Impact of E-Service Quality on Customer Satisfaction in Erbil Province

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Abstract

This study investigates the relationship between e-service quality and customer satisfaction, with a focus on gender differences among online shoppers in Erbil Province. A quantitative, descriptive statistical method was employed, using a sample of 300 participants, including 142 males and 158 females, selected through convenience sampling. The study utilized a 30-item e-service quality scale and a 21-item customer satisfaction scale, both developed by Farisa (2018), to assess key dimensions such as customer service, privacy, fulfilment, overall service quality, and consumer behaviour. Responses were measured on a five-point Likert scale. The results demonstrate a positive correlation between e-service quality and customer satisfaction, showing that improved service quality significantly enhances satisfaction. Gender differences were found to influence how users perceive service quality and satisfaction for female. Cronbach's Alpha scores of 0.886 for e-service quality and 0.876 for customer satisfaction confirmed the reliability and consistency of the scales used. Additionally, the study highlights that e-service quality is a strong predictor of customer satisfaction. These findings emphasize the importance of continuous improvement in service quality and the need for tailored strategies to meet diverse customer expectations.

Key words: E-service quality, Satisfaction, Customer satisfaction

Introduction

The global economy has undergone a profound transformation, shifting from a focus on manufacturing to a service-oriented model. This new paradigm is characterized by inclusivity, dynamism, and digitalization. Technology has been instrumental in revolutionizing the business landscape, bridging gaps between developed, developing, and underdeveloped economies. With digitalization, globalization, privatization, liberalization, and evolving international market dynamics, competition has reached unprecedented levels (Shailaja, 2023). Customers evaluate a product or service by comparing it with their pre-defined expectations. They judge quality based on this comparison, seeking to fit it into their mental framework. If the service quality exceeds their expectations, they will be completely satisfied (Shrestha and Agrawal, 2023).

Maintaining high levels of customer satisfaction is essential to the long-term success of a business. Satisfied customers are more likely to remain loyal, which generates consistent revenue over time. They are also less sensitive to price increases and are willing to spend more on familiar products. Additionally, positive customer experiences help build strong business relationships, enhance brand reputation, and reduce the costs associated with retaining existing customers (Murugiah and Akgam, 2013). When considering customer satisfaction, the foremost factor that springs to mind is service quality, given its significant impact on satisfaction levels. Quality of service serves as a fundamental driver of customer satisfaction. Therefore, organizations are advised to prioritize enhancing service quality as it directly influences customer satisfaction (Zouari and Abdelhedi, 2021).

Finally, references show that E-Service Quality have transformed customer satisfaction through their provision of convenient, efficient, and accessible banking solutions. Utilizing digital platforms, customers can conduct transactions, access account information, and avail services remotely, saving considerable time and effort. This heightened convenience and accessibility significantly enhance satisfaction levels as customers experience smoother and more streamlined experiences. Moreover, E-Service Quality often offers personalized features and round-the-clock support, further augmenting satisfaction.

Research Problem

The emergence of E-Service Quality in the Kurdistan Region represents a notable shift towards modernization and technological advancement in recent years. However, despite its potential benefits, the sector faces significant challenges due to the lack of comprehensive regulation and oversight. This regulatory gap has created an environment where quality standards are not uniformly enforced, resulting in instances of subpar service delivery.

Moreover, the absence of censorship further exacerbates the situation, as there are limited mechanisms in place to ensure the quality and reliability of digital services. This lack of regulation and oversight poses risks to both consumers and businesses, potentially undermining trust in the digital economy.

Additionally, a notable issue in the region is the lack of clear channels for customer feedback and satisfaction measurement. Without effective feedback mechanisms, businesses and institutions offering E-Service struggle to gauge customer sentiment and address concerns promptly, this not only hampers efforts to improve service quality but also limits opportunities for innovation and growth in the digital sector. Overall, the challenges surrounding the regulation, censorship, and feedback mechanisms in the Kurdistan Region's E-service quality highlight the need for comprehensive policies and strategies to ensure the sector's sustainable development and enhance customer satisfaction

Significance Research

E-Service Quality has significant potential to expand the delivery of basic financial services via affordable, convenient and secure environment to the public at large through innovative technologies like mobile-phone-enabled solutions, electronic money models, and digital payment platforms. Financial Institutions (Banks, Microfinance institutions) and non-Financial firms (mobile network operators) and third-party providers (agent network managers, payment aggregators, and others) are leveraging digital channels to offer basic financial services at greater convenience, scale and lower cost than traditional banking allow (Abbasi and Weigand, 2017). Researches show that customers are satisfied with the speed E-service quality especially by using internet and social media, however some results show that the effective topic for the customers when using E-service quality is fearing about security that kept them from do not use any application (Muluka et al, 2015). Culture, trust and

security of services are important topics of research in E-service quality because customers are constantly looking for trust and security when using E-Service Quality The fact that the existence of a service culture affects the use of E-service quality in these societies when the culture has a positive attitude towards E-Service Quality, individuals are more likely to use and satisfy these services (Neves et al, 2023).

