Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3, 489-510
2025
Publisher: Learning Gate
DOI: 10.55214/25768484.v9i3.5250

Analysis of digital banking service perceptions and its impact on customer satisfaction among generation Z

Maysya Hartanti[1*], Yohannes Kurniawan[2]
[1,2]Accounting Department, School of Accounting – Master of Accounting, Bina Nusantara University, Jakarta, Indonesia 11480; maysya.hartanti@binus.ac.id (M.H.) ykurniawan@binus.edu (Y.K.).

Abstract: Digital banking has significantly altered financial services by facilitating transactions and financial management via online platforms. The swift growth of Indonesia's digital banking sector underscores the necessity of comprehending the factors influencing Generation Z's satisfaction to enhance service quality. As digital natives, Generation Z is crucial in driving growth within the sector. This research examines the primary elements affecting their satisfaction with digital banking services in Greater Jakarta, utilizing data collected from 400 participants. A structured questionnaire was employed, and the data were analyzed using the Structural Equation Model - Partial Least Square (SEM-PLS) method through SmartPLS 4.1.0.8, adopting an extended E-S-QUAL framework. The analysis evaluates efficiency, fulfillment, system availability, security, trust, convenience, and promotional policies. The findings indicate that efficiency, trust, convenience, and promotional policies significantly impact customer satisfaction. In contrast, fulfillment, system availability, and security exhibited no significant effect on customer satisfaction. Service providers must enhance these factors while re-evaluating less influential aspects. This study contributes to the existing literature on digital banking and offers practical recommendations for optimizing service quality. Future research should explore the moderating effects of gender and economic status, expanding the sample to include Millennials (Generation Y) for comparative insights.

Keywords: *Customer satisfaction, Digital banking, E-S-QUAL, Generation Z, Service quality.*

1. Introduction

The global financial industry has undergone major changes with the emergence of digital banking, driven by the development of internet technology and the widespread use of smartphones [1]. Digital banking offers faster, more efficient and convenient transactions compared to traditional banking, and allows users to access various financial services, such as savings, investments and virtual credit cards, without the need to visit a physical branch office Windasari, et al. [2]. World Bank [3] notes that there are approximately 97.74 million adults in Indonesia who are unbanked, making Indonesia one of the largest unbanked populations in the world. The rapid growth of digital banking in Indonesia is also characterized by the total value of digital banking transactions reaching IDR5,570.49 trillion in May 2024, an increase of 10.82% compared to the previous year [4]. This increase is driven by the large population of Generation Z, which is the largest demographic group in Indonesia and plays an important role in the digital economy. Generation Z shows a prominent ability to use digital banking services and a strong tendency to utilize them, although it may face certain difficulties [2]. The dominance of Generation Z, known as digital natives, indicates significant potential in the adoption of digital services, including digital banking [5]. The advent of digital banking services has introduced a new era in the banking industry, where conventional banking operations are carried out online, providing unparalleled convenience and flexibility to customers. These services cover various activities

History: Received: 6 January 2025; Revised: 21 February 2025; Accepted: 21 February 2025; Published: 7 March 2025
* Correspondence: maysya.hartanti@binus.ac.id

such as depositing and withdrawing funds, transferring money between accounts, managing account details, and applying for various financial products. In addition, these services also include loan management, bill payments, and integrated features such as investing in mutual funds or the stock market [6]. Digital banking has emerged as a cornerstone of modern finance, providing convenience, accessibility, and efficiency to consumers around the world. Customers' perceptions of these services include their attitudes, beliefs and experiences regarding the use of technology in banking activities. These perceptions include positive sentiments, such as the convenience and flexibility of the technology, as well as concerns, particularly regarding security and reliability [7]. The main causes behind the increasing popularity of digital banking in Indonesia are strong security measures, ease of transactions, and user-friendly applications. Populix [8] revealed that the sought-after features of digital banking apps include data and transaction security (31%), ease of access (12%), full features (12%), integration with other financial services (11%), and special promotions (10%) [8]. Service quality is a crucial factor in various industries [9-12]. Previous research shows that the dimensions in the SERVQUAL model are reliable tools for measuring customer satisfaction and loyalty in the e-service industry [13-15]. However, with the development of the internet and digital media, the SERVQUAL model needs to be adapted to measure service quality in electronic contexts, such as e-commerce, e-banking, and online shopping [16]. To fill the gap, this study uses the E-S-QUAL model, which has been recognized as a key tool for evaluating digital service quality. This model consists of four main dimensions, namely Efficiency (speed of access as well as site usage), Fulfillment (the extent to which site promises regarding order delivery and item availability are fulfilled), System Availability (correct technical functioning of the site), and Security (the level of site security in protecting customer information) [17, 18]. Global research shows that consumers, especially in younger age groups, have higher levels of satisfaction and trust in digital banking services [19-22].

