#### htt ps://doi .org/10. 48047 /AFJBS.6.14.2024.9917-9 9 52



## African Journal of Biological Sciences

Journal homepage: http://www.afjbs.com



Research Paper

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# A SERVQUAL Based Model for determining the Continuous Usage of Digital Financial Services by Consumers of Gujarat

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Volume 6, Issue 14, Aug 2024

Received: 15 June 2024

Accepted: 25 July 2024

Published: 15 Aug 2024

doi: 10.48047/AFJBS.6.14.2024.9917-9952

#### **Abstract**

Digital financial services have gained great importance among the Indian consumers in the recent times. The impact of Covid 19 pandemic increased the usage of digital financial services widely all over the world, to limit the human contact. This paper presents a SERVQUAL based model to investigate the continuous usage of digital financial services by consumers in Gujarat. The study gives a deep insight on the relationship of five service quality dimensions (tangibility, reliability, responsiveness, empathy and assurance) towards the continuous usage of digital financial services. Primary data has been collected from 509 people from Gujarat through random sampling method. Quantitative survey has been conducted for collecting the data from the respondents. The data has been subject to statistical analysis using structured equation modelling approach. It is found that out of all the five-service quality dimensions three dimensions namely tangibility, empathy and reliability positively influence the users' intention to use digital financial services continuously. Additionally, the moderating role of consumer demographic profiles in shaping the perceptions of service quality is also identified in this paper. It is clear that the demographic characteristics gender, age and income moderate the relationship between the service quality and intention of the consumers to use the digital financial services. The findings suggest digital financial service providers to improve their efficiency and sustainability in meeting the various needs of the Gujarat consumers.

**Keywords:** Digital financial services, SERVQUAL, consumer demographics, UPI, Online banking.

### 1. Introduction

India's is undoubtedly one of the fastest-growing economy, which makes extensive use of international financial services. To help India in recognizing its potential in the international financial services sector, the Indian government took the initiative to build an International Financial Services Centre (IFSC) in 2015, in Gujarat International Finance Tec-City, popularly known as GIFT City. Gujarat has become a hub for financial and technology gateway (PWC,

2021) of India. Gujarat has become a key place that contributes to the growth of financial and digital services as well.

The financial services sector is evolving at a fast pace rate like never before thanks to the digital revolution. The advent of financial technology (fintech), has accelerated the development of various new digital financial services and products (DFS). The financial sector has always relied on technology to a certain extent, but the dependence ratio has completely on a full-fledge mode in the current digital era. In developed markets, the industry has constantly been a major adopter of technology-driven solutions (Arner, et al, 2016). The internal operations of financial organisations have changed due to technological improvements, ranging from transaction processing to risk management. Digital advancements in financial services started with the launch of the Automatic Teller Machine (ATM) in the late 1960s. This development touched a new height with the arrival of the Internet in the 1990s, specifically in the developed world as standardized financial institutions has begun offering online banking services (eservices) (Lyons and Kass-Hanna 2021) more frequently. The COVID-19 pandemic (Lyons and Kass-Hanna 2021) play a major role that changed the world from cash to digital.

Digital financial services have all the potential to lessen costs, enhance speed, safety and security, and transparency, and facilitate more specialized financial services, which can efficiently serve the needy people. Low marginal costs and more transparency are two important characteristics of DFS. This DFS can address demand-side obstacles such as unstable and low earnings for the poor, trust, and demographic hurdles, along with supply-side obstacles including high operating costs and little competition. In some developing nations, mobile money has benefitted from the high rate of mobile phone adoption to establish the "first wave" of DFS. At present, there are 90 nations with over 850 million registered mobile money accounts, and over 1.3 billion USD worth of transactions (Pazarbasioglu, et al 2020) take place with these accounts every day.

Technological developments have been equally supportive of the financial industry. The country has witnessed many cutting-edge product developments in the digital payment sector over the last ten years. The emergence of Millennial and Gen Z that have grown up with smartphones have augmented the usage of technological innovations in digital payments. A survey (IBEF, 2019) that looked at factors like fast adoption, instant payments, and 24/7 service availability emphasized that compared to other developing countries, India possess a better developed digital payment ecosystem than other countries. Digital India is obviously having a

promising future; nonetheless, the industry still faces significant challenges related to consumer awareness and security concerns, which demand continuous support (KPMG, 2020) from banks, payment processors, and the government.

Using mobile money for even everyday routine transactions has become a game-changer in digital-financial transactions. Mobile money is also one of the digital technology schemes, which can be used to make deposits or withdrawals, pay bills, and transfer money across different financial accounts. Due to its strong connections to a broad range of partners, such as mobile network operators (MNOs), fintechs, banks, non-banking financial institutions, shops, governments, etc. mobile money stands unique from other digital financial services (Chu, 2018).

A lack of physical form of money had compelled people to switch from cash to cashless transactions in India since the demonetization period. The focus in the retail sector has switched to costs as banking sector have persisted in moving their customers to more affordable electronic and automated channels with a particular focus to minimize human participation. The study by Lohana, et al (2021) show a significant effect of age, education, occupation, and income of respondents on consumers' usage of digital financial services.

In general, millennial people, have high aspirations to use technology for the most of the services they require, which is ranging from ordering food online to booking tickets for flights, and booking other services online possibly through a mobile device (Karsh, 2021). This strategy also includes accessing financial services, accessing to financial loans, paying for products and services, etc. One of the main components of accessing FinTech services is having smartphones and fast Internet service (Kalra, 2019). Another significant factor is how much financial institutions and businesses make use of contemporary technology in their functions. Demographic factors such as age, gender, income, and education (Alshari and Lokhand 2022) are some of the important factors that directly affect the adoption of financial services.

