Customer Satisfaction, Customer's Perception of Service Quality, Government Sector.

1. Introduction:

Every aspect of our society has been impacted by the development of information technology (IT) for improving operations, cutting costs, improving customer service, delivering better services, and enhancing transaction fulfillment, every organization is eager to utilize one or more information technology facilities to guarantee that their clients receive prompt high-quality services, Recently, The governments of the major industrial countries have adopted the provision of services to their citizens through electronic means, e-government is interactions between a citizen and their government through technological communications devices or platforms to improve their response to society's evolving needs, increasing their capacity and adaptability, and lower government operating costs, Many nations have succeeded in implemented e-government, including United States, Singapore, Vietnam, Korea, Japan and Egypt.

e-government is generally still new according to a study of (Nguyen et al.2021) so the governments have tended to adopt a strategy of converting all their services to digital systems and interaction with citizens as customers because the customer is considered the main and most important job for any sector especially governmental sector. Recently, the government sector in Egypt took initial steps towards providing its services electronically by established technology centers aimed to provide services to the public through applications that provide speedy delivery of services, ease of preparing reports, ensure that customer data is as secured as possible, these technological centers use of electronic systems allowing the employee's easy storage, preservation, and retrieval of information and it considered the beginning of the start towards the complete digital transformation of all services.

the success of the government organization in performing its mission depends largely on the competence of employees in the use of information technology which previous studies (e.g. Kunle et.al.2014; Hermawan& Suharnomo,2020) considered one of the determinants or antecedents of satisfying customers, the previous studies (e.g.Rosmika&Nurhaida,2017 ;Admkew,2021) have indicated that the employee's competence and their skills in providing services to clients is one of the most important determinants of achieving satisfaction and build a permanent relationship with customers, the information technology competencies will enable the management to empowering their employees to perform their role and enable the customer's access to



their services with highly reliable and satisfactory because the customer is considered the main and most important job for any service sector, the results of previous studies (e.g. Fidaa& Marwan,2020; Abdülhey,2020; Nourhan et al.2021; Evan et al. 2022) recommended additional research needed can be done in this area to identify the relation between the Information Technology Competence and customer's satisfaction specifically applicable to the government sector. thus, the question concerning how information technology competence plays a critical role in customer satisfaction and how customer's perception of service quality influences customer satisfaction is what the current study is concerned with examining the mediating role of customer's perception of service quality in the Relationship between Information Technology competencies (ITC) and customer's satisfaction.

2. The Research problem:

The Organizations have spent a lot of money putting electronic systems in place to update their infrastructure which contributed to the development of the technical performance of its employees, Recently, under the e-government initiative Egypt's government would like to introduce all its services electronically by technological centers which establish for this reason in order to keep pace with technological, Although the results of some previous studies (e.g.Holt et al.2007; Shahrabi,2016; Ahmed et al. 2019; Evan et al .2022) indicated that information technology competence is a variable that could have an effect on satisfaction customers it remains unknown if the technical intervention and information technology competence support or improve customer satisfaction or not, especially in a challenging environment like the government environment.

Based on the aforementioned, the research problem can be summarized in the following main questions:

- 1. Is there a significant relationship between Information Technology Competence (ITC) and Customer Satisfaction (CS)?**
- 2. Is there a significant relationship between the Information Technology Competence (ITC) and Customer's Perception of Service Quality (CPSQ)?**
- 3. Does the Customer Perception of Service Quality (CPSQ) have a major impact on customer satisfaction?**
- 4. Is there an indirect effect of Information Technology Competence (ITC) on customer satisfaction (CS) as a result of entering the perception of service quality (CPSQ) as a mediating variable?**

3. Prior Literature and Study Hypothesis:

3/1. The Relationship between Information Technology Competence and Customer satisfaction

The previous studies focused on testing the relationship between information technology and its impact on organizational performance, marketing performance and employee satisfaction, while the study of the relationship between the competence of employees in using information technology and its relationship with customer satisfaction has not received the same amount of attention especially in governmental organizations, among the studies that dealt with this relation, the study of Bakhat&Aziz (2012) Applied to customers in fast food restaurants in Pakistan, the results pointed to a significant relationship between information technology services and Customer satisfaction.

the study of Shateba&Zarkon(2013)Applied to banking institutions in Algeria the finding referred to there was no statistical significance between information technology Competence and customer satisfaction, whereas the study of Aduloju et al.(2014) Applied to insurance companies in Nigeria European the finding referred to the effect of technical skills on customer Satisfaction is moderated by behavioral skills, while the finding of Vandyck(2016) study about the impact of information technology on customers satisfaction applied to social security and national insurance trust the finding pointed to a significant relationship between the ITC and customer satisfaction.

On the contrary, the study of Gesto&Leopoldo's(2018) looked at the impact of information and communication technology (ICT) skills on the share of productivity components of human resources for the improvement of the functional system of management of the department of power distribution centers in districts of Guilan province, the study's findings suggested that traditional methods of execution were more still effective, the study of Nourhan et al.(2021) examined the relationship between information technologies and customer satisfaction applied to students who used electronic educational services at the logistics transport Academy, the results indicated that there was a strong significant relationship between information technologies and student satisfaction.

By reviewing the results of previous studies that examined the relationship between information technological competence on one hand and customer satisfaction on the other hand it is noted that the Previous studies differed in with dealing the concept of information technology competence - which is meant by the current study - Is information technology or information technology competence? this led to a difference in the results of these



studies However many of those studies agreed on the existing relationship between the two variables so the current study tends to examine this hypothesis:

H1. There is a statistically significant relationship between information technological competence on one hand and customer satisfaction on the other hand.