This research extends the modified E-S-QUAL model by adding three independent variables such as trust, convenience, promotion policies. By employing the extended E-S-QUAL model to investigate the impact of digital banking service perceptions on Generation Z satisfaction in Jabodetabek, the study aims to close the current gap. Previous research, such as that conducted by Mujinga [23] has shown the significant impact of E-S-QUAL dimensions on online banking service quality in South Africa, specifically Efficiency, Fulfillment, Security, and System Availability. This study confirms the importance of applying the E-S-QUAL model in measuring digital service quality and its impact on customer satisfaction. Similarly, Raza, et al. [24] in their research in Pakistan, which used a modified E-S-QUAL model, found positively affect user satisfaction and contribute to customer loyalty. The study highlights how crucial innovation in digital technology is to improving consumer satisfaction, especially for Generation Z. It gives banks information they can use to assess and improve their digital services in order to better cater to the needs of their younger customer and create features that increase customer satisfaction. Researchers can use the study as a reference for future research and as a contribution to academic literature as it examines the factors impacting the adoption of digital banking in the Jabodetabek region. The findings highlight the importance of security and privacy in digital services and provide useful guidance to regulators and the government in developing consumer protection regulations. In summary, the research endeavors to enable Generation Z and the broader public to comprehend the facets of digital banking that influence their contentment, fostering knowledgeable decision-making and discerning assessment of digital offerings while advancing digital financial literacy.

2. Literature Review

2.1. Digital Banking Service

According to the Financial Services Authority [25] digital banking is a fully digital-based banking service, where all transactions are conducted through electronic media without the need for face-to-face interaction or visits to branch offices. This is different from mobile banking and internet banking, which are still limited to a few specific services and often require customers to come to the branch office, for example, for document verification or special transactions [2]. Digital banking allows customers to

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

access and complete all types of financial transactions independently and directly through digital platforms provided by banks. The concept of digital banking can also be defined as the transformation of traditional banking services and products from an offline platform to an online platform, allowing customers to access them remotely without having to visit a physical branch [26]. Digital banking apps that are widely used in Indonesia include Digibank by DBS, Bank Jago, Blu by BCA, Bank Neo Commerce, Jenius, Allo Bank, LINE Bank, and SeaBank. With differences in market share and user count, each of these applications provides a range of functions to satisfy customers expectations for digital banking [8]. Digital banking services include a wide range of traditional banking activities integrated in a single application, such as deposit management, fund transfers, deposits, current accounts, and other services [27, 28]. Service quality has been empirically proven as a strong factor influencing user satisfaction in the banking industry, suggesting that service quality plays an important role in determining customer satisfaction [18, 29]. Therefore, banks need to continuously improve the quality of their digital services to retain and attract more users in this digital era.

2.2. E-S-QUAL

E-service quality, including e-banking service quality, is defined as consumers' overall evaluation and judgment of the excellence and quality of e-service offerings in a virtual market environment [30-32]. The E-S-QUAL model is a scale designed to measure the quality of electronic services provided through websites, which is a development of the SERVQUAL framework. The SERVQUAL framework was originally designed to assess service quality through five dimensions, namely reliability, responsiveness, assurance, empathy, and tangibles. In the context of E-S-QUAL, service quality evaluation is carried out through 22 items which are divided into four main dimensions, namely efficiency, fulfillment, system availability, and security [17]. The five dimensions of service quality suggested by Parasuraman, et al. [17] form the basis for evaluating the quality of digital banking services from a user perspective in this study. The electronic service quality model (E-S-QUAL), has been widely used in various studies to define customer experience in interactive virtual environments, as well as to measure the level of success of a company [30]. Previous research used the E-S-QUAL approach to examine the relationship between customer satisfaction [24, 28, 33].

3. Research Model and Hypothesis Development

Figure 1 shows the proposed research model, which measures the quality of digital banking services. It is based on theoretical models and the literature study. We explain the quality of digital banking services and examine how it affects customer satisfaction using a modified version of the E-S-QUAL theory.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