Educational accomplishment has an impact on how they utilize contemporary digital technology, particularly with reference to least developed countries (Habibi and Zabardast, 2020). How they use technology in their daily lives matters a lot, particularly digital financial services. Empirical research has demonstrated that the utilization of all technology services is contingent upon the abilities acquired through schooling. Another important factor influencing the progression of digital technology is the income status of society (Habibi and Zabardast

2020). Also, low economic levels and poor educational systems (Habibi and Zabardast 2020) put the least developed nations at risk when it comes to using digital financial services.

Every industry has changed completely thanks to the development of information and communication technology (ICT). Information and business processes are becoming more intertwined because of technological development. Over the past few decades, banks have used ICT together with other corporate entities. The most popular and promising UPI transfer apps are payment apps including Google Pay, Paytm, and Phonepe. Financial inclusion is a dynamic tool, which might help developed and developing nations achieve manifold macroeconomic stability, and sustainable economic growth, employment generation, and income equality. Studies have found that consumers can access digital financial services at a convenient level. Also, the empathy factor (Sandanshive, et al 2022) which is considered significant to bank customers' happiness with digital financial services, has the largest disparity. Sandanshive, et al (2022) emphasized that, when it comes to the reliability component, expectations are higher than perceptions as a consequence of security concerns and trust issues in digital payment methods.

Providing exceptional customer service is obviously indispensable to the success of any organization, financial institutions is not an exceptional as they are service-oriented businesses. A bank's capability to deliver above-average customer care has a significant effect on both customer satisfaction and bank preference. According to Karnsomdee and Sonyon (2019), consumer satisfaction and service quality will possibly influence digital financial decisions. Customer happiness and service quality are likely to have a major beneficial effect on digital financial decisions. Service quality is something that determines the overall satisfaction of customers regardless of industry (Ali, et al 2012) and these include five major components, i.e. trustworthiness, responsiveness, assurance, empathy, and tangibility. When choosing a digital financial service, users of digital banking services generally consider time and money savings and also their level of satisfaction (Karnsomdee and Sonyon 2019) with the digital channel.

The term "service quality" refers to how customers' demands are addressed through transmitted service (Ma and Zhao, 2012). A customer's assessment of an organization performance can be defined by its service quality, i.e. excellent, common, or bad. One of the major success variables that influences a service organization's potential to compete is service quality. A financial institution can stand unique by providing services with reliability, tangibility and enhance quality (Auka, et al 2013). If not, the customers will not continuously use or buy services from

the same organization. When they receive high-quality service, customers feel safe. Consequently, the primary responsibility of any institution is to guarantee that potential clients receive high-quality services. In the financial terms, reliability refers to the positive aspect, i.e. trust; tangibility refers to the tangible components of the services; whereas empathy denotes individual attention, specialized care, and flexible financial hours are crucial (Malik, 2018). With regards to assurance, customers anticipate that the DFS will be safe and that staff members will act in an encouraging manner. The degree of responsiveness (Hadid, et al 2020) exhibits how often a DFS consciously provides services, which are necessary for its clients.

Customers, in general, demand high-quality, efficient services in all aspects, and digital banking services are no exception. As there is less employee-customer interaction digital financials services, the quality of services is considered essential in digital financial services than it is in offline financial services. Quereshi et al., (2008) examined the variables influencing customers' propensity for digital financial services and figured out that nearly 50% of banking clients had switched to these platforms as they believed they provide greater security, privacy, and utility. Ibrahim (2006) emphasized that the following elements make up digital service quality, i.e. accurate and convenient digital financial operations, accessibility, effective queue management, customized services, friendly and responsive customer service. In terms of digital financial services, service quality (Kureshi and Bhatt 2018) play an important role in order to retain customers.

The most important elements for financial transaction operations are speed, accuracy, and time. Consequently, the goal of contemporary digital financial services is to satisfy customers' overall financial demands. However, customers' continuous usage of online financial services is likely to be influenced by lack of trust in the electronic security mechanisms (Liao, et al 2012). While the number of digital transactions is increasing, it is particularly significant to concentrate and examine the intentions of digital financial service users on further implementation (Liao, et al 2012). As online services progress, so does the number of customers who are aware of the advantages that digital financial service offers. Some examples of the conveniences associated with digital financial service (Liao, et al 2012) are the less-complicated service and variety of financial product searches, the ease of access, etc.

Post demonetization, digital payment methods have certainly been the major driver of the digital financial service industry in India. According to Kim et al. (2008), consumers decide based on the partial information that is at their disposal. As a result of the increased risk

involved in their usage choices, customers are reluctant to stick with the services. Apart from risks, buyers also evaluate the potential advantages of continuous usage of a product or service (Benlian and Hess 2011). According to the Theory of Reasoned Action (TRA), users' perceptions of using digital financial services, which are impacted by behavioural beliefs, play an important role in defining how frequently individuals use it. These ideas might be either constructive or destructive. Customers' perceived benefits and level of trust in digital financial services are higher when they hold positive beliefs. Conversely, negative attitudes are linked with perceived risks. Subjective assessments of perceived risk have a direct impact on customers' behavioural intent during the decision-making process (Kim et al 2008). Featherman et al. (2010) pointed out that customers will be more inclined to purchase a service when they perceive it to have greater benefits. The study by Gupta, et al (2023) concluded that trust in service will possibly result in the continuous usage of digital financial services.