3/2. The Relationship between Information Technology Competence and Customer's Perception of Service Quality:

Does information technology competence play a role in the customers' perception of service quality? Many previous studies focused on testing the relationship between information technology competence and organizational performance more than testing the relationship between Information Technology Competence and customers' perception of service quality, in this context the study of AL-jeddah(2008) pointed to a significant relationship between information technology and organizational performance applied to Jordanian industrial companies, while the finding of Shehata(2012) study's indicated that there is a significant correlation between information technology on the one hand and the effectiveness of e-government on the other hand applied to the Civil Service Bureau in Jordan.

the study of Aduloju et al.(2014) examined the relationship between IT technical abilities and operational competence applied to 308 Bank employees, the finding referred to that IT technical abilities offer dependable and consistent IT support to the business and it may have a direct impact on operational competence and firm performance, Whereas the Nagem-Elden(2022) study examined the correlation between the quality of financial services and information communication technology, the finding referred to Information and communication technologies having a role in enhancing the quality of financial services.

In the same context and the same result as the Evan et al.(2022)study's which examined the direct relationship between information technology and information technology competence on perception of service quality, the results indicated that there was an effect of 0.45 and 0.21 respectively on perception of service quality applied on 201 employees in PT,ADM located in Tasikmalaya-Indonisia, the study of Lili(2019) about the impact of user satisfaction on information technology on the one hand and customers' perception of Service Quality on the other hand, the finding referred to a significant relationship between user satisfaction on information technology and Customers' perception of service quality.

The study of Kalasa&Annuar(2019) focused on the technology adoption propensity as a moderator variable between the Service Quality and

Customer Satisfaction the result pointed to a positive correlation between customers' perceptions of service quality and the propensity for technology adoption.

It is noted that there are few prior studies that focused on the direct relationship between information technological competence and Customer Perception of Service Quality, despite this lack however some studies indicated that there is a significant relationship between information technology competence and customer perception of Service Quality, in light of the information above the current study tends to test the following hypothesis:

H2. There is a statistically significant relationship between information technological competence and Customer's Perception of Service on Quality.

3/3. The Relationship between Customer's Perception of Service Quality and Customer's satisfaction

the Customer satisfaction and service quality are important challenges in the marketing and management fields because improving service quality is remaining the first step toward increasing customer satisfaction therefore previous studies focused on studying this relationship, like the study of Ismail et al.(2009) which dealt with Customer's Perception of Service Quality as independent variable represent of three dimension, the finding showed that a significant relationship between the perception of service quality and customer satisfaction, and this relationship is strengthened by entering perceived value as a Moderating variable.

The study of Shanker&Hrvay(2010)examined the effect of service quality on customer Satisfaction in banking sector in Malaysia, the finding pointed to Customer's Perception of Service Quality has a positive effect on customer satisfaction because satisfying human cravings is a goal that organizations seek to achieve, the study of Ghaffari et al.(2012) tested the relationship between service quality and customer satisfaction in the banking industry, the findings pointed to the customer perceptions of electronic services have a positive effect on customer preferences rather than traditional services, and also the customer perceptions of electronic service quality is higher than traditional service quality.

The study of Anthony(2014) aimed to investigate of customer satisfaction and service quality applied to Ghanaian employees in public service, the findings indicated a strong and positive relationship between customer satisfaction and service quality, while the findings of the Ajmal et al.(2017) indicated that a significant relationship between customer satisfaction and



service quality dimensions representing on: tangibility, empathy, and assurance.

It is the same result was confirmed by the study of Fidaa&Marwan(2020) which aimed to examine the relationship between service quality and customer satisfaction applied to 310 customers of the private telecom sector companies in India, the result revealed that there is a significant relationship between service quality and customer satisfaction.

sometimes the relationship between satisfaction and service quality maybe has a kind of overlap when satisfaction comes as an intermediary between service quality and customer loyalty as reported by Kamisah et al.(2021) that examined relationships between quality of service, customer satisfaction, and customer loyalty applied to 150 clients who have life insurance policies in Malaysia, the results showed that there is a mediation of customer satisfaction between service quality and loyalty this mediation is due to the significant effect between customer satisfaction and the perception of quality of service, it was noted that the dimension of reliability is the most influential on customer satisfaction and loyalty, this is the same result that was reached Abdülhey(2020) in a study applied to patients in some hospitals in Turkey, the effect of full mediation of job satisfaction was due to a strong significant relationship with service quality dimensions.

Through data gathered from in-person questionnaires the study of Nguyen et al.(2021) sought to assess the elements influencing citizens' satisfaction when using online governmental services in Vietnam the findings showed that the quality of online public services, citizen knowledge, privacy, security, trust, and accessibility all have an effect on how satisfied citizens with those services, so the commercial banks have to created mobile banking services specialized in meet the needs of their customers as a result of the quick development of information and communication technology. In order to understand how e-service quality affects customer loyalty the findings of Wasutida(2022)study's applied to 271 young customers dealing with commercial banks in Thailand revealed that the four e-service quality dimensions positively affect customer loyalty, the finding also showed the importance of e-service quality in raising customer satisfaction, In the same context.

The study of Evan et al.(2022) pointed to a significant relationship between service quality and customer satisfaction applied to 201 employees in PT,ADM located in Tasikmalaya-Indonesia, this result was confirmed by the study of Zygiaris et al.(2022) which examined the impact of the five dimensions of service quality: Empathy, reliability, assurance, tangibles and responsiveness on customer satisfaction applied to 117 auto care

service clients in Saudi Arabia, the result showed that the service quality of auto care is a significant determinant of customer satisfaction.

it is noted by reviewing previous studies indicated there is a significant relationship between customers' perceptions of service quality and customer satisfaction, but it does not explain the nature of this relationship, since customers' perceptions of service quality reflect positive trends perceptions or customer expectations about the service provided, while Customer satisfaction comes through actual experiences and expertise with the organization, However, the previous studies indicated that the service quality is one of the most effective tools to gain customer satisfaction, so the current study tends to test the following hypothesis: H3. There is a statistically significant correlation between Customer's Perception of Service Quality and Customer's satisfaction.