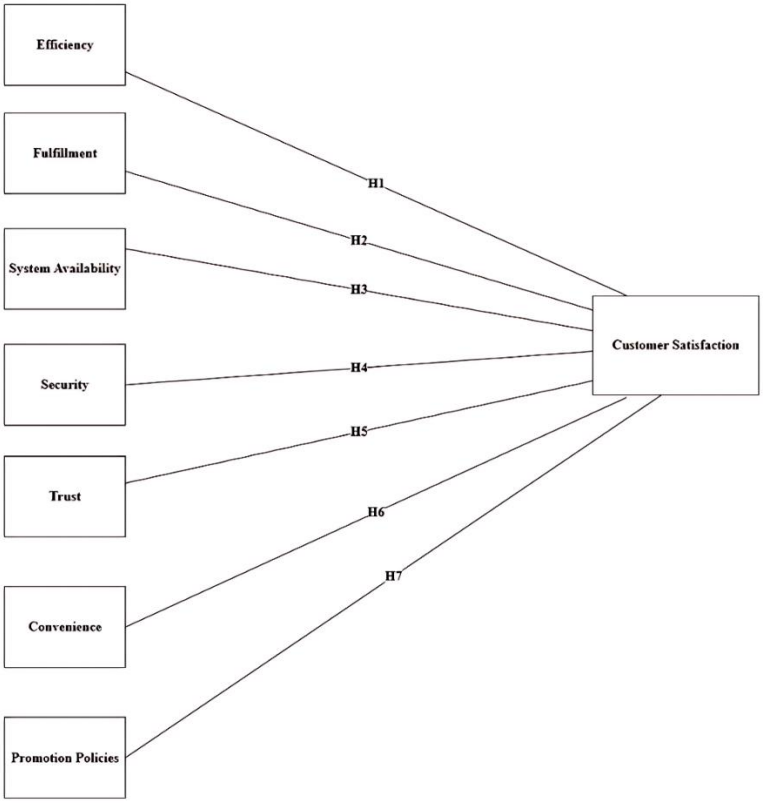

Figure 1.
The proposed research model.

3.1. Efficiency

Efficiency in digital banking refers to the ability of banks to optimize their operations, reduce costs, meet customer demands, and remain competitive through the adoption of digital technologies [34]. By adopting digital technologies, banks can reduce operational costs and improve service efficiency, which makes them more attractive to customers seeking fast and economical services [35]. Digital banking has improved efficiency and cost-effectiveness in the process of technology-enabled service delivery [26]. The study of Raza, et al. [24] recommend that banks invest more in the efficiency dimension as it is the strongest predictor of electronic customer satisfaction. When customers are satisfied, this will ultimately increase their loyalty. Research by Carbó-Valverde, et al. [36] emphasized that effective digital transformation positively affects customer satisfaction, with customers being more satisfied with banks that have higher levels of digitalization. This result is consistent with previous studies which hypothesize that digital bank quality has an impact on customer satisfaction [18, 27, 33, 37, 38].
Based on the previously described literature, the following hypotheses are proposed:

H_1: Efficiency of digital bank services has a significant positive effect on customer satisfaction among generation Z.

3.2. Fulfillment

Fulfillment in the context of digital banking relates to timeliness and accuracy in service delivery through digital channels [26]. This means that the services provided must be timely, accurate, and able to meet customer expectations. Ahmed, et al. [27] added that fulfillment also includes evaluating the technical performance of web applications, operations, and overall performance. This suggests that the reliability and ease of access of a digital platform, such as a bank app or website, are important elements

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

in ensuring a high level of fulfillment. Users expect digital bank apps or websites to function properly, not experience glitches, and be easily accessible [39]. Previous studies have shown a positive and significant relationship between fulfillment and e-banking user satisfaction [40, 41]
Based on the previously described literature, the following hypothesis is proposed:

H_2: Fulfillment of digital bank services has a significant positive effect on customer satisfaction among generation Z.

3.3. System Availability

System availability in digital banking means that the online banking system is always accessible to customers whenever they need it. High system availability helps maintain customer satisfaction and trust [23]. In a technical context, system availability refers to the proper functioning of a banking website or application without technical glitches. This includes the technical infrastructure that supports the operation of the website and the effectiveness of the site in providing services to users [27, 42]. However, studies on the impact of system availability on customer satisfaction give mixed results. Some studies, such as those conducted by Mujinga [23] and Ayinaddis, et al. [43] found that system availability has no statistically significant impact on customer satisfaction. In these studies, system availability was noted as one of the lowest-scoring factors in influencing customer satisfaction, suggesting that this aspect may not contribute significantly unless it is further optimized [44]. On the other hand, other studies have shown that system availability has a significant positive impact on customer satisfaction [27, 43]. Generation Z, who are known to be highly dependent on technology and expect services to be always available, system availability can be an important factor in shaping their perceptions of digital banking services.
Based on the previously described literature, the following hypotheses are proposed:

H_3: System availability of digital bank services has a significant positive effect on customer satisfaction among Generation Z.

3.4. Security

Digital banking systems face significant challenges related to security. The security component assesses the level of protection provided by the bank's digital platform to consumers' personal and financial information [17]. Strong protection in this regard contributes directly to increased customer satisfaction, as customers feel safer and more secure in using digital banking services [18]. Financial institutions must foster user trust by ensuring the reliability, safety, security of digital banking transactions. The importance of security in the acceptance of electronic payment systems has been highlighted by various studies because it is closely related to decisions and satisfaction with these services [45]. Research shows that security has a crucial influence on consumer satisfaction [46, 47]. However, a study conducted by [48] revealed that Gen Z customers usually do not consider security as a significant concern as they believe in the sophisticated and reliable security protocols of digital banking services. This generation's trust in technological advancements increases their overall satisfaction. This finding emphasizes the importance for digital banks to prioritize security measures to foster customer trust and satisfaction.
Based on the previously described literature, the following hypotheses are proposed:

H_4: Security of digital bank services has a significant positive effect on customer satisfaction among generation Z.