The service quality theory (Oliver, 1980) emphasized that when performance falls short of their expectations, consumers will rate the quality as low; also, when performance meets or surpasses expectations, they would rate the service as high-quality. Reducing expectancies or elevating the customer's viewpoint of what they have actually received might be essential to bridge this gap. Customers' happiness with the quality of financial services is generally dependent on their empathy and concerns regarding security and technology usage in financial transactions. Service quality and consumer satisfaction are intertwined concept. Customer satisfaction is likely to enhance with increased service quality. As services have special qualities such as intangibility, heterogeneity, inseparability, and perishability, measuring service quality is considered challenging aspect for service providers (Seth, et al 2008). Studies have emphasized the existence of close connection between the SERVQUAL factors and customer satisfaction level in digital financial services (Munusamy, et al 2010; Sanjuq, 2014). Results of Murari, (2018) emphasized that consumers' contentment with the delivery of financial services is essentially based on their empathy and concerns regarding technology in financial transactions.

#### 1.2 Problem statement

Customer service with excellent quality is considered necessary for the success of any organization and financial institution is not an exception to it. Good service quality has a significant role in providing the business a competitive edge, specifically for service-oriented businesses such as financial institutions where it influences significant variables, i.e. customer satisfaction, which directly or indirectly has an effect on continuous usage of service. Since it

influences overall bank's performance, service quality in digital financial service is a hot topic that researchers, financial and banking institutions find to be very important. The approach to service quality emerged with the invasion of the digital financial services. The study intends to determine which aspect of service quality is most critical and influences continuous usage of services the most. The current study specifically has been carried out to identify the relationship between service quality of digital financial service and continuous usage of services.

#### 2. Literature review

#### 2.1 Digital financial services

Digital banking is a financial service which can be made through mobile or other digital means that allows the users to make transactions, visualization of history, trading and also permitting advisory services and cross selling of products. When it comes to digital financial services (DFS), the quality of service is an important aspect for the banks, as it significantly contributes to the performance of the banks. The usage of digital financial services is increased among the users during the period of COVID 19 pandemic, as digital financial services needs less human contact. This paper uses a SERVQUAL based model to determine the continuous usage of digital financial services by consumers especially in the context of Gujarat. The SERVOUAL model is usually used to examine the total awareness and expectancy of a particular service. To be clearer, this model is developed by Parasuraman et al (1985), which measures the difference amongst expectation of the customers' service outcome and the awareness of the customers' genuine outcome. If the customers consider that the service quality is favourable, then it is said that the service has met the customers' expectations of the service outcome. As proposed by Parasuraman et al (1985) the SERVQUAL model has five factors of service quality which includes tangibles, reliability, responsiveness, empathy caring and assurance. This paper delves into the complex relationships between these factors and continuous usage of digital financial service with consumer demographic profile as a moderator. By examining these relationships, the study aims to contribute valuable insights for improving the efficiency and sustainability of digital financial service providers in fulfilling the evolving needs of the dynamic consumers in Gujarat.

## 2.2. Service Quality of Digital finance service provider:

#### 2.2.1. Tangibility Influence on Continuous Usage of Digital Financial Services:

Parasuraman et al (1985) describes tangibility as the tangible features of a service as the physical equipment, model equipment, dressed up employees and materials which are aesthetically pleasing. Tangibility includes the design, accessibility and clarity of the given information in the service interface. According to Parasuraman, Zeithaml and Berry (1988), tangible cues influences the attitudes of customers attitudes and behaviour significantly. The factors such as visual appeal, user-friendliness of the design, and accessibility significantly influences the experience and satisfaction of the users, which leads to their decision to continue the usage of a service in the context of digital financial services. In another study of Zeithaml, Parasuraman and Malhotra (2002), the importance of tangible attributes are highlighted in examining the reliability and performance of digital financial services. It is found that the clarity of transaction interfaces and the efficacy of the digital platforms impacts the perceptions of customers on reliability significantly. Many studies found that there is significant positive correlation between customer satisfaction and tangibility (Krishnamurthy et al, 2010; Selvakumar, 2015, Kant and Jaiswal, 2017; Olorunniwo et al, 2006). The study of Uddin and Nasri (2023) found the positive relationship of customer satisfaction and intention to use mobile financial services. Hence it is clear that tangibility related to customer satisfaction significantly influences the continuous use of digital financial services among customers.

## 2.2.2. Reliability Influence on Continuous Usage Digital Financial Services:

According to Zhang et al (2019) reliability is a service quality dimension which is considered as one of the important variables of the satisfaction levels of customers. Blut (2016) says that accuracy and consistency of the service delivery are the two important features of any reliable service. On time order processing, security of the customer information, providing reliable financial reports and ensuring the delivery of guaranteed services are considered as the basic quality of reliable service in maintaining customers in the banking industry as per the study of Peng and Moghavvemi (2015). Researchers like Parasuraman, Zeithaml & Berry (1988), and Parasuraman, Zeithaml & Malhotra, (2005) studied have highlighted the influence of reliability on user satisfaction and loyalty in the case of financial services. The study of Liao and Cheung (2002) found that reliability in digital financial services is very important for the purpose of secure transaction processing, service delivery and system availability (Suh and Han, 2003). The significance of reliability in e-banking services is highlighted in the study of Chong et al (2010), stating that perceived reliability influences the intentions of the users significantly to use the digital financial platforms continuously. The importance of reliability in enhancing the trust of users is significant in the context of digital finance, where concerns regarding to

security of data and transaction integrity are crucial (Bhattacherjee, 2002). Reliability also influences user loyalty and satisfaction, especially in digital era with instant and remote transactions (Zeithaml, Berry and Parasuraman, 1996). The study of Laukkanen et al (2007) underscored the important role played by reliability in fostering perceived risks associated with online financial services, which are positively influencing the intention of the users to continue using the digital financial services.