All this evidence shows that conducting scientific research on the impact of E-service quality on customer satisfaction is necessary and a priority, especially for the Kurdistan Region, as this service does not have a long history This makes any research in this field will be important, so this study is an attempt by researchers to present the subject is scientifically.

Purpose of Research

1. Investigate the relationship between customer satisfactions in the e-service.
2. Find out level of e-service quality according to gender differences.
3. Find out level of customer satisfaction according to gender differences.
4. To assess the predictive impact of e-service quality on customer satisfaction

Literature Review

E- Service Quality

E-service quality, also known as electronic service quality, refers to evaluating customer satisfaction with online service providers. It involves examining the entire process of purchasing and delivering products or services by assessing the provider's ability to offer efficient and effective shopping experiences through its website. This evaluation compares the service actually received by customers with their expectations, using various dimensions of service quality as benchmarks (Avania and Widodo, 2023). The concept of "e-service" pertains to the provision of services through the Internet, including both electronic commerce and non-commercial services such as e-government. E-services cover a wide array of offerings that are continuously accessible online, facilitating transactions like buying and selling. These websites stand apart from traditional ones, which mainly provide informational content. Since the early 2000s, there has been a growing scholarly interest in the study of e-services. (VanRiel et al., 2011: 359).

The concept of E-service quality evolved from the traditional service quality model, tailored specifically for the online business and e-commerce landscape. As the internet became widely adopted in the early 2000s, online businesses recognized the importance of delivering high-quality services to attract and retain customers, leading to the development E-service quality. This term refers to the extent to which a website facilitates seamless browsing, purchasing, and delivery of products or services, while also enhancing customer trust, confidence, and loyalty toward both the website and its associated brands or sponsors (Morsi, 2023). Service quality refers to the extent to which a service provider's performance meets or exceeds a customer's expectations. High service quality satisfies various customer needs and enhances competitive advantages. When a service performs at or above the expected level, it is deemed to have met the quality standards. On the other hand, if the performance is below expectations, it indicates that the service was of inferior quality. (Rahman et al., 2020: 39).

E-service quality reflects how effectively and efficiently an online store facilitates the purchasing, shopping, and delivery of products or services. The website serves as the primary tool for delivering e-service quality to customers. Unlike traditional retail service quality, e-service quality lacks face-to-face interaction, making the online experience distinct. Additionally, online shopping carries a higher level of risk for customers, as they must share personal information with the company, increasing concerns about privacy and security (Olofsson and Karlström, 2022). According to Parasuraman et al. (1988: 12) delineate service quality as the appraisal of a particular service provider, emerging from the contrast between the firm's performance and the customer's industry-related expectations. This conceptualization subsequently gave rise to the formulation of a service quality evaluation instrument recognized as SERVQUAL. Within the domain of research on service quality scales, two primary thematic trajectories can be discerned:

1- The Nordic viewpoint, as delineated by Gronroos (1982: 30), utilizes generic service terminology to elucidate the notion of service quality, encompassing elements such as functional and technical aspects.

2- The North American standpoint, as articulated by Parasuraman et al. (1988: 12), employs service attributes as a means to characterize service quality within measurement scales, encompassing dimensions such as reliability, responsiveness, empathy, assurance, and tangibility.

Customer Satisfaction

Satisfaction is a multifaceted concept with diverse meanings and applications across various fields. It plays a significant role in disciplines such as sociology, economics, religion, law, psychology, urban and regional planning, marketing, music, and entertainment, among others. The concept of satisfaction is inherently subjective and influenced by personal values, making it highly context-dependent in its interpretation and use (Adah and Folorunso, 2015). Customer satisfaction pertains to the sentiments a consumer holds regarding a specific service or product post-usage. Regarded as a fundamental strategic objective, organizations should prioritize customer satisfaction. This emphasis is warranted as numerous studies consistently demonstrate a strong correlation between customer satisfaction and subsequent intentions to repurchase, positive word-of-mouth promotion, market reputation, and customer loyalty. These interconnected factors ultimately contribute to increased profits and reduced costs for businesses (Zouari and Abdelhedi, 2021).