3.5. Trust

Three levels of trust in digital banking, namely "Trust in the bank", "Trust in the internet", and "Trust in internet banking information" [6]. These three levels play a significant role in shaping Generation Z's perception of digital bank services, which has a direct impact on customer satisfaction. Trust is a crucial factor in digital interactions, given the inherent risks attached to digital platforms

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

[49]. Various studies show that trust has a positive effect on customer satisfaction levels [50-53]. Based on the previously described literature, the following hypothesis is proposed:

H_5: Digital bank service trust has a significant positive effect on customer satisfaction among generation Z.

3.6. Convenience

By offering quick, adaptable, and simple transaction solutions, digital banking services' convenience contributes significantly to enhancing the customer experience [39]. Digital banking removes the requirement for in-person branch visits by enabling consumers to perform a variety of financial activities at any time and from any location [2]. Without having to wait in line at the bank, this flexibility enables customers to autonomously handle their financial needs, such as paying payments or investigating better financial options. In addition to satisfying customer expectations, the convenience raised the perceived value of the services [24]. According to Merhi, et al. [49] this is especially relevant for Generation Z, who are tech-savvy and have high standards for usability. Digital bank users enjoy time and cost savings and easy access, all of which contribute to their satisfaction [45].

Based on the previously described literature, the following hypothesis is proposed:

***H*$_6$**: Convenience of digital bank services has a significant positive effect on customer satisfaction among generation Z.

3.7. Promotion Policies

Promotional policies encompass a range of incentives, including rebates, gifts, vouchers, extra loyalty points from partner merchants, and discounts on merchant products bought through digital banking services. Young consumers, who frequently favor monetary incentives, have shown a strong preference for these promotional approaches [2]. Promotion is the value that is included in every discount or offer that a digital bank makes; it is organized using dynamic promotional messaging to make it more appealing to customers. Furthermore, according to Windasari, et al. [2] digital banks convey the value of discounts or promotions through real-time generated advertising messages. In addition, a study by Le, et al. [28] showed that customer satisfaction with digital banking services, including promotions and rewards, had a positive impact on financial performance, especially before the COVID-19 pandemic, by creating higher customer satisfaction. Generation Z, in particular, is highly responsive to financial incentives such as discounts, cashbacks and rewards. Younger customers typically favor short-term incentives that provide quick financial benefits [54].

Based on the previously described literature, the following hypotheses are proposed:

H_7: Perceived promotion policies of digital bank services have a significant positive effect on customer satisfaction among Generation Z.

4. Research Methodology

4.1. Measurement

The modified E-S-QUAL measurement scale was employed in this study's quantitative survey. To build the conceptual framework of this study, the measuring items for each construct, as indicated in Table 1, were modified from earlier research (Figure 1). The literature served as the empirical foundation for the theories that were employed. Efficiency, fulfillment, system availability, and security are the four primary constructs that were taken from E-S-QUAL [17]. Furthermore, as independent variables, items for trust, convenience, and promotion policy were modified from Bhuvaneswari and Maruthamuthu [29]; Ayinaddis, et al. [43]; Le, et al. [28] and Windasari, et al. [2]. In order to measure independent and dependent factors, the questionnaire used in this study was created using data from a variety of literature sources [18, 26, 29]. Three sections made up the questionnaire: the first asked for demographic data, while the second and third asked about respondents' opinions of the quality of the services they received and how satisfied they were with the digital banking services they utilized. The questionnaire used in this study consists of 32 items divided into several main variables. The

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

efficiency variable is measured by 4 items, the fulfillment variable by 5 items, the system availability variable by 4 items, and the security variable by 4 items. In addition, the trust variable has 4 items, convenience 4 items, promotion policy 3 items, and customer satisfaction is measured by 4 items. Each item is measured using a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree).

Table 1.
List of measurement items.