#### 2.2.3. Responsiveness Influence on Continuous Usage Digital Financial Services:

According to Endara et al (2019) the responsiveness dimension of service quality reflects the speed of employees in providing timely and sufficient assistance. Whereas, Uddin et al (2015) say that responsiveness is the ability of executing the tasks assigned manually and/or electronically on time. Ronny (2022) says that dealing with banks' willingness to assist the customers with speedy services, which included providing help when the customer complains about the e-banking services and assisting in the circumstances where banks cannot function for hours or some days during a natural disaster is called as responsiveness. According to Ejigu (2016) banks must pay attention to responsiveness to ensure that they do not provide low quality services for the customers. In digital financial services, responsiveness is related to the ability of bank to respond to their service requests raised by the customer regarding the financial transactions and the ability to assist customers to overcome the problems faced during digital transactions (Ronny, 2022). Ahangar (2011) highlights responsiveness in e-banking implementation, which includes proper availability and willingness to compensate for customer losses caused by issues with the banks' online application. Gefen and Straub (2003) found that the efficient responsiveness positively contributes to the customer's trust towards online service providers, which enhances the continuous usage of digital financial services.

#### 2.2.4. Empathy Influence on Continuous Usage Digital Financial Services:

A critical role is played by empathy in influencing the usage behaviour of consumers towards digital financial services. Empathy is referred as the providers' ability to mention the needs of an individual and the users' concerns by fostering a sense of care and personalized attention. This act influences the users' satisfaction, loyalty and trust in financial services. In the study of Dabholkar and Sheng (2013) and Dabholkar et al (1996) highlights that consumer who perceive high empathy levels are more likely to use digital financial services continuously. According to Flavian et al (2004), it is important to show empathy through online channels in this digital era, as face to face interactions are limited nowadays. Kim and Lee (2011) found that the level

of trust on digital financial services is higher among the users who receive higher empathy from the service provider, which can positively influence the continuous usage of digital financial services. Overall, empathy builds a personalized relationship with the customers and paves way for a stronger emotional connection with them fostering the continuous usage of digital financial services (DFS).

#### 2.2.5. Assurance Influence on Continuous Usage Digital Financial Services:

Parasuraman et al. (1994) states that assurance shows the attitudes of the staffs and their behaviour, and the ability to provide friendly, courteous, confidential, and competent services by the staffs. The significance of assurance in electronic services is highlighted in the study of Parasuraman, Zeithaml and Malhotra (2005), which underscores its vital role in influencing user trust and satisfaction with the digital service providers. Assurance includes communication clarity of terms, fee disclosure transparency, and the provision of reliable information in the context of digital financial services (DFS) (Zeithaml, Bitner and Gremler, 2006). The study of Suh and Han (2003) revealed that consumers who perceive higher assurance levels from the digital financial service providers are more likely to trust the platform which influences their intentions to the continuous usage of digital financial services (DFS). The digital financial landscape which relies up on advanced technologies, demands customers to ensure the confidentiality and security of their data regarding their financial transactions and reports. The significance of security features, privacy policies and data protection measures are studied by Beldad et al (2010) and Gerrard and Cunnigham (2003).

Table 1: Review of studies on the dimensions of Service quality and their relationships with continuous usage of digital financial service

Author	Yea r	Service Quality Dimension	Influence on Continuous Usage of Digital Financial Services
Parasuraman et al	1985	Tangibility	Positive
Zeithaml, Parasuraman and Malhotra	2002	Tangibility	Positive
Krishnamurthy et al	2010	Tangibility	Positive
Parasuraman, Zeithaml and Berry	1988	Tangibility	Positive
Olorunniwo et al	2006	Tangibility	Positive
Selvakumar	2015	Tangibility	Positive
Kant and Jaiswal	2017	Tangibility	Positive
Uddin and Nasri	2023	Tangibility	Positive

Zhang et al	2019	Reliability	Positive
Parasuraman, Zeithaml and Malhotra	2005	Reliability	Positive
Blut	2016	Reliability	Positive
Parasuraman, Zeithaml and Berry	1988	Reliability	Positive
Liao and Cheung	2002	Reliability	Positive
Suh and Han	2003	Reliability	Positive
Chong et al	2010	Reliability	Positive
Bhattacherjee	2002	Reliability	Positive
Zeithaml, Berry and Parasuraman	1996	Reliability	Positive
Laukkanen et al	2007	Reliability	Positive
Endara et al	2019	Responsiveness	Positive
Uddin et al	2015	Responsiveness	Positive
Ronny	2022	Responsiveness	Positive
Ejigu	2016	Responsiveness	Positive
Ronny	2022	Responsiveness	Positive
Ahangar	2011	Responsiveness	Positive
Gefen and Straub	2003	Responsiveness	Positive
Dabholkar and Sheng	2013	Empathy	Positive
Dabholkar et al	1996	Empathy	Positive
Flavian et al	2004	Empathy	Positive
Kim and Lee	2011	Empathy	Positive
Parasuraman et al.	1994	Assurance	Positive
Parasuraman, Zeithaml and Malhotra	2005	Assurance	Positive
Suh and Han	2003	Assurance	Positive
Zeithaml, Bitner and Gremler	2006	Assurance	Positive
Beldad et al	2010	Assurance	Positive
Gerrard and Cunnigham	2003	Assurance	Positive

## 2.3. Moderating role of Consumer Demographic Profile towards Service Quality:

The demographic factors plays a pivotal role in defining the behaviour of the customers, which has been theorized. Many studies have concluded that demographic profile plays a vital role in the decision-making process (Christia et al, 2016). Age, income, gender, and occupation are some of the demographic factors that influences the perception of service quality provided by the service providers (Ankush, 2023).