Customer satisfaction may be a profoundly individual appraisal that's incredibly affected by person desires. A few definitions are based on the perception that client fulfillment or disappointment comes about from either the affirmation or disconfirmation of person desires with respect to a benefit or item. clients are fulfilled with comfort of conventional keeping money but desires are always rising as modern advances and shopper behaviors create. Progressively, client behavior is changing to include web, versatile, social media and in-person interactions for a single buy (Muluka et al, 2015). Customer satisfaction could be a significant component of a trade methodology as well as client maintenance and item repurchase. To maximize the client fulfillment companies ought to offer thoughts and strategies after the completion with all the vital records. As for case, clients will purchase a car after taking a closer see at it such as how is the motor, what is its show, how numerous kilometers it has been traveling, and is there any splits or not. Subsequently, they don't feel baffled after acquiring it(Khadka & Maharjan, 2017).

In advanced commerce logic trade ought to be Customers arranged and the execution of the most standards of nonstop change, legitimizes the significance of assessing and analyzing Customer satisfaction. In brief, Customer satisfaction is considered as standard of standardize and brilliance of execution for numerous commerce. It too makes a difference to distinguish the potential advertise openings. Customers are the reason of what humans do and instead of them depending on people, humans very much depend on clients. The client isn't the source of

a issue, people shouldn't maybe make a wish that clients 'should go away' since people future and security will be put in jeopardy.' Fulfilled client think twice or several times some time recently exchanging to choices since they ended up connected sincerely additionally anxious to accept on choices quality (Sharmin, 2013).Prior to engaging in shopping, a purchaser establishes specific criteria encompassing aspects like quality, pricing, and the seller's conduct to ensure contentment with the shopping experience. Consequently, customers possess a predetermined set of standards when evaluating a product or service. As a consumer utilizes the service, they assess it against these predetermined criteria, essentially gauging the service's quality through this comparison. Customers aim to align services with preconceived attributes in their mental framework to anticipate what to expect. Complete satisfaction for the customer is achieved when the service quality surpasses their initial expectations (Shrestha and Agrawal, 2023). The intensified forces of digitalization, globalization, privatization, liberalization, and the evolving dynamics of international markets, coupled with shifting customer expectations, have escalated competition to unprecedented levels. The landscape now presents formidable challenges in not only attracting new customers but also in maintaining the satisfaction of existing ones. The contemporary business environment demands a nuanced approach to navigate through these complexities and establish enduring relationships with customers (Shailaja and Devi, 2023).

Impact of E-Service Quality on Customer Satisfaction

Service quality has consistently been a key factor influencing customer purchase intentions and satisfaction. Over the past two decades, its significance has grown substantially within the realm of online businesses. From e-commerce platforms and online banking to social media networks, companies across various industries are increasingly focused on enhancing their e-service quality. The goal is not only to improve operational efficiency but also to attract and retain more customers in an increasingly competitive digital landscape (Mercan et al, 2020). Several studies have explored the impact of e-service quality on customer satisfaction, revealing key insights into how various elements of online services shape customer experiences. These studies emphasize that dimensions such as website usability, responsiveness, reliability, privacy, and order fulfillment play critical roles in determining customer satisfaction such as:

According to research of Olofsson and Karlström (2022). the results show that the two dimensions efficiency and privacy have the highest impact on customers' perception of E-service quality and thereby are affecting customers' level of e-satisfaction the most. Gupta and Tiwari (2015) conducted an exploratory factor analysis to examine the components of e-service quality. The analysis was performed on a dataset derived from customer responses, revealing a two-factor solution that accounted for 69.5% of the total variance. To identify the orthogonal factor dimensions, the researchers applied principal component analysis along with the varimax rotation method, ensuring clearer differentiation between the factors. Also Morsi (2023) show that six key dimensions—information quality, responsiveness, reliability, personalization, usability, and security—that significantly impact e-SERVQ. These dimensions, in turn, were found to have a substantial effect on customer satisfaction. Mercan et al. (2020) found that the efficiency, availability, privacy, and fulfillment aspects of e-service quality have a positive impact on customer satisfaction across the platforms studied. Avania and Widodo (2023) found that e-customer satisfaction mediates the relationship between E-service quality and e-customer loyalty. Their study shows that changes in customer satisfaction directly influence loyalty levels on the Shopee E-commerce platform.