Variable	Items	Measurement	References
Efficiency	EFF1	My digital banking service platform allows me to make transactions efficiently.	Parasuraman, et al. [17] and Bankuoru, et al. [18]
	EFF2	The information concerning the services and features of the digital bank I require is readily available and quickly accessible.	
	EFF3	The digital banking application I use is well-structured, allowing me to locate features with ease.	
	EFF4	The page view on this digital bank application loads information quickly.	
Fulfillment	FUL1	Digital banks execute money transfers promptly and in a timely manner.	Parasuraman, et al. [17] and Malc, et al. [41]
	FUL2	The digital bank consistently fulfills my needs in every transaction and service I require.	
	FUL3	Digital banks are reliable in delivering the services they advertise.	
	FUL4	Digital banks consistently meet their commitments regarding transaction completion times.	
	FUL5	My digital bank addresses problems or complaints with effective solutions that align with customer needs.	
System Availability	SYS1	Users can easily access the account or log in.	Parasuraman, et al. [17] and Malc, et al. [41]
	SYS2	Digital banks rarely experience disruptions or crashes.	
	SYS3	The system is consistently available when required by the user.	
	SYS4	The digital bank application continued to run smoothly after I entered the transaction information.	
Security	SEC1	My digital bank ensures the security of my personal data and information.	Parasuraman, et al. [17] and Bankuoru, et al. [18]
	SEC2	I feel safe when I use my bank's digital services to make transactions.	
	SEC3	I am confident that my bank does not share my personal and financial transaction data with third parties without my consent.	
	SEC4	I am confident that digital banks implement systems capable of preventing financial fraud.	
Trust	TR1	If there is an error in my financial transactions, I trust my digital bank will promptly correct it and provide an appropriate solution.	Melinda, et al. [53] and Nguyen and Dang [26]
	TR2	I trust that my digital bank presents transaction information honestly and transparently.	
	TR3	I trust that digital banks honor every commitment made to their customers.	
	TR4	I trust that digital banks maintain customer trust by providing benefits that meet expectations.	
Convenience	CONV1	Using digital banking facilitates access to financial services for me.	Lee and Kim [55]
	CONV2	Using digital banking is more convenient compared to traditional banks.	
	CONV3	Digital banking is highly user-friendly and practical.	
	CONV4	Digital banking allows me to manage my finances anytime and anywhere with ease.	
Promotion Policies	PROM1	Digital banks routinely offer service fee waivers, cashback, or discounts.	Le, et al. [28]
	PROM2	The promotions offered by this digital bank are appealing and add value for me.	
	PROM3	The service fee waivers, cashback, and discounts provided by this digital bank meet my needs.	

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

Customer Satisfaction	CST1	I am satisfied with the quality of digital banking services offered.	Bankuoru, et al. [18]
	CST2	I am satisfied with the features provided by digital banking services.	
	CST3	I intend to continue using this digital banking service in the future.	
	CST4	I would recommend using this digital banking service to others.	

5. Results and Discussion

5.1. Respondent

Data collection included respondents' demographic attributes such as age, gender, education level, occupation, domicile, experience using digital banking, and monthly income. This research uses purposive sampling technique, which is part of non-probability sampling. Samples were selected based on certain criteria, namely digital bank service users aged 17-26 years, domiciled in the Jabodetabek area, and have used digital bank services for at least six months. These criteria were chosen to ensure that the respondents were in accordance with the research objectives, namely examining perceptions of the use of digital bank services and their impact on customer satisfaction. To determine the sample size, the Slovin formula was used with a margin of error of 5%. Slovin's method is most effective when the population proportion is near 0.5 and can only be used to estimate population proportions with a 95% confidence level. Resulting in a target sample of 400 Generation Z respondents in the Greater Jakarta area. Data was collected online through social media platforms and online survey platform and using Google Forms as a data collection tool. Ethical considerations were followed by ensuring that respondents' personal information would be kept confidential and that their participation was entirely voluntary.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

Table 2.
Characteristics of Respondents.

Demographic Variable	Category	Frequency	Percent (%)
Gender	Male	126	31,5
	Female	274	68,5
Age	17 – 20 years	88	22
	21 – 23 years	182	45,5
	24 – 26 years	130	32,5
Occupation	Highschool Student	23	5,75
	University Student	138	34,5
	Private Employee	122	30,5
	Civil Servants	52	13
	Entrepeneurs	22	5,5
	Freelancer	43	10,75
Education	Highschool	171	42,75
	Diploma	53	13,25
	Bachelor Degree	170	42,5
	Master Degree	6	1,5
Domicile	Jakarta	112	28
	Bogor	85	21,25
	Depok	78	19,5
	Tangerang	74	18,5
	Bekasi	51	12,75
Which digital bank apps do you use?	Seabank	159	39,75
	Bank Jago	83	20,75
	Blu by BCA	153	38,25
	Neobank by BNC Digital	103	25,75
	Jenius	64	16
	LINE Bank	70	17,5
	Digibank by DBS	25	6,25
	Allo Bank	13	3,25
Use of Digital Bank Features	Funds Transfer	274	68,5
	Payment of credit card bills, internet, telephone, electricity, etc.	198	49,5
	Recording financial details (mutation, history, account)	156	39
	Financial management features based on needs	110	27,5
	Investment	78	19,5
	Deposit	53	13,25
	Paylater	32	8
Reasons for Using Digital Banking	Fast and easy fund transfer	254	63,5
	Accessible transactions	240	60
	Integration with e-wallets and other payment services	133	33,25
	Convenient account registration	153	38,25
	Cost-effective transaction and administrative fees	164	41
	Loyalty or incentive programs	73	18,25
	Numerous promos are unavailable with mobile banking.	72	18
	Investment and financial management functionalities	41	10,25
Income or Allowance per Month (IDR)	< Under IDR1,000,000	46	11,5
	Rp1,000,000 - Rp3,000,000	1	0,25
	Rp3,000,001 - Rp5,000,000	135	33,75
	Rp5,000,001 - Rp10,000,000	13	3,25
	Rp10,000,001 - Rp20,000,000	2	0,5
	Rp20,000,001 - Rp30,000,000	147	36,75
	Rp30,000,001 - Rp50,000,000	56	14
	> Above Rp50,000,000	0	0