The study of Gupta (2011) found that customer satisfaction, perceived service quality, perceived value from internet banking services are influenced by the demographic factors of the customers such as age, education, profession and income without any specific differences

in the case of gender. Spathis (2004) found that male customers of Greek banks have a more optimistic perception of the service quality they receive than women customers. Grazhdani and Merollari (2015) made a study on the effect of demographic factors on customer service quality perception. The results of the study showed significant variance in the perception of service quality between age groups and no differences in bases of income, gender, and, occupation.

**Table 2: Moderating role of demographic profile** 

		Demographic	
		Factors	Influence on Continuous Usage of Digital Financial
Author	Year	Influenced	Services
Christia et		Age, gender,	
al	2016	income,	Positive
aı		occupation	
		Age, gender,	
Ankush	2023	income,	Positive
		occupation	
		Age, gender,	
Gupta	2011	income,	No significant different was found based on gender
Сиріа		occupation	No significant different was found based on gender
		education level,	
Spathis	2004	Gender	More Positive Perception in Male Clients
Grazhdani		Age, gender,	Significant Differences in Service Quality Perception
and	2015	income,	Between Age Groups, No Differences Based on Gender,
Merollari		occupation	Income, and Occupation

Source: Author

#### 3. Research Gap:

There are extensive studies on the SERVQUAL based model for determining service quality in many other aspects, but there is a gap in determining the relationship between service quality dimensions and continuous usage of digital financial services using demographic profile of customers as a moderator. Factors like Age, gender, education and income influence the perceptions of service quality, yet there is a lack of comprehensive examinations into hoe these demographic factors impact the association between service quality dimensions and continuous usage behaviour of digital financial services (DFS) especially in the context of Gujarat.

Understanding how demographic attributes moderate the effect of service quality on continuous usage can help the service providers to modify their services and ensure a more personalized experience for diverse groups of consumers. To the best of author's knowledge, existing studies fail to identify which particular dimensions of service quality influences continuous usage of financial service the most. Consequently, this gives the current study the chance to identify how the individual dimensions of service quality impact the continuous usage of financial services.

### 4. Conceptual Framework and Hypothesis:

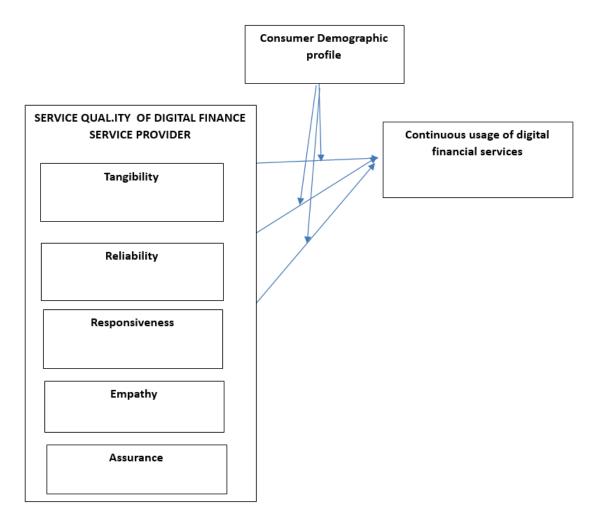


Figure 1: Relationship between Service Quality and Continuous Usage of DFS

Source: Authors

- H1: The service quality of Digital financial service provider influences the continuous usage of DFS by the people of Gujarat
- H1.1 The tangibility of Digital financial service provider influences the continuous usage of DFS by the people of Gujarat
- H1.2 The reliability of Digital financial service provider influences the continuous usage of DFS by the people of Gujarat
- H1.3 The responsiveness of Digital financial service provider influences the continuous usage of DFS by the people of Gujarat
- H1.4 The empathy offered by Digital financial service provider influences the continuous usage of DFS by the people of Gujarat

H1.5 The assurance offered by Digital financial service provider influences the continuous usage of DFS by the people of Gujarat

H2: Consumers' demographic profile moderates the relationship between the service quality of digital financial service provider and the continuous usage of *DFS* by the people of Gujarat

#### 3. Research Methodology and Instrumentation

This research adapts a positivist research paradigm. A deductive approach has been adapted in this research. The sample size is 509 people of Gujarat belonging to the middle- and higher-income groups. The data collection method is online survey using structured questionnaire and the data was collected using random sampling approach. The research instrument has four parts

- > The first part measures the demographic profile of the consumer, gender, age and income.
- ➤ The second part measures the awareness the consumers have towards digital financial services through 3 items.
- ➤ The third part measures the five constructs associated with service quality of digital financial services. The instrument has been adapted from the work of Khan, Lima and Mahmud (2021). This part of the instrument has 13 items in total with 2 items measuring tangibility, 2 items measuring reliability, 3 items measuring responsiveness, 3 items measuring assurance and 3 items measuring empathy.
- ➤ The fourth and last part of the instrument measures the continuous usage of digital financial services by consumers with the help of a 2-item scale adapted from Shaikh et al (2023).

The data collected was analysed with the help of AMOS software. Structured equation model was tested by applying the data collected in AMOS software.

#### 4. Analysis and findings

#### 4.1 Demographic data

According to the table 3, the demographic data shows that the majority of the respondents are female (58.5%), whereas the remaining are male respondents, which ratio is as follows: (41.5%). The age groups of 21 to 30 years (9.4%), and 31 to 40 years are observed to be higher with (52.8%) and 41 to 50 years are (18.9%). Also 50 and above age group holds the ratio of

18.9%. Many respondents (47.7%) were aware of mobile wallet/E-wallet digital financial services, followed by cards (23.8%). 17.3% were aware of digital payment applications such as Phonepe and Google pay. Mobile wallet/E-wallet (43.4%) were found to be largely used by many respondents, followed by cards (24.8%). And, the popular UPI apps (Phonepe and Google pay) were found to be used by 25.1% of the respondents.