Methodology

Method

Research methodology is a structured, scientific approach used to collect, analyze and interpret quantitative or qualitative data to answer research questions or test hypotheses, and theory. A research methodology is like a plan for conducting research and helps researchers stay on track by limiting the scope of the study (Sreekumar , 2023). In this research, the descriptive statistical method (quantitative) was relied upon to conduct the research. This study was conduct through a survey, which is a common method in quantitative research; through a series of closed-ended questions that the research participant answers with an option that is with the opinion its own is equivalent. The questionnaire was prepared in such a way that various questions were ask to the research participants about e-services quality in Erbil Province.

Research Population

The target population for this study consists of residents of Erbil Province who are actively involved in online shopping activities. These individuals represent the research community under investigation, as their behaviors, experiences, and perceptions of e-commerce services are central to the study's analysis. Erbil Province, situated in the northern region of Iraq, provides a relevant context for examining consumer engagement with digital marketplaces, reflecting both the local adoption of online shopping and the challenges associated with e-commerce in the area.

Sample of Research

Determining the sample size is a crucial aspect of research methodology that involves selecting the number of observers or replicates to include in a statistical sample. While a larger sample size can increase precision in some cases, there are situations where the increase in precision is insignificant or nonexistent (Kaur, 2021). A sample size of 300 residents from Erbil Province, actively engaging with online market platforms, was chosen for this study. The researchers utilized convenience sampling to gather participants, ensuring easy access to individuals willing to take part in the survey. Of the 300 participants, 142 identified as male and 158 as female, providing a balanced representation of gender perspectives. This distribution ensures a diverse range of experiences and opinions related to e-commerce usage, enhancing the reliability of the study's findings by reflecting the behaviors and preferences of both male and female online consumers in the region. As shown in table 1

Table 1 demographical variables

Variables	N	Percentage
Gender		
Male	142	47.3%
Female	158	52.7%
Age		
18-30 Year	162	54%
31-43 Year	92	30.7%
44-56 Year	29	9.7%
Above 56 Year	17	5.6%
Marital State		
Single	138	46%
Married	162	54%

Research Tools

In this study, two questionnaires were used to collect data and information as follows:

1- **E-Service Quality** : The questionnaire employed in this study comprised 30 items intended to capture participants' perceptions and experiences concerning different aspects of e-service quality. The researchers utilized the e-service quality scale developed by Farisa (2018) as the primary tool for evaluating the effectiveness of electronic services. This scale was select not only to assess the overall quality of e-services but also to measure customer satisfaction and loyalty, which are crucial components in determining service performance. The 30 items were distribute across three core dimensions (Customer Service, Security/Privacy, and Fulfilment). Each question on the survey was present in a five-point Likert scale format, allowing respondents to choose from options ranging from "Strongly Agree" to "Strongly Disagree."

2- **Customer Satisfaction:** The questionnaire consists of 21 items aimed at evaluating participants' satisfaction levels and their commitment to the e-service provider. For this purpose, the researcher employed the scale developed by Farisa

(2018), structured around two key dimensions: Overall Service Quality and Consumer Behavior. Each item offers respondents five response options— "Strongly Agree," "Agree," "Neutral," "Disagree," and "Strongly Disagree"—to capture detailed insights into their perceptions.

3-

Validity and Reliability

Before administering the questionnaire, the researcher conducted an evaluation to ensure that the measurement tools were valid and reliable, confirming their appropriateness for the study. To achieve this, the Cronbach's Alpha statistical tool was utilized. This tool is commonly used in research to assess both reliability and internal consistency of scales. A reliable instrument ensures that the items within a questionnaire consistently measure the same concept, while validity ensures that the instrument accurately captures what it is intended to measure. In this study, the Cronbach's Alpha for E-Service Quality was reported as 0.886, demonstrating a high degree of internal consistency across the 30 items included in this scale. Similarly, the Cronbach's Alpha for Customer Satisfaction was found to be 0.876, signifying a robust level of internal consistency among the 21 items in that section. These high alpha values confirm that the items are internally cohesive, enhancing the credibility of the study's findings by ensuring that the measures accurately capture the intended dimensions. As shown in table 2.