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

Length of Use of Digitial Bank	6 - 11 months	30	7,5
	1 - 2 years	203	50,75
	3 - 4 years	81	20,25
	> 4 years	86	21,5
	Length of Use of Digitial Bank	30	7,5
	6 - 11 months	203	50,75
	1 - 2 years	81	20,25
Frequency of Use of Digital Bank Services	Daily	62	15,5
	4 - 5 times per week	57	14,25
	2 - 3 times per week	131	32,75
	1 time per week	93	23,25
	1 - 2 times per month	57	14,25

The demographic distribution, as outlined in Table 2 indicates that the gender distribution comprises 31.5% male and 68.5% female. Age is categorized into three groups: 17-20 years, comprising 22%; 21-23 years, including 45.5%; and 24-26 years, comprising 32.5%. Occupational distribution includes 5.75% high school students, 34.5% university students, 30.5% private employees, 13% civil servants, 5.5% entrepreneurs, and 10.75% freelancers. Within the Education category, 42.75% possess a high school education, 13.25% hold a diploma, 42.5% have obtained a bachelor's degree, and 1.5% possess a master's degree. All participants are domiciled in the Jabodetabek area, comprising 28% from Jakarta, 21.25% from Bogor, 19.5% from Depok, 18.5% from Tangerang, and 12,75% from Bekasi. Within the realm of digital banking applications, SeaBank emerged as the favored choice among participants, succeeded by Blu from BCA and Neobank from BNC Digital. Other notable applications are Bank Jago and Jenius. In digital banking, the predominant function is money transmission, succeeded by bill payment, financial record-keeping, and financial management. The main reasons for using these services are the speed and ease of fund transfers, the convenience of mobile transactions, compatibility with e-wallets, and lower transaction fees.

5.2. Descriptive Analysis

The mean values for the descriptive statistics of the numerous variables analyzed in this study are presented in Table 3. Efficiency has the highest mean value at 4.378. Indicator EFF1 (My digital banking service platform allows me to make transactions efficiently) showed the highest score, highlighting that Generation Z highly values transaction speed and ease of access in digital banking services. This finding indicates that younger generations prioritize speed and efficiency in technologies, as literature suggests that efficiency directly impacts user satisfaction.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

Table 3.
Descriptive Analysis.

Variable	Indicator	Mean	Median	Standard deviation
Efficiency	EFF1	4.378	5.000	0.775
	EFF2	4.265	4.000	0.758
	EFF3	4.162	4.000	0.801
	EFF4	4.335	4.000	0.691
Fulfillment	FUL1	4.290	4.000	0.708
	FUL2	4.250	4.000	0.808
	FUL3	4.188	4.000	0.795
	FUL4	4.155	4.000	0.797
	FUL5	4.215	4.000	0.805
System Availability	SYS1	4.157	4.000	0.913
	SYS2	4.117	4.000	0.833
	SYS3	4.103	4.000	0.853
	SYS4	4.197	4.000	0.764
Security	SEC1	4.210	4.000	0.769
	SEC2	4.215	4.000	0.818
	SEC3	4.120	4.000	0.831
	SEC4	4.122	4.000	0.811
Trust	TR1	4.115	4.000	0.829
	TR2	4.255	4.000	0.752
	TR3	4.240	4.000	0.789
	TR4	4.240	4.000	0.723
Convenience	CONV1	4.270	4.000	0.726
	CONV2	4.225	4.000	0.815
	CONV3	4.312	4.000	0.768
	CONV4	4.263	4.000	0.767
Promotion Policies	PROM1	4.200	4.000	0.778
	PROM2	4.225	4.000	0.768
	PROM3	4.192	4.000	0.794
Customer Satisfcaction	CST1	4.230	4.000	0.750
	CST2	4.250	4.000	0.798
	CST3	4.272	4.000	0.793
	CST4	4.185	4.000	0.765

Additionally, Fulfillment exhibits a mean score between 4.155 and 4.290, with FUL1 (Digital banks execute money transfers promptly and in a timely manner) recording the highest mean score. This suggests that customers prioritize the efficiency and reliability of transaction processing, highlighting the necessity of fulfilling service expectations. System Availability mean scores ranged from 4.103 to 4.197, with SYS4 (The digital bank application continued to run smoothly after I entered the transaction information) showing the highest mean score. This highlights the importance of dependable system performance for customers, especially in digital banking. Security variables show little variation, with mean scores ranging from 4.120 to 4.215. SEC2 (I feel safe when I use my bank's digital services to make transactions), which measures feelings of safety when using bank digital services for transactions, shows strong customer confidence in transaction security. There is still room for improvement in data privacy, as noted by SEC3 (I am confident that my bank does not share my personal and financial transaction data with third parties without my consent). Trust exhibits a stable

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

mean score range of 4.115 to 4.255, with TR2 (I trust that my digital bank presents transaction information honestly and transparently) being particularly notable, underscoring the significant impact of trust on customer satisfaction.