**Table 3: Respondent Demographic analysis** 

		Frequ	Percent	Valid	Cumulative
		ency	(%)	%	%
		<b>(f)</b>			
	Male	211	41.5	41.5	41.5
Gender	Female	298	58.5	58.5	100.0
	Total	509	100.0	100.0	
	21 – 30	48	9.4	9.4	9.4
	31 – 40	269	52.8	52.8	62.3
Age	41 - 50	96	18.9	18.9	81.1
	50 and above	96	18.9	18.9	100.0
	Total	509	100.0	100.0	
	Rs 30000 to Rs 50000	68	13.4	13.4	13.4
	Rs 51000 to Rs 70000	225	44.2	44.2	57.6
Income	Rs 71000 t Rs 90000	141	27.7	27.7	85.3
	Rs 90000 and above	75	14.7	14.7	100.0
	Total	509	100.0	100.0	
Which	Cards	121	23.8	23.8	23.8
of the	Mobile wallet/E-wallet	243	47.7	47.7	71.5
followi	Unified Payment				
ng	Interface (Google	88	17.3	17.3	88.8
digital	pay/phone Pe)				
financi	Central Bank Digital	57	11.2	11.2	100.0
al	currency/ CBDC	37	11.2	11.2	100.0
service		I	I	ı	I
s are					
you					
aware	Total	509	100.0	100.0	
of?	~ .	10.5	24.0	24.0	24.0
Which of	Cards	126	24.8	24.8	24.8
the	Mobile wallet/E-wallet	221	43.4	43.4	68.2
followin	Unified Payment				
g digital	Interface (Google	128	25.1	25.1	93.3
financial	pay/phone Pe)				

services do you	Central Bank Digital currency/ CBDC	34	6.7	6.7	100.0
use					
frequentl	Total	509	100.0	100.0	
y?					
How	Less than five times	65	12.8	12.8	12.8
many	5 to 20 times	380	74.7	74.7	87.4
times do	More than 20 times	64	12.6	12.6	100.0
you use	Total	509	100.0	100.0	
these					
services					
once in a					
month?					

## 4.2 Reliability analysis

The reliability of the scale has been experiments using the alpha test, in which the alpha value above .6 is considered reliable and good-fit. Table 4 shows that all the variables are above .7, which insists that the scale is significantly reliable.

Table 4: Cronbach value of reliability analysis

Item name	Alpha Value (a)
Tangibility	.791
Reliability	.769
Responsiveness	.780
Assurance	.828
Empathy	.809
Continuous usage of	.908
digital financial	
services	

**Source: Author** 

## 4.3 Factor analysis

The aim of factor analysis, in general, is to model the correlations amongst given items. Also, the factor analysis is specially carried out to lessen the total number of components in order to interpret the findings. Table 5 shows the value of KMO Bartlett's (table 5) and Principal Component Analysis (PCA).

**Table 5: KMO and Bartlett's Test** 

Kaiser-Meyer-Olkin	n Measure of Sampling	.860
Adequacy.		.000
Bartlett's Test	of Approx. Chi-Square	4290.387
Sphericity	df	105
	Sig.	.000

As the above Table 5 shows, the KMO value is .860 and the significant and the p-value is .000 (<0.05).

Table 6: Rotated Component Matrix<sup>a</sup>

		Component			
	1	2	3		
T1		.786			
T2		.876			
R1		.822			
R2		.796			
RE1			.809		
RE2			.835		
RE3			.695		
A1	.718				
A2	.733				
A3	.713				
E1	.816				
E2	.694				
E3	.792				
Continuous usage1	.799				
Continuous usage2	.799				

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 5 iterations.

**Source: Author** 

**Table 7: Component Transformation Matrix** 

Component	1	2	3
1	.830	.408	.381
2	535	.775	.337
3	158	483	.861

Extraction Method: Principal Component

Analysis.

Rotation Method: Varimax with Kaiser

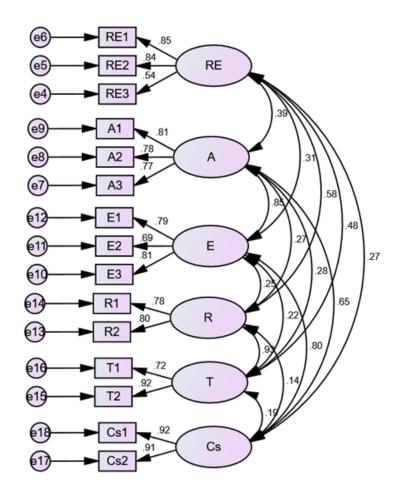
Normalization.

**Source: Author** 

The rotated component matrix is presented in Table 6. The coefficient absolute values obtained in the above table 7 shows that the variances are maximized with reduced dimensionality.

## 4.3 SEM analysis

The SEM path diagram (Figure 2) shows the relationships of the variables involved. Latent variables are a part of the structural model, wherein SEM analysis has been used to validate the data.