Table 2 validity and reliability of scales

Variable	Cronbach's Alpha	N of Items
E - Service Quality	.886	30
Customer Satisfaction	.876	21

Research Procedure

After developing the questionnaire for data collection, the researcher conducted field visits to Erbil province, located in northern Iraq, selecting citizens as the sample population for the study. The questionnaire was distributed in the form of survey forms, and participants were invited to take part voluntarily, ensuring that their involvement was based entirely on personal willingness. Before administering the survey, the researcher provided a comprehensive

explanation of the study's primary objectives, emphasizing the importance of their input and how it would contribute to the research. Participants were also assured that all information gathered would be treated with the utmost confidentiality and used exclusively for scientific purposes, with no personal data being disclosed or shared beyond the scope of the study.

The researcher prioritized creating an ethical and supportive environment by allowing participants to make their own decisions regarding whether to provide information and complete the survey. This flexible approach aimed to respect the respondents' autonomy and encourage authentic, honest responses based on their personal experiences and perspectives. Additionally, for participants who encountered difficulties in understanding certain questions or concepts, the researcher provided thorough explanations to ensure clarity and prevent misunderstandings. This interactive process not only enhanced participants' comprehension but also contributed to the accuracy and reliability of the data collected. Through these efforts, the researcher aimed to foster a sense of trust, transparency, and cooperation throughout the data collection process, ensuring high-quality responses and meaningful insights.

Results and Discussions

In this section, the researcher outlines the most significant results of the study, aligning them with the research objectives established at the outset. These findings are crucial for understanding the dynamics of e-service quality, customer satisfaction within the context of online shopping among residents of Erbil Province. The results will be discussed in detail to highlight how they reflect the respondents' experiences and perceptions regarding e-commerce services as follows:

1- **Correlation between E- service quality and customer satisfaction**

The relationship between e-service quality and customer satisfaction was examined using Pearson's correlation coefficient. This statistical tool assesses the strength and direction of the linear association between two continuous variables. As shown in table 3.

Table 3: Correlation between E- service quality and customer satisfaction

Variable	Mean(M)	SD	Pearson correlation	Sig (2 Tailed)
E - Service Quality	90.62	17.94	.666	.000
Customer Satisfaction	67.17	13.84		

The data provided reveals important insights into two critical variables: E-Service Quality and Customer Satisfaction. The mean score for E-Service Quality is 90.62, indicating that respondents generally perceive the quality of e-services as high. This score suggests that the majority of participants have favorable views regarding the effectiveness, efficiency, and overall experience of online services. However, the standard deviation of 17.94 indicates a significant level of variability in responses. The mean score of 69.33 for Customer Satisfaction and Loyalty, alongside a standard deviation of 12.7, illustrates that most customers in Erbil are satisfied with the e-services they use. The findings indicate that e-service providers have successfully aligned their offerings with customer expectations, resulting in enhanced satisfaction and the potential for stronger customer loyalty. This presents an opportunity for businesses to build on their successes, further refine their services, and continue fostering positive relationships with their customers.

The correlation between E-Service Quality and Customer Satisfaction is indicated by a Pearson correlation coefficient of 0.666, reflecting a strong positive relationship between these two variables. This value suggests that as the perceived quality of e-services increases, customer satisfaction also tends to rise. Moreover, the correlation is statistically significant, as indicated by a p-value of 0.000. This significance suggests that the observed relationship is unlikely to be due to random chance, reinforcing the credibility of the findings. It indicates that the connection between e-service quality and customer satisfaction is robust and can be generalized across the broader population of online shoppers, particularly those in Erbil Province. Therefore, businesses can confidently rely on this correlation when designing strategies to enhance customer satisfaction.

2- Find out level E-service quality according to gender (male and female).

To evaluate whether there are differences in the perceived quality of e-services between males and females, an Independent Samples T-test was conducted. This statistical tool compares the means of two independent groups to determine if the differences between them are statistically significant.

The study examined the impact of level of E-service quality comparing the mean satisfaction scores between male and female participants in Erbil Province. A total of 300 participants were surveyed, with 142 males and 158 females. The results showed that females had a higher average satisfaction score (M = 93.17, SD = 18.36) compared to males (M = 87.77, SD = 17.08). An independent samples t-test was conducted to assess whether the difference in mean scores was statistically significant. The t-test yielded a t-value of -2.639, with a p-value of 0.009 and 298 degrees of freedom.