The mean scores for Convenience varied from 4.225 to 4.312, with CONV3 (Digital banking is highly user-friendly and practical) exhibiting the highest mean score. Ease of access and convenience in digital banking applications are highly prioritized by Generation Z. Convenience refers to how easily users can access digital banking features, including a user-friendly interface and practicality for daily transactions. Promotion Policies exhibit a notable trend, with mean scores varying between 4.192 and 4.225. The highest mean score is observed in PROM2 (The promotions offered by this digital bank are very attractive and add value for me), suggesting that promotional offers significantly enhance user experience and foster customer engagement.

5.3. Model Analysis

This study uses the Structural Equation Model - Partial Least Square (SEM-PLS) method with the SmartPLS version 4.1.0.8 application to analyze statistical data and process quantitative data in this study. The main advantage of SEM-PLS is its ability to view constructs as composites resulting from total variance, which is determined by a linear combination of indicator variables [56]. SEM-PLS has also been used in a variety of previous studies, which have shown how well it analyzes customer satisfaction and banking services [18, 24, 26, 29].

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

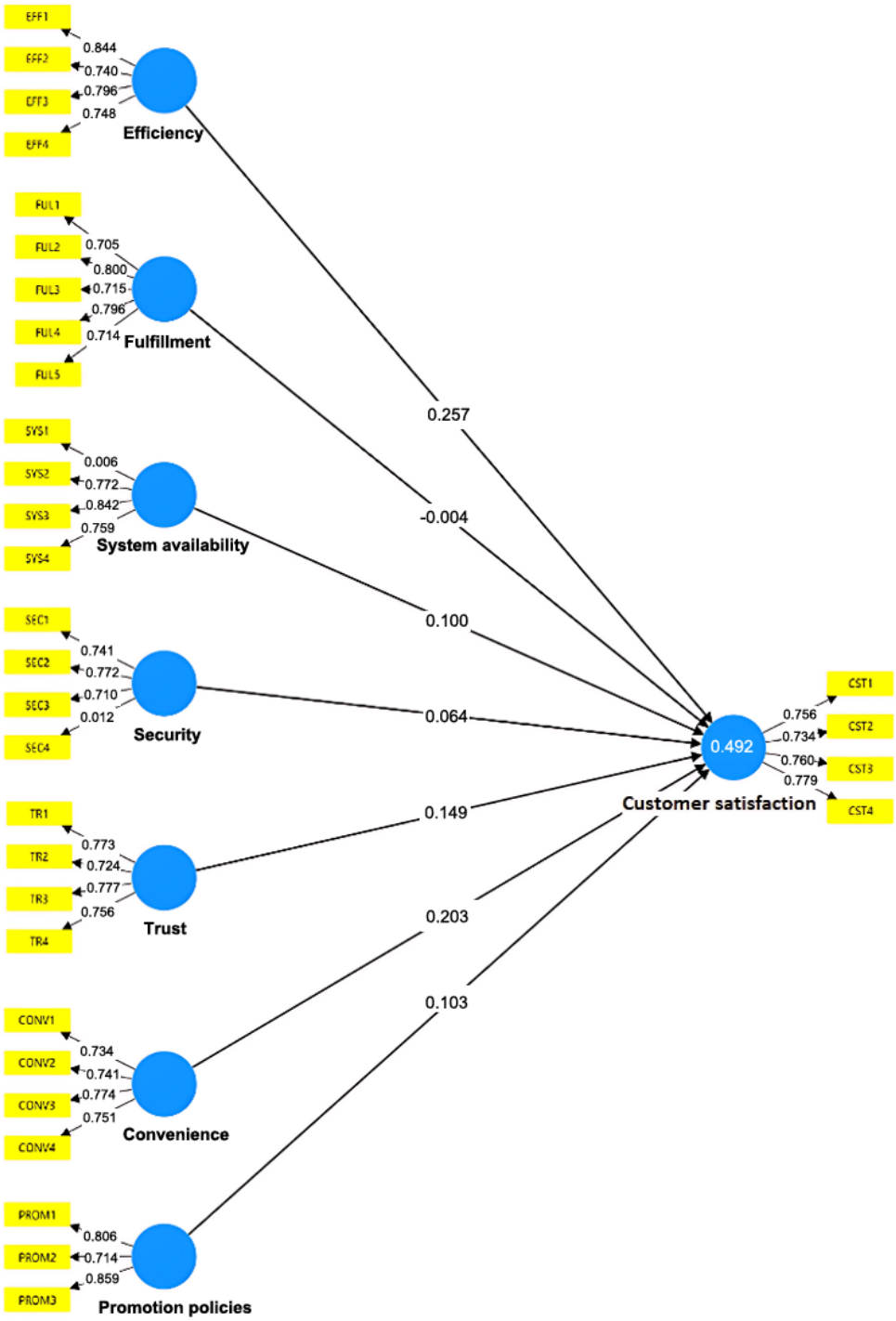

Figure 2.
Final model output.