**Figure 2 Structural Equation Model** 

## **4.4 CFA Analysis**



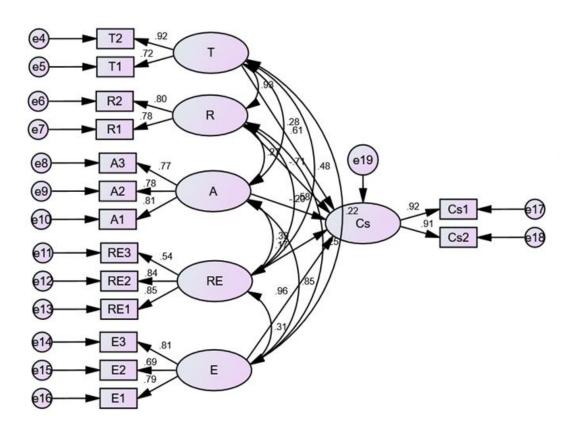


Figure 3: CFA Analysis

**Table 8: Computation of degrees of freedom (Default model)** 

Number of distinct sample moments:	120
Number of distinct parameters to be estimated:	45
Degrees of freedom (120-45):	75

Table 9: Default model's result: Minimum was achieved

Chi-square =	310.818
Degrees of freedom =	75
Probability level =	.000

The estimated chi-square value is 310.818, with dof of 75 and probability as .000, which shows that the proposed model is a good-fit.

Table 10: CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	45	310.818	75	.000	4.144
Saturated model	120	.000	0		
Independence model	15	4340.225	105	.000	41.335

Table 11: RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.037	.929	.886	.580
Saturated model	.000	1.000		
Independence model	.221	.330	.234	.289

**Table 12: Baseline Comparisons** 

Model		RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.928	.900	.945	.922	.944

Model	NFI	RFI	IFI	TLI	CFI	
Wiodei	Delta1	lta1 rho1 Delta2		rho2	CIT	
Saturated model	1.000		1.000		1.000	
Independence model	.000	.000	.000	.000	.000	

From Table 10, 11 and 12, it is observed that CMIN/DF (chi-square) is 4.144 and RMR (root-mean-square) value is .037 with significance p-value of .000. Besides, as per table 13, the observed value of GFI (goodness-fit-index) is .929, in which all the values are within the acceptable range.

**Table 13: Parsimony-Adjusted Measures** 

Model	PRATIO	PNFI	PCFI
Default model	.714	.663	.675
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**Source: Author** 

Table 14: RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.079	.075	.088	.000
Independence model	.282	.275	.289	.000

**Table 15: HOELTER** 

Model	HOELTER	HOELTER
Model	.05	.01
Default model	158	174
Independence model	16	17

The obtained CFI value as per Table 13 is .675. It is evident from the Tables 14 and 15 that the obtained parsimony values exhibits that the model is neither simpler nor complex.

**Table 16: Regression weights** 

			Estimate	S.E.	C.R.	P	Label
Cs	<	T	.706	.352	2.007	.003	
Cs	<	R	712	.340	-2.090	.005	
Cs	<	A	265	.196	-1.350	.177	
Cs	<	RE	.179	.089	2.003	.045	
Cs	<	E	1.160	.178	6.508	***	
T1	<	T	1.000				
T2	<	T	1.350	.078	17.278	***	
R1	<	R	1.000				
R2	<	R	1.015	.056	18.267	***	
<b>A</b> 1	<	A	1.000				
A2	<	A	.998	.055	18.133	***	
A3	<	A	.905	.050	18.064	***	
Cs1	<	Cs	1.000				
Cs2	<	Cs	1.009	.038	26.218	***	
RE1	<	RE	1.000				
RE2	<	RE	1.165	.066	17.701	***	
RE3	<	RE	.684	.057	11.947	***	
E1	<	E	1.000				
E2	<	E	.924	.059	15.628	***	
E3	<	Е	1.047	.056	18.775	***	

The regression weights have been presented in the Table 16. It is clear from Table 16 that the significance value of the constructs 'Assurance' and 'Responsiveness' is greater than 0.005. The other constructs have a significant impact in determining the continuous usage of financial services that are available digitally.

## 4.4 Moderator analysis

Table 17: CS\_AVG versus SERV\_AVG

Model: 1

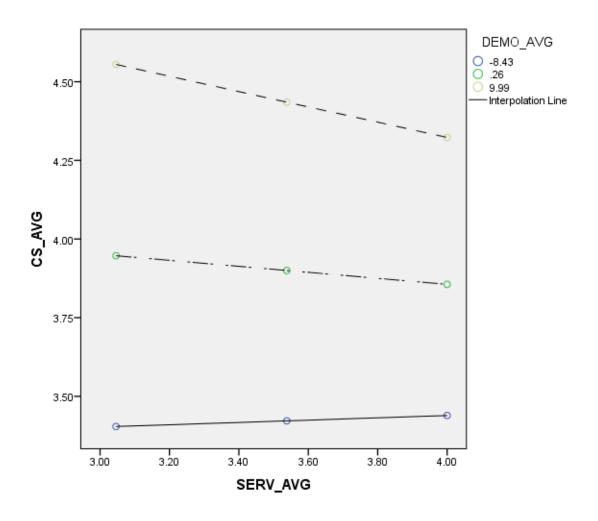
 $Y : CS\_AVG$ 

 $X : SERV\_AVG$ 

W: DEMO\_AVG

Sample Size: 509								
Outcome varia	ble: CS_A	NG	ŗ					
Df1 df2								
3.000 5	505.000							
Model Summa	ry							
MSE	F		Df1		Df2			
5.754	313.158	8	3.0000		505.00	00		
Model			J		J			
	coeff	S	Se	t		p	LLCI	ULCI
Constant	4.209		199	21	1.146	.000	3.818	4.600
SERV_AVG	.091	0	).57	-1	.6091	.108	203	.020
DEMO_AVG	.109	).	009	11	.741	.000	.091	.127
Int_1	.015	).	002	-6	-6.103 .000		.020	010
***Level of co	onfidence t	for a	all confid	lenc	e interv	als in ou	tput: 95.00	000

The graph is generated for the moderating analysis based on the table values of Table 17.