Since the p-value is less than the conventional threshold of 0.05, the difference between the two groups is statistically significant. This indicates that gender plays a meaningful role in shaping customer satisfaction with e-services, with females reporting significantly higher levels of satisfaction than males. The findings suggest that service providers in Erbil should consider gender-specific expectations and preferences when developing strategies to enhance customer satisfaction with e-services. As shown in table 4.

Table 4: mean differences of E- service quality according to gender

Variable	Gender	N	Mean(M)	SD	T-test	Sig- 2 tailed	df
E- Service Quality	Male	142	87.77	17.08	-2.639	.009	298
	Female	158	93.17	18.36			

3- Find out level of customer satisfactions according to gender (male and female)

An Independent Samples T-test was performed to determine if there are significant differences in customer satisfaction levels between males and females. This statistical method assesses whether the mean satisfaction scores of the two independent groups vary

enough to suggest a meaningful difference, rather than being due to random chance. The results of this test provide insight into whether gender plays a role in shaping customer satisfaction.

This study investigated gender-based differences in customer satisfaction with e-services in Erbil province. The sample included 300 participants, with 142 males and 158 females. Analysis of the data showed that females had a higher mean satisfaction score (M = 68.81, SD = 12.87) than males (M = 65.35, SD = 14.68). An independent samples t-test was performed to assess whether this difference was statistically meaningful.

The t-test resulted in a t-value of -2.169, a p-value of 0.031, and 298 degrees of freedom. Since the p-value is less than 0.05, the difference between male and female satisfaction levels is statistically significant. These results suggest that females experience slightly higher satisfaction with e-services than males. Understanding these differences can help service providers develop more targeted strategies to meet customer expectations and enhance satisfaction across both genders. As shown in table 5.

Table 5: mean differences of customer satisfactions according to gender

Variable	Gender	N	Mean(M)	SD	T-test	Sig- 2 tailed	df
Customer Satisfactions	Male	142	65.35	14.68	-2.169	.031	298
	Female	158	68.81	12.87			

4- To assess the predictive impact of e-service quality on customer satisfaction

The researcher employed simple linear regression to predictive impact of e-service quality on customer satisfaction. This method was chosen to determine how effectively variations in e-service quality can predict changes in customer satisfaction. By using this statistical technique, the researcher aimed to quantify the strength and direction of the relationship, providing insights into whether improvements in e-service quality are likely to result in higher customer satisfaction.

The results indicate a statistically significant relationship, as evidenced by the F-value of 237.946 and a P-value of 0.000, which is well below the threshold of 0.05. With a degree of

freedom (df) of 299, the analysis confirms the suitability of the two variables for prediction. Furthermore, the beta coefficient (β = 0.666) demonstrates a positive relationship, suggesting that higher e-service quality is associated with increased customer satisfaction.

The analysis aimed to determine the effect of E- service quality on customer satisfaction using variance (R^2 = 0.444). This result indicates that 44% of the variability in customer satisfaction can be explained by differences in E- service quality, providing a substantial predictive power. Additionally, the significance level (Sig = 0.000) demonstrates strong statistical evidence for the relationship, as it is below the conventional threshold of 0.05 ($P < 0.05$).

To further assess the accuracy of the prediction, a T-test was performed. The result (T = 6.687, Sig = 0.000) confirms the appropriateness of the prediction, as the two-tailed significance value is well below 0.05, indicating statistical significance. This suggests that the relationship between E- service quality and customer satisfaction is unlikely due to random chance.

In summary, the results provide robust evidence that E- service quality a reliable predictor of customer satisfaction, with a positive association between the two variables. The statistical significance and explanatory power confirm that the model is suitable for predictive purposes; highlighting the meaningful impact E- service quality has on customer satisfaction. As shown in table 6 and figure 1.