3/4. The Mediating Role of Customer's Perception of Service Quality between Information Technology Competency and Customer's satisfaction

The mediating role of customers' perception of service quality has gained the attention of Many studies (e.g. Ramasubbu et al.2008; AJmal et al.2017 ;Yeni&, Yasri,2019; Kalasa&Annuar,2019; Al-Gasawneh et al.2022) compared to other variables, this indicates that reaching customer satisfaction is not limited to the direct relationship with information technology competency only but rather requires the presence of intermediate variables whether mediator or moderator support reaching consumer satisfaction.

The study of Ramasubbu et al.(2008) tested the first hypothesis that there is a positive relationship between higher levels of technical skills of employees and customer satisfaction overall, The results showed that this relationship is moderated by behavioral skills, and they also discovered that the Customers who frequently receive services appreciate technical skills of support staff more than first-time customers, While Jason's (2013) study examined the effect of complementary IT resources on the service-profit chain and competitive performance of South African hospitality firms applied to 112 South African hospitality establishments, the results showed that the complementary system of IT resources had significant direct effects on competitive performance, and this relationship is totally mediated by employee outcomes.

Whereas the study of Hidayat et al.(2015) examined how customer satisfaction and loyalty at Islamic banks in East Java are affected by service quality and customer trust, the result pointed to that loyalty at Islamic banks has a significant effect on customer satisfaction and revealed



that customer satisfaction in East Java is influenced both directly and indirectly by service quality and customer confidence, In the related context, The study of Rosmika&Nurhaida(2017)examined the role of service quality in the relationship between employees' competence, culture set, and customer satisfaction through the quality of service, applied to 100 customers of Bank Rakyat Indonesia Medan, the finding pointed to employees competence has an indirect effect through service quality, so we can say that the service quality has full mediation as an intervening variable to customer satisfaction.

The study by Boonlertvanich(2019) examined the impact of different dimensions of services mobile banking on customer satisfaction for mobile banking users in rural areas of Bangladesh during the COVID-19 pandemic the finding indicated that the reliability, responsiveness, and efficiency dimensions of mobile banking services have a significant influence on customer satisfaction during the COVID-19 lockdown times, In the opposite direction, the study of Darojat(2020) examined customer satisfaction as a mediating variable between e-service quality and customer loyalty applied to a sample of 170 clients of PT. Kidang Rangka Mebel Jakarta, the results pointed to there is a partial mediation of customer satisfaction between E-Service Quality service and customer loyalty, this is the same results shown by a study by Kamisah et al.(2021), the efficiency of the E-Customer Relationship Management (E-CRM) technologies was evaluated in the study offered by Dehghanpouri et al.(2020) which examined the relationship between customer satisfaction, service quality, privacy, and trust, to identify the factors of critical success for E-CRM systems, applied to 378 taxpayers in Iran's eastern Azerbaijan Province, the findings indicated that the customer satisfaction is mostly influenced by perceived service quality and the Customer satisfaction appears to be strongly influenced by the trust as a result service quality, and the trust, and privacy have a big impact on how well E-CRM systems work.

Al-Gasawneh et al.(2022) study investigates the mediating role of customers' perception of service quality between the marketing effectiveness and the CRM performance aspects: key customer focus-CRM information management-CRM organization-CRM-based technology, applied to some Jordanian hotels clients, the results showed that full mediation of service quality between the marketing effectiveness of Jordanian hotels and the CRM performance aspects.

By reviewing all previous studies it is noted that customer satisfaction is a behavior that is motivated by several factors including personal factors, price factors, and product quality, while the Customer's Perception of

Service Quality is affected by its five dimensions: such as reliability, Responsiveness, etc, However, previous studies agreed on the existence of convergence between the two concepts, and this convergence made Make that Customer's Perception of Service Quality is one of the most important incentives for customer satisfaction, so the present study tends to test the following hypothesis:

H4. There is a statistically significant role in Customer's Perception of Service Quality as a mediating variable between Information Technology Competency and Customer Satisfaction.

4. The study Model

In the context of reviewing previous studies and the objectives that the current study seeks to achieve a model for the current study has been developed shown in the following Figure number (1), The model is based on testing four main hypotheses about the Assumed relationships between the variables under the current study.

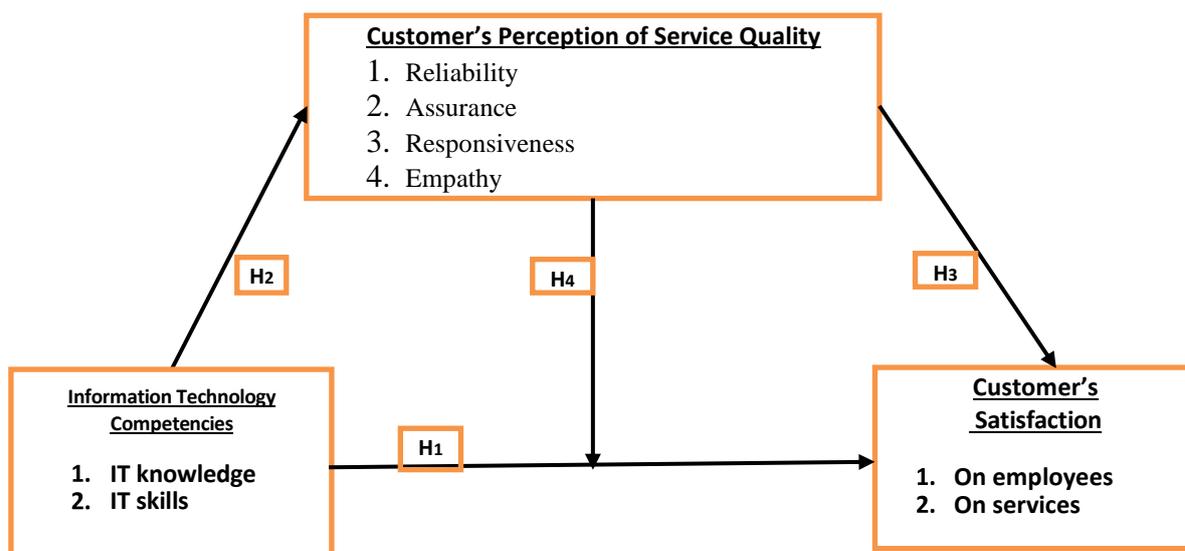


Figure (1)
The study's default model

5. The Study Methodology and Measuring

5/1. Measuring:

5/1/1 Information Technology competencies:

As previous studies the variable refers to an employee's capability to use information technology at the workplace (e.g.Perry,1990; Gold et al. 2001; Al-khaffaf et al. 2018), The scale proposed by Tippins&Sohi (2003), used by Fernandes et al.(2016), It consists of 15 items distributed in three



dimensions: IT knowledge, IT skills (know How), and attitudes that determine the performance level of the context of a given work (job, a group, etc.), These skills enable employees to produce results and add value, the current study will depend on two dimensions only of the same scale: IT knowledge and IT skills (knowing how), The scale has been translated and reformulated to relevant the field of study, the items will be directed to customers who usually obtain services, The scale consists of 8 items-4 items for each dimension were positively worded, Examples of items include the two dimensions: Technical support staff have a high level of computer-based technical ability, and the employees are knowledgeable about how to create and manage computer-based communication channels, Responses were distributed on a five-point Likert scale from never(1) to always(5), The results of the confirmatory factor analysis indicated that a good fit was ($\chi^2/df=3.522$, CFI=.950, RMSEA=.063), The overall scale's Cronbach's Alpha is.742.

5/1/2 The customer perception of service quality:

The current study used the wide-scale SERVQUA tool which was mentioned in more studies (e.g.Lapierre,1996; Parasuraman et al.1988; Parsuraman& Zeithaml,1991;Kalasa&Annuar,2019),The scale measures how much the customer's expectations and perceptions diverge from one another; the higher the perceived level of service quality the better the perceived level of service quality, the lower the perceived level of service quality, the lower the perceived level of service quality, The scale consists of 16 items, 4 items for each dimension-Examples of scale items for each dimension, Responsiveness: My service provider responds quickly, Reliability: The service provider completes the task correctly the first time around, Assurance: I feel secure doing business with a service representative, Empathy: My service provider paying close attention to me individually, the scale directs its items to customers who usually obtain services, the scale has been translated and reformulated to relevant the field of study, the present study used a five-point Likert scale with the range from Never (1) to Always (5), The results of the confirmatory factor analysis indicated that a good fit was ($\chi^2/df=3.978$, CFI=0.882, RMSEA =.089) The overall scale's Cronbach's Alpha is.753.

5/1/3 The Customer satisfaction:

the customer judges the strength of his or her relationship with a vendor or service provider on the sum of experiences with the company, Customer satisfaction refers to the customer's judgment as to whether the services meet his expectations and needs, and reflects the ability of corporations to draw in new customers, keep existing ones, and develop strong connections

with them over time (Ambro&Praprotnik,2008; Pakurár et al.2019).

The current study has measured Customer satisfaction using the scale of Pakurár et al.(2019) which consists of two dimensions that have been defined as follows: the satisfaction on employees, and the satisfaction on services, The scale consists of 6 items, three items for each dimension. for example of questionnaire items include satisfaction on services: the technology center provides the necessary information on the requirements for obtaining services, for example of the satisfaction on employees: the employee is familiar with his work and is able to answer all inquiries, The study depends on a five-point Likert scale with the range from Never (1) to Always (5), The results of the confirmatory factor analysis indicated that a good fit was ($\chi^2/df=3.766$, $CFI=0.879$, $RMSEA=.084$, Cronbach's Alpha for the whole scale is 0.794, and all questions are directed to customers who usually obtain services.

5/2.Statistical methods

The statistical programs Statistical Packages for Social Sciences version (26/SPSS) as well as analysis of a moment structures(22/Amos) were used in the present study, Additionally, because the current study was founded on previous studies, confirmatory factor analysis (CFA) was used to determine the validity of the measures for each study variable and the structural model to test the study hypotheses.

5/3: the sample and the study population

The study population is composed of customers who obtain services such as building permits, water facilities, and Electricity facilities offered by Information technology centers of the local administration in Minya governorate, The number of beneficiaries of these services may reach hundreds of individuals per day, using the probability sampling method, a random sample of 400 individuals was selected,308 surveys were returned, Overall response rate 77%, Table No. (1) shows the demographic characteristics of the participating sample in the present study.



Table (1)
Demographic characteristics of the sample

The characteristics	The survey distributed	The survey Returned	The response rate
Participants according to gender	400	308	100%
male	300	216	72%
female	100	92	92%
Participants according to education level	400	308	100%
Do not read and write	100	50	50%
Less than Middle Certification	100	100	100%
Middle Certification	100	100	100%
Higher Certification	100	58	58%
Participants by residential area	400	308	100%
countryside	200	154	77%
city/urban	200	154	77%

The Source: /the researcher

5/4. The results of the statistical analysis

Table No(2) shows the Mean, Standard Deviation, and Correlation Coefficients between the variables, the coefficients show that information technology competency is correlated with customer satisfaction by 0.332, information technology competency is correlated with customer's Perception of Service Quality (CPSQ) by 0.762, customer's perception of service quality is correlated with the customer satisfaction by 0.681, All of these correlation coefficients are significant at 0.05**, The structural model of the study is an acceptable fit where (TLI, .960, CFI, .983, RMR, .019, GFI, .932, AGFI, .796, PGFI, .331, RMSEA, .956, NFI, .980, RFI, .954, IFI, .983).