**Figure 4: Moderation Analysis** 

The moderation effect of the demographic profiles of the consumers have been analysed and presented in the Table 17 and Figure 4 respectively. It is evident from the Table 17 that, the significance value of 'p' is .000 which is less than 0.005. It shows that the demographic profile of the consumers moderates the relationship between the service quality of digital financial services offered by the banks and the continuous usage of those services by the consumers of Gujarat.

#### 4. Results and discussion

The results of the findings of the test of hypothesis have been graphically presented in the Figure 5.

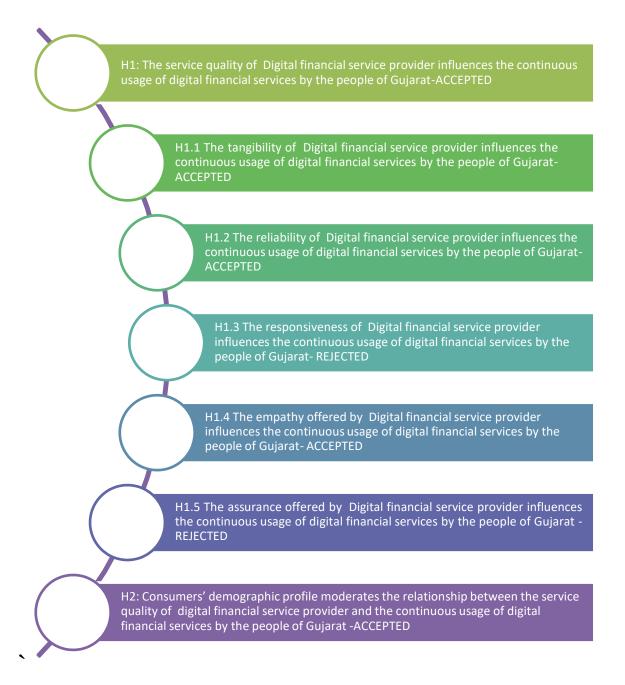


Figure 5: Hypothesis testing results

This research deals with the different dimensions of digital financial services quality and their overall effect on continuous usage of digital financial services by the people of Gujarat. For this, basic structure of SERVQUAL model five dimensions, i.e. reliability, responsiveness, assurance, empathy, have been adopted in this paper along with one significant construct i.e. continuous usage of digital financial services. It is important to explore the impact of financial service quality on continuous usage of digital financial services. Digital financial services has

played an important role in the context of COVID-19 (Morari, 2018) and demonetization (Lohana, 2021); and the circumstances during pandemic has made it even more essential to make use of digital financial technology to maintain the integrity of financial systems and protect public safety in the face of social alienation. To avoid making the problems brought on by this crisis itself, this innovative technology has been carefully planned and executed to control their risks, particularly for the poor and impoverished society. Many studies have focused on the economic aspects that influence digital adoption ratios, but those studies haven't given much thought to the demographic factors that affect consumers' continuous usage of this fintech service.

Digital financial service is a concept that can be accessed and delivered digitally, for making any payments, credit, savings, or any other financial related services (Kambale, 2018). Service quality is obviously an important measure of any firm's performance and financial service is not an exceptional. Fintech is a common term specially used for these innovative digital solutions. Even in the current digital era, Gujarat is still lacking access to basic financial services (Gangani and Raval 2021), despite the benefits it holds. Thus, this paper is specially carried out to examine the level of digital financial service in Gujarat region. Study by (Gangani and Raval 2021) has been specially initiated to discuss the level of digital financial inclusion in Gujarat, wherein continuous usage of digital service, service quality have been ignored. In the current study, reliability, empathy and consumers' demographic profile are found to be influencing factor that affect the continuous usage of digital financial services. Similarly, the study by Lohana, et al (2021) exhibit a considerable impact of demographic status on consumers' usage of digital financial payments.

### 6. Conclusion, Limitations and Future Scope

With the invasion of new banking channels such as internet and mobile banking, it is possible for bank customers to conduct business with their reputed banks from the comfort of their homes. During demonetization, a poor circulation of currency had actually enforced customers to switch from cash to cashless transactions, i.e. digital payment system. Post Covid-19 and post demonetization, it has also become mandatory for financial and banking sector to focus on quality digital services. In order for customers to use digital services continuously, placing service quality has become a significant factor to a large extent. Customer satisfaction is something that actually determines the continuous usage of any services. Therefore, to keep customers in the service industry, it is important for any sector to make sure that the right

products and services are provided, backed by the right combination of service quality dimensions. The findings of the current study has provided insightful information about consumers' usage of digital financial services and how demographic factors play a significant role in digital payment services. Technology is actually what bothers users in delivering the financial services with better quality. The importance of this paper lies in its empirical investigation of the impact of demographic characteristics and service quality on the continuous usage of digital payment systems in India. The results also showed that continuous usage of digital financial services is largely dependent on their level of tangibility, reliability and the empathy offered by the digital financial service provider. In the long run, policymakers can make use of these insights to enhance the service quality in the context of digital financial payments.

The study is limited to SERVQUAL model alone and considered only digital financial services, which means customers who have digital literacy are included. Additional factors that influence continuous usage of service can be included in the future study. The findings could have been improved by including areas other than Gujarat. The findings of the current study will help individuals, organizations, and policymakers who are interested in learning more about the service quality of digital financial services. Future studies, especially in the areas of service quality, customer satisfaction, and loyalty, will greatly benefit from the present study and the researchers can use the findings of this study as a reference for carrying out further investigation in this area.

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