5.4. Outer Model (Measurement Model)

The outer model serves as a component of the structural model, detailing the relationship between the construct and its associated indicator variables. The purpose of the outer model evaluation is to

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

verify that the indicators effectively represent the construct. The outer model of PLS SEM consists of two types of measurements: reflective and formative model measurements. The initial PLS SEM model measurement in the outer model is characterized by reflective measurement. In reflective measurement, indicators are regarded as representations of the construct. The measurement model is evaluated through the assessment of reliability and validity [57].

Table 4.
Convergent Validity Based on Outer Loadings.

Construct	Items	Outer Loadings	AVE
Efficiency	EFF1	0.844	0.613
	EFF2	0.740	
	EFF3	0.796	
	EFF4	0.748	
Fulfillment	FUL1	0.705	0.558
	FUL2	0.800	
	FUL3	0.715	
	FUL4	0.796	
	FUL5	0.714	
System Availability	SYS1	0.806	0.633
	SYS2	0.772	
	SYS3	0.842	
	SYS4	0.759	
Security	SEC1	0.741	0.577
	SEC2	0.772	
	SEC3	0.710	
	SEC4	0.812	
Trust	TR1	0.773	0.575
	TR2	0.724	
	TR3	0.777	
	TR4	0.756	
Convenience	CONV1	0.734	0.567
	CONV2	0.741	
	CONV3	0.774	
	CONV4	0.761	
Promotion Policies	PROM1	0.806	0.632
	PROM2	0.714	
	PROM3	0.859	
Customer Satisfaction	CST1	0.756	0.574
	CST2	0.734	
	CST3	0.760	
	CST4	0.779	

Convergent validity tests assess the correlation of each indicator with other indicators within the same construct through the analysis of cross-loading and Average Variance Extracted (AVE) values. Convergent validity in measurement models with four or more indicators is established when indicator loadings meet an acceptable threshold ≥0.70 [58] or when the Average Variance Extracted (AVE) for each variable is ≥ 0.5 [57]. As shown in Table 4 indicate that all indicators for each variable demonstrated factor loadings exceeding 0.70, thereby permitting their retention in the analysis. The AVE values for all variables exceeded 0.5, demonstrating that each variable satisfied the required

validity criteria. The second type of test is discriminant validity using Fornell-Larcker Criterion and Heterotrait-Monotrait (HTMT).

Table 5.
Discriminant Validity Based on Fornell-Larcker Criterion.

Variable	CONV	CST	EFF	FUL	PROM	SEC	SYS	TR
CONV	0.753							
CST	0.564	0.757						
Eff	0.603	0.617	0.783					
FUL	0.521	0.484	0.600	0.747				
PROM	0.479	0.506	0.553	0.515	0.795			
SEC	0.558	0.535	0.609	0.587	0.544	0.759		
SYS	0.418	0.497	0.537	0.512	0.533	0.529	0.795	
TR	0.548	0.568	0.611	0.576	0.525	0.638	0.587	0.758

According to Fornell and Larcker [59] criteria, discriminant validity is established when the square root of the Average Variance Extracted (AVE) for each construct exceeds the inter-construct correlation within the model. Table 5 indicates that each construct exhibits discriminant validity, as the square root of the AVE (presented on the diagonal) consistently exceeds the inter-construct correlations. This suggests that each construct in the model possesses a significant degree of uniqueness, allowing for clear differentiation from other constructs.

Table 6.
Discriminant Validity Based on Heterotrait-Monotrait (HTMT).

Variable	CONV	CST	EFF	FUL	PROM	SEC	SYS	TR
CONV								
CST	0.741							
Eff	0.779	0.798						
FUL	0.666	0.615	0.747					
PROM	0.660	0.689	0.739	0.679				
SEC	0.733	0.704	0.783	0.752	0.742			
SYS	0.519	0.622	0.665	0.627	0.701	0.668		
TR	0.717	0.748	0.787	0.740	0.718	0.840	0.743	

The Heterotrait-Monotrait Ratio (HTMT) of correlations, introduced by Henseler, et al. [60], serves as a metric for evaluating discriminant validity, providing enhanced precision and sensitivity compared to traditional methods. Henseler et al. proposed a threshold of 0.9, however, this study utilizes a more conservative threshold of 0.85, which reflects the unique conceptual nature of the constructs involved. Table 6 demonstrates that the HTMT values show correlations between the constructs ranging from 0.519 to 0.840, all of which are below the 0.85 threshold. This suggests that each construct is clearly differentiated from the others. The low inter-construct correlations, all under 0.85, indicate that the model maintains discriminant validity. The HTMT criterion demonstrates that the constructs in this study are distinct and represent different dimensions of the underlying concepts.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

Table 7.
The Value of Composite Reliability, R Square, and Cronbach's Alpha.

Variable	