Table (2)

Mean, Standard Deviation, Correlation's Coefficients

Variables	Mean	Standard Deviation	Information Technology Competency	Customer's Perception of Service Quality	Customer's satisfaction
Information Technology Competency	3.35	.769	(.1000)		
Customer's Perception Of Service Quality	3.11	.852	.762**	(.1000)	
Customer's satisfaction	3.75	.742	.332**	.681**	(.1000)

**correlation is significant at 0.01. The Source: the SPSS/26 Program

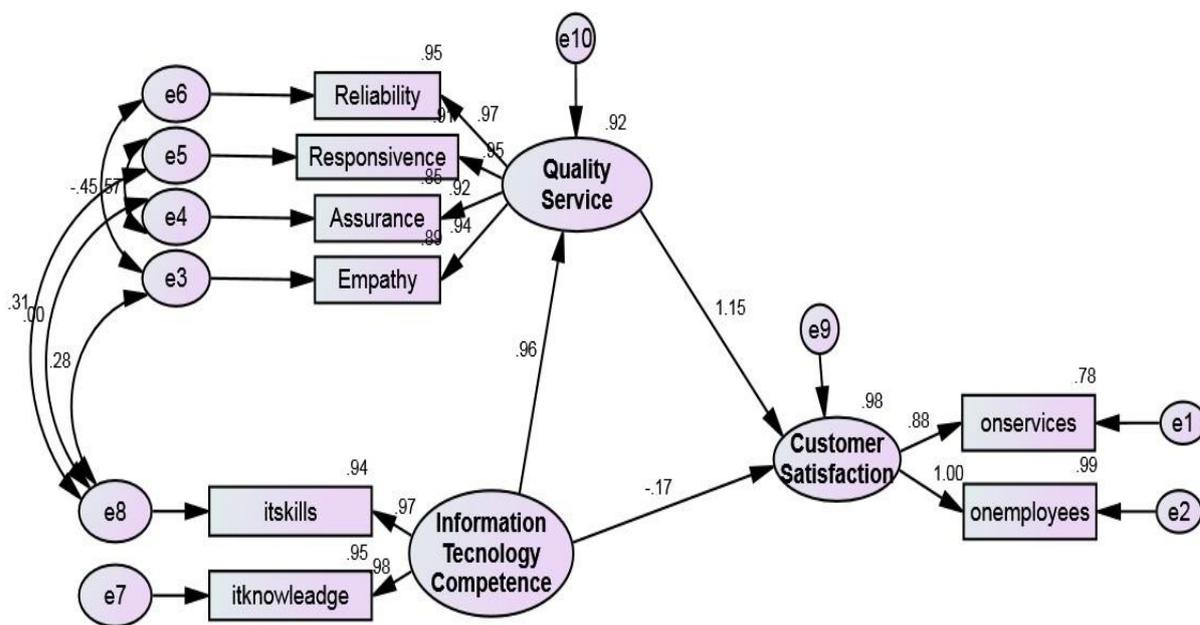


Figure2. Structural model of the study, The Source /Amos program/22

The first hypothesis states that: there is a statistically significant relationship between information technological competence and customer satisfaction, the finding shows that there is no significant relationship between technological competence and customer satisfaction, where $\beta = -0.17$, $SE=0.068$, $P=0.017$, $C.R.-2.379$, hence rejecting the first hypothesis.

The second hypothesis states: There is a statistically significant relationship between information technological competence and customers' Perception of Service on Quality, the finding indicated that $\beta = .954$, $SE=.029$, $P =0.000$, $C.R.33.193$, this result supported the second hypothesis by showing a significant relationship between information technological competence and Customer's Perception of Service on Quality they receive.



with regard to the third hypothesis, “There is a statistically significant relationship between Customer’s Perception of Service Quality and Customer's satisfaction, according to the findings in table (3), where $\beta = 1.083$, S.E.079, C.R.13.690, and $P = 0.000$, hence the third hypothesis can be accepted.

According to the fourth hypothesis, "Customer's Perception of Service Quality Plays a Statistically Significant Role as a Mediating Variable Between Information Technology Competency and Customer Satisfaction, the results shown in Table (4) illustrate the standardized total effects of the variable of technological information competence on customer satisfaction as a result of entering the Customer’s Perception of Service on Quality as a mediator variable, the total standardizing total effect of the first dimension of job satisfaction "on employees" by 0.997 and the total effect of the second dimension of job satisfaction " on services" by 0.881 this means that the fourth hypothesis is acceptable.

Table (3)
Regression weights:(Group number1-Default model)

Regression weights:(Groupnumber1-Defaultmodel)		Estimate	S.E.	C.R.	P
Quality Service	<--- Information Technology Competence	.954	.029	33.193	***
Customer Satisfaction	<--- Quality Service	1.083	.079	13.640	***
Customer Satisfaction	<--- Information Technology Competence	-.161	.068	-2.379	.017
On services	<--- Customer Satisfaction	1.000			
on employees	<--- Customer Satisfaction	1.055	.033	31.680	***
Empathy	<--- Quality Service	1.000			
Assurance	<--- Quality Service	1.021	.032	31.563	***
Responsiveness	<--- Quality Service	1.013	.028	36.103	***
Reliability	<--- Quality Service	.976	.029	34.243	***
It knowledge	<--- Information Technology Competence	1.000			
It skills	<--- Information Technology Competence	1.022	.020	50.052	***

N=308p>0.001. The Source: the AMOS/22 Program

Table (4)
Standardized Total Effects

Standardized Total Effects(Groupnumber1	Information Technology Competence	Quality Service	Customer Satisfaction
Quality Service	.960	.000	.000
Customer Satisfaction	.933	1.153	.000
It skills	.971	.000	.000
It knowledge	.976	.000	.000
Reliability	.935	.974	.000
Responsiveness	.914	.952	.000
Assurance	.886	.923	.000
Empathy	.904	.941	.000
On employees	.931	1.150	.997
On services	.823	1.016	.881

N=308p>0.001. the Source: The Amos/22 Program

6. Study Discussion and Implications

the present Study seeks to investigate the relationship between information technology Competence (ITC) represented in two dimensions: IT knowledge and IT skills, and customer satisfaction (CS) represented in two dimensions: On employees and On services, Additionally, the significance of how clients see the quality of the services represented in four dimensions: Reliability, Responsiveness, Assurance and Empathy in this relationship, Applying on the Customers benefiting from the technology centers' services in the local administrative of government sector.