Table 6: predicting impact E- service quality on customer satisfaction

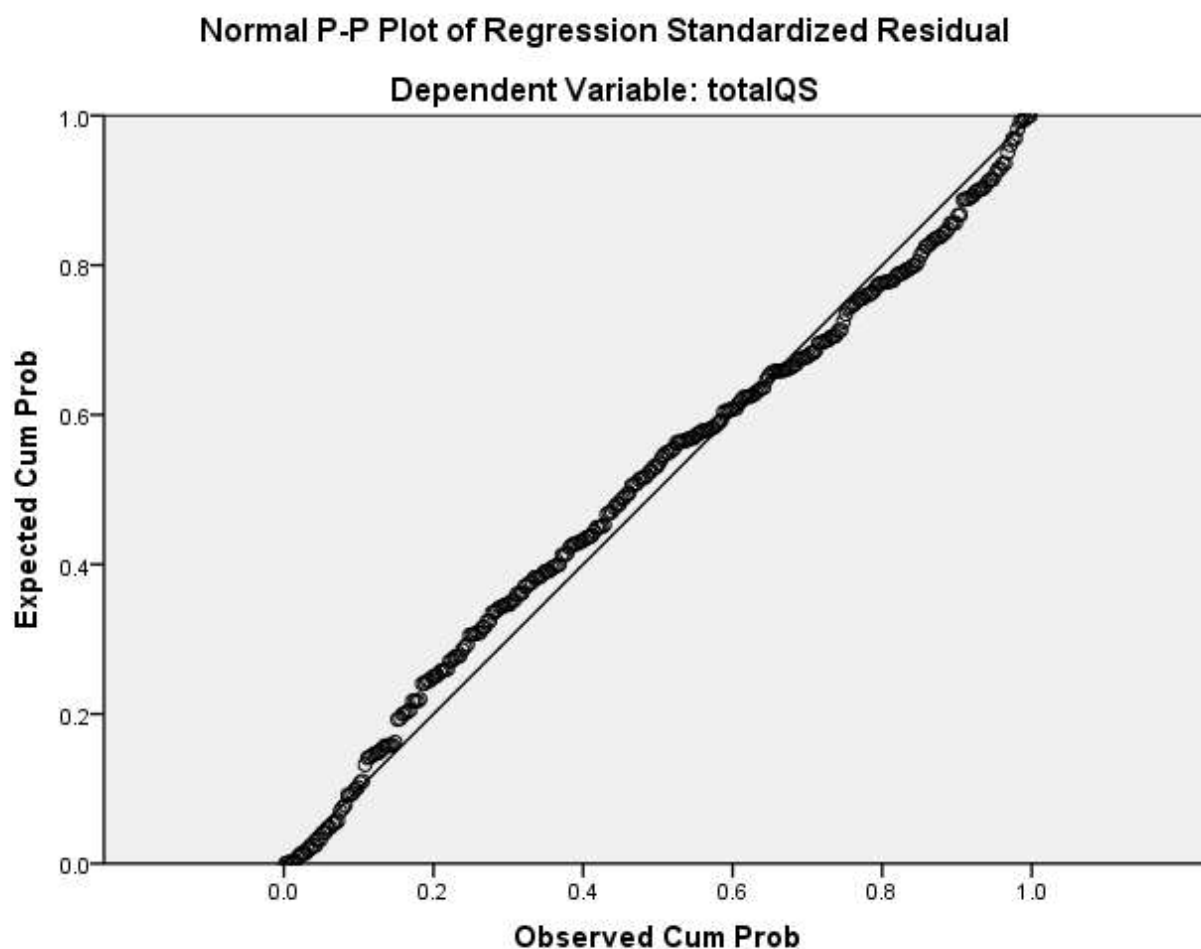| E service Quality	R	Variance(R^2)	*Beta*(β)	T-test	P value	F	df
Customer Satisfaction	.666	.444	.666	6.687	.000	237.946	299

Figure 1: predicting impact E- service quality on customer satisfaction

Discussions

The findings indicate a strong positive relationship between e-service quality and customer satisfaction, aligning with the outcomes reported in prior research, particularly the study by Morgan (2020). This relationship suggests that as the quality of e-services improves—through aspects such as user-friendly interfaces, quick response times, reliable services, and efficient support—customer satisfaction tends to increase proportionately.

The underlying reason for these results are rooted in the fact that high-quality e-services fulfill customers' expectations more effectively, leading to positive experiences. When online services are fast, accurate, and easy to use, customers perceive greater value and convenience, which enhances their satisfaction. Additionally, factors like personalization, security, and

seamless navigation play significant roles in shaping users' perceptions of service quality. This results same with previse studies such as: study of (Morgan, 2020; Avania and Widodo, 2023; and Olofsson and Karlström, 2022) studies supports these findings, emphasizing that customers in digital environments have heightened expectations regarding convenience and responsiveness. The study highlights that customer satisfaction is not solely influenced by the availability of services but also by the way those services are delivered. Specifically, the ability of e-services to resolve problems quickly, provide relevant information, and foster trust through secure platforms significantly boosts customer loyalty and satisfaction.