the first hypothesis, which stated that there would be a direct relationship between information technology competency and consumer satisfaction was not supported, This result was not as expected by the researcher, or as the Previous studies have indicated may be due to the reaching of customer satisfaction within the government organization does not depend on the Competence of the employees in using technology only, or may be due to that the customer may be not concerned with the Competence of the workers in using technology as much as it means his Perception of service quality that he expects to obtain from the government organization, this result not agree with the results some of studies (e.g.Bakhat&Aziz,2012; Shateba&Zarkon,2013; Aduloju et al. 2014;Vandyck,2016).



the findings confirmed the second hypothesis that there is a significant relationship between information technology competence and customers' perceptions of the quality of services, This result supports the researcher's point of view that customer satisfaction is not affected by information technology Competence as much as customers' perception of service quality, which is affected by information technology Competence to a greater degree than customer satisfaction according to the results of the current study, this result supported the results of some studies (e.g. Lili,2019; Kalasa&Annuar,2019;Nagem Elden,2022).

The results confirmed the third hypothesis that there is a positive relationship between customers' perception of the quality of services and customer satisfaction, this result supported the results of some studies (e.g. Ghaffarietal,2012; Osotimehin et al.2015; Ajmal et al. 2017; Pakurár et al.2019).

finally, the results supported the fourth hypothesis that there is an indirect effect of information technology Competence on customer satisfaction as a result of entering a variable of customers' perception of service quality, this result supported the results of studies of both (e.g. Ramasubbu et al.2008; Rosmika&Nurhaida,2017; Al-Gasawneh et al. 2022).

7. Conclusion

Because the citizen is the focus of the government organizations' attention today's challenge facing government organizations is how to fully understand consumer wants and expectations, how to meet them while reducing costs and enhancing quality, so the Customer's Perception of Service Quality is an important tool to apply this concept, So government organizations must work to activate and continuously measure the extent to which customers' perception of the quality of service, The researcher advises the managers to pay close attention to the aspects that influence or contribute to how customers perceive the quality of their services.

this study provides insights into information technology Competence in the new service economy is likely to be highly appreciated, so it is essential for the government organization to pay special attention to supporting the technical capabilities of employees inside technology centers through the development of continuous training systems about the latest applications, it would be useful for government organization to remuneration staff members with more advanced technological talents.

it is necessary to persistently collect information from both the employees and customers to prioritize the continuous measurement of customer satisfaction to achieve two goals: the first Integrating quality with satisfaction and moving from the desired quality to the expected quality, and the second to get feedback about the skills and behaviors of the employees and set a training program to improve their technical skills.

Deploying personnel with greater technical expertise to manage technology centers could also be beneficial to educate the clients about the development of their operations, helping them to know the advantages of using information technology and aware them of the role that the government organization in improving the accessibility of its services to customers, as the manager also should help the population understand changes in their operations and helping them to know the challenges caused by information technology.

It is necessary for governmental organizations to invest in the infrastructure of technological centers to become a strategic civilized interface It is easily copied and applied in multiple places to facilitate access to customers and prevent overcrowding and congestion.

Finally, in general, management's support for information technology adoption is a crucial step toward highlighting information technology dimensions in any organization. Every individual must support the execution of organizational strategy and every change made by management, especially in the governmental sector.

8. Future studies:

Because it is a multifaceted phenomenon, customer satisfaction cannot be reduced to a single satisfaction index, we must remember that the client ultimately evaluates the quality of the service provider based on their overall experience with the organization, so according to the findings of the present study

Further research into the relationship between information technology competency and consumer satisfaction is necessary and the intermediate variable is customer relationship management, It is essential to remember that customer relationship management is a business strategy, not a product or service that an organization offers, Customer relationship management has driven many organizations to consider how to offer customers a better experience, so further research can be conducted in this area to determine the difficulties users of information technology—whether customers and employees—are encountering.



9. The Study Limits

The current study is geographically limited as it was applied to clients who deal with technology centers within one geographical area, The present study is restricted to the government sector so the results can be used to some extent in other organizations, The sample surveyed was limited to customers who frequented the technology centers, not with employees of the technology centers, finally, the current study relied on a customer survey this prevents generalization outside the context of the service interactions observed at the research site.

The reference:

- Abdülhey, E. (2020). The Mediating role of customer satisfaction in the relationship between service quality and customer loyalty, in partial fulfillment for the degree of Master of Science in Industrial and Systems Engineering [https:// www. researchgate. net/publication /3512 62921](https://www.researchgate.net/publication/351262921).
- Admkew, H. M.(2021).Effects of Employee Competence on Customer Satisfaction: studyon private sector in eastern Ethiopia ,Voice of Research, Volume 9 Issue 4, ISSN 2277-7733.
- Aduloju,K &Folake.O,& Musa.O.(2014). Information Technology and Customer Service Performance among Insurance Companies in Nigeria, *European Journal of Business and Management*www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.6, No.20.
- Al-Jeddah, M. (2008). “The level of communication technology uses and its impact onperformance TheRegulatory Authority in theJordanian Industrial Public Shareholding Companies, Jordan, The Jordanian *Journal of Ghadara Business*. Issue 2. Page 102 - 133.
- Ambro, M. &Martina, P.(2008).Organizational Effectiveness and Customer Satisfaction, *Organizacija, Volume, 41, Research papers, Number5*, DOI-10.2478/v10051-008- 0018-2.
- Anthony, S. K. (2014). Service Quality and Customer Satisfaction: Empirical Evidence from the Ghanaian Public Service, *European Journal of Business and Management* www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.6, No.6.
- Attar ,G.S. R.(2010).The relationship between information technology adoption and job satisfaction in contracting companies in Jordan, *Journal of Information Technology in Construction (ITcon)*, Vol. 15, pag. 44-63, <http://www.itcon.org/2010/3>.
- Bakhat, M.&Shaham, S.A.(2012).The Impact of information technology & Hospitality services on customers satisfaction -A Case study of Fast Food industry in Pakistan *Interdisciplinary Journal of Contemporary research in business*, Institute of Interdisciplinary Business Research , vol, 4,no,6.
- Beig, M.&Mohammad, H. P &Yaser G.(2012).The role of information technology and (CRM) in supply chain. Institute of Interdisciplinary