The findings also indicate that respondents are generally satisfied with the quality of E-services quality, attributing their positive experiences to the high standards and wide range of services provided by businesses and institutions through digital platforms. Participants frequently express their satisfaction through feedback and comments on social media, which serves as a crucial channel for companies to gauge customer sentiment and improve their offerings. A significant factor contributing to customer satisfaction is the strong sense of security these businesses provide, reassuring users that their data and transactions are protected. Additionally, companies demonstrate high responsiveness to customer needs, swiftly addressing concerns, adapting to preferences, and offering tailored solutions. This combination of security, responsiveness, and consistent service quality has fostered trust and loyalty among customers, further enhancing their overall experience with e-services.

The findings reveal that the quality of e-services in Erbil province is notably high, supported by statistical evidence. These results are consistent with those of (Mercan et al, 2020) These results suggest that businesses in the region are actively working to identify and address existing gaps in service delivery, striving to elevate their e-services to meet global standards. This effort is driven by the growing demand from customers, who expect high-quality digital solutions. Additionally, Erbil's favorable environment, particularly in terms of security and stability, provides a solid foundation for the continuous improvement and expansion of e-services. Despite facing the challenges of a rapidly evolving global landscape, businesses in Erbil are making consistent efforts to keep pace with international advancements, ensuring they remain competitive and responsive to the needs of their consumers. The results also reveal that female respondents reported higher levels of perceived e-service quality and customer satisfaction compared to their male counterparts. One possible explanation for this finding is that women may place greater emphasis on the overall service experience, including

responsiveness, personalization, and reliability, which are key components of e-service quality. Research suggests that women often value relationship-building and detailed customer support more than men, which may lead to higher levels of satisfaction when these expectations are met. Additionally, women may engage more actively with e-services, such as providing feedback or interacting with customer service, which can enhance their perception of service quality.

Finally, the findings indicate that e-service quality accounts for 44% of the variance in customer satisfaction, as reported by several studies (Morgan, 2020; Avania and Widodo, 2023; Olofsson and Karlström, 2022; Gupta and Tiwari, 2015; and Morsi, 2023). This result suggests that key elements such as usability, reliability, responsiveness, privacy, and personalization are essential drivers of customer satisfaction in online environments. The significant predictive power of e-service quality can be attributed to the fact that customers value smooth, secure, and efficient online interactions. When websites or platforms meet or exceed expectations, they enhance user experience and build trust, which in turn improves satisfaction. Conversely, poor service quality, such as delays, security issues, or unresponsive support, undermines satisfaction and discourages repeat usage. The studies emphasize that, while e-service quality is a major determinant, other factors—like pricing, product variety, or brand image—also contribute to the remaining 56% of customer satisfaction.

Conclusions

This study reveals several important insights into the relationship between e-service quality and customer satisfaction. The results confirm that e-service quality is positively correlated with customer satisfaction, meaning that higher levels of service quality lead to greater satisfaction among users. Key aspects such as efficiency, responsiveness, security, and usability contribute significantly to shaping customers' experiences. The analysis also highlights that gender differences affect the way customers perceive both e-service quality and satisfaction. Male and female customers may have distinct expectations and experiences when interacting with online platforms, leading to differences in their satisfaction levels. For instance, men might prioritize efficiency and usability, while women might place greater importance on personalization or security. This suggests the need for companies to consider

these differences when designing and delivering their online services. Moreover, the study confirms that e-service quality serves as a strong predictor of customer satisfaction. A significant portion of customer satisfaction can be explained by the quality of e-services offered; reinforcing the idea that continuous improvement of service quality is essential. However, customer satisfaction is also influenced by other factors, such as product variety, pricing, and brand reputation, indicating that companies must adopt a holistic approach to meet customer needs.

To enhance customer satisfaction, businesses should prioritize improving key dimensions of e-service quality, such as usability, responsiveness, security, and fulfillment. Ensuring smooth website navigation, quick customer support, secure payment systems, and timely delivery of products will provide a positive user experience and encourage customer loyalty. It is also crucial to address gender-specific preferences, as male and female customers may have different expectations and priorities.

Additionally, continuous monitoring and evaluation of service quality are essential. Businesses should gather customer feedback through surveys, reviews, and analytics to identify areas for improvement and align their services with evolving demands. Benchmarking against competitors can help maintain a competitive edge. Leveraging predictive analytics to anticipate trends and satisfaction levels allows companies to make proactive adjustments, ensuring that services meet or exceed expectations.

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