- Business Research, *journal of contemporary research in business*, Vol 4, No8.
- Bharati, P & Berg, D.(2003)."Managing Information Technology for Service Quality: A Study from the Other Side". Management Science and Information Systems Faculty Publication Series. Paper 9.http://scholarworks.umb.edu/msis_faculty_pubs/9
- Biljana, A. (2011). Measuring Customer Satisfaction with Service Quality Using American Customer Satisfaction Model. *International Journal*, 1(3).
- Boonlertvanich, K. (2019). Service Quality, Satisfaction, Trust, and Loyalty: The Moderating Role of Main-Bank and Wealth Status. *International Journal of Bank Marketing*, 37, 278-302.[https:// doi. org/ 10.1108/IJBM-02-2018-0021](https://doi.org/10.1108/IJBM-02-2018-0021)
- Chen, L., Zheng, W., Yang, B., & Bai, S. (2016). Transformational Leadership, Social Capital and Organizational Innovation. *Leadership & Organization Development Journal*, 37(7), Pag,843-859.
- Darojat, T.A. (2020). Analysis of E-CRM and e-Service Quality of Customer Loyalty at PT. Kidang Rangga Jakarta Mebel With Satisfaction as a Intervening Variable: Analysis of E-CRM and e-Service Quality of Customer Loyalty at PT. Kidang Rangga Jakarta Mebel With Satisfaction as a Intervening Variable.*Jurnal Mantik*,3(4), Pag, 671-677.
- Dehghanpouri, H., Soltani, Z., & Rostamzadeh, R. (2020). The impact of trust, privacy and quality of service on the success of E-CRM: the mediating role of customer satisfaction.*Journal of business & industrial marketing*, Pag,1831-1847.
- Evan, N.& Rini, M.S.& Sutarman & Arif .Y.& Asep, K..(2022)The Effect of Information Technology, Competence, and Commitment toService Quality and Implication on Customer SatisfactionInternational, *Journal of Technology* 13(4) 827-836 (2022).
- Gestão, R., T, & Leopoldo, P. (2018). The role of the use of information and communication technology skills on the share of productivity components of human resources for the improvement of the functional system of management of the department of power distributionCenters In Districts Of Guilan Province <http://revistagt.fpl.edu.br/>, v. 18, n. 3, Pag. 49-66,set./dez. , e-ISSN: 2177-6652.

- Ghaffari, F. P., & Amir J. A. (2012). The relationships between service quality and customer satisfaction in the banking industry: A comparison of traditional and electronic services. *Journal of Management Science*, 5(24), Pag,41-66.
- Gold, A., Malhotra, A. and Segars, A. (2001). Knowledge Management: An Organizational Capabilities Perspective. *Journal of Management Information Systems*, 18, Pag, 185-214.
- Fidaa, O. D. Safi & Marwan S. Alagha .(2020). The Relationship Between Service Quality And Customer Satisfaction "Applied Study on Private Telecom Services in India International Journal of Scientific and Research Publications, Volume 10, Issue 8, August 2020 767 ISSN 2250-3153.
- Hermawan, I & Suharnomo,,M.(2020). Information Technology as a Strategic Resource in Encouraging Organizational Change Readiness through the Role of the Human Capital Effectiveness, *Jurnal Dinamika Manajemen*, 11 (2) , Pag, 242-254.
- Hidayat, R., Akhmad, S., & Machmud, M. (2015). Effects of service quality, customer trust and customer religious commitment on customers satisfaction and loyalty of Islamic banks in East Java.AI-Iqtishad: *Jurnal Ilmu Ekonomi Syariah*,7(2), Pag,151-164.
- Ismail, A& Muhammad ,M.B. A.& Sebastian, K. F.(2009). Exploring the relationships among service quality features, perceived value and customer satisfaction, doi:10.3926/ jiem..V2n1.pp230-250, *journal of engineering and management(JIEM)* – 2(1): Pag 230- 250 – ISSN: 2013-0953.
- Jason, F. C .(2013).The Impacts of Complementary Information Technology Resources on the Service-Profit Chain and Competitive Performance of South African Hospitality Firms,*International Journal of Hospitality Management* 34(1):245–254,DOI:10.1016 /j.ijhm. 04.005.
- Kalasa, A.&Alaska,S.& Nurafizah,S. A.(2019).The relationship between service quality and customer satisfaction among millennials in the hospitality industry: Technolog adoption propensity (TAP) as moderating factor, *The Business and Management Review*,Volume 10 Number.
- Kamisah, I.& Jamie, W. C. T. & Jacinta, P.M. Chan. (2021). The Mediating Role of Customer Satisfaction in the relationship between Service



Quality and Customer Loyalty, Management and Accounting Review, Volume 20, No 3, December.

Kunle, A&Folake, O.& Musa O.(2014).Information Technology and Customer Service Performance among Insurance Companies in Nigeria *European Journal of Business and Management*www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.6, No.20, 2014.

L, Braulio. R.& Laureano. S. M. (2016). Information Technology Competency Scale applied to the Hospitality Industry. See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/310766818>.

Lili, Tan,(2019)."The Roles of Information Technology in Customer Relationship Performance, Employee User Satisfaction,Service Quality and Customer Satisfaction" Creative Components.260. <https://lib.dr.iastate.edu/creativecomponents/260>.

Mamoun, N. A, Bushra K. M.(2019). "An intervariable approach to customer satisfaction and loyalty in the internet service market", Internet Research, <https://doi.org/10.1108/IntR-12-2017-0514>.

Matthysen, M., & Harris, C. (2018). The relationship between readiness to change and work engagement: A case study in an accounting firm undergoing change. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 16(0), a855. <https://doi.org/10.4102/sajhrm.v16i0.855>.

Mohamed, Z.&Zainab, S.(2013). Information and communication technology and its impact on the satisfaction of the customers of the banking institution in Algeria, a field study of a sample of commercial banks in the Stateof Algeria1320/*Journal of the performance of Algerian institutions- Issue 30*.

Najmuddin, J. R. (2022). "Information and Communication Technology and its Role in Improving the Quality of Banking Services (Applied Study on Libyan Commercial Banks)." *Al-Qirtas, Journal of Human and Applied Sciences* 16 (February).<https://alqirtas.alandalus-libya.org.ly/ojs/index.php/qjhar/article/view/442>

Nguyen, Thi .P.T, &, Nguyen, V. A.,Le,T.H&Dinh,T.N. H.(2021). Measuring citizen's satisfaction when using E-Government online public services: Lessons from Vietnam, *journal of Contemporary Issues in Business and Government* ,Vol. 27, No. 1, 2021 P-ISSN: 2204-1990; E-ISSN: 1323-6903 <https://cibg.org.au/>.

- Nourhan, A.S.& Dina,A. H.& Ahmed, B.(2021).The Impact of Digitalization on Customers' Satisfaction in Educational Sector: An Empirical Study,2847, *Psychology and Education* , 58(4) :2839 -2847.
- Osoimehin, K. B. A.& Hassan, H. A. Abass.(2015). Customers Perception of Service Quality in the Nigerian Telecommunication Sector, *Journal of Economics and Business Research*, ISSN: 2068-3537,E –ISSN (online) 2069 –9476,ISSN – L = 2068 –3537 Year XXI, No.1, pp.144-157.
- Pakurár ,M & Hossam. H& Nagy , J.P &Judit, O.(2019).The Service Quality Dimensions that Affect Customer Satisfaction in the Jordanian Banking Sector, *Sustainability* 11, 1113; doi:10.3390/su11041113 www.mdpi. com/ journal/sustainability.
- Parasuraman, A. (2000). Technology Readiness Index (TRI) a multiple-item scale to measure readiness to embrace new technologies. *Journal of service research*, 2(4), 307-320.
- Perry, S. (1990). Ideas for improving the transfer of learning. *Adult Learning*, 1 (7), 19-.
- Ramasubbu, N.& Sunil .M, M.S. Krishnan.(2008).High tech, high touch: The effect of employee skills and customer heterogeneity on customer satisfaction with enterprise system support services. see front matter, ElsevierB.V. All rights reserved. doi: 10.1016/j.dss.2007.06.005 *Decision Support Systems* 44, 509–523.
- Rosmika, T. E&T. Nurhaida.(2017).Employee Competence and Culture Set to Customer Satisfaction with Service Quality as Intervening Variable of PT. Bank Rakyat Indonesia (Persero) Tbk Medan, *Journal of Education and Practice* www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.8, No.36.
- Sadeghi,M. N. V. D., & Zandieh, D. (2015). The Relationship Between Employees' Readiness to Provide Service and Customer's Satisfaction in Pasargad Bank. *International Business and Management*, 10 (1), 38-43. Available from: <http://www.cscanada.net/index.php/ibm/article/view/6269> DOI: <http://dx.doi.org/10.3968/6269>.
- Shahrasbi, Nasser. (2016). Reflecting on the Conceptualization of Organizational Readiness and its Relationship with IT Thesis presented with a view to obtaining the degree of Ph. D. in administration (Information technology option Implementation



- Success HEC MONTRÉAL School affiliated with the University of Montreal.
- Shankar, Jayaraman, M., C., & Hor Wai, M. (2010). Service quality delivery and its impact on customer satisfaction in the banking sector in Malaysia. *International, Journal of Innovation, Management and Technology*, 1(4).
- Subramony, M., Segers, J., Chadwick, C., & Shyamsunder, A. (2018). Leadership Development Practice Bundles and Organizational Performance: The Mediating Role of Human Capital and Social Capital. *Journal of Business Research*, 83(1), 120-129.
- Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: is organizational learning a missing link? *Strategic Management, Journal*, 24(8), 745–761. doi:10.1002/smj.337.
- Wasutida, Nurittamnot. (2022). Understanding The Influence Of E-Service Quality On Customer Loyalty To Using Mobile Phone Application Of Young Consumers, *Journal of Positive School Psychology*, ORCID: [https:// orcid.org/0000-0002-4362-6973](https://orcid.org/0000-0002-4362-6973) [http:// journalppw.com](http://journalppw.com), Vol. 6, No. 6, 1443 -1449.
- Vandyck, Rukia.(2016) .The Impact of information technology on customers satisfaction at social security and national insurance trust. A Thesis submitted to the Department of Marketing and Corporate Strategy of the *Kwame Nkrumah University of Science & Technology (KNUST)* in partial fulfillment of the requirements for the degree of Master of Business Administration .
- Yeni, S.&, Yasri. (2019). The Effect of Service Quality and Customer Satisfaction Toward Word of Mouth Intention, *Advances in Economics, Business and Management Research*, volume 64. [https:// www. Researchgate .net/publication/333397506](https://www.Researchgate.net/publication/333397506)
- Youssef, S.N. (2012). The Impact of Information Technology on Increasing Government Effectiveness Electronic, Civil Service Debt Case Study, Department of Electronic Business, Jordan, Al Sharq University middle.
- Zygiaris S, Hameed Z, Ayidh Alsubaie M and Ur Rehman S. (2022). Service Quality and Customer Satisfaction in the Post Pandemic World: A Study of Saudi Auto Care Industry. *Front. Psychol.* 13:842141. doi: 10.3389/ fpsyg. 842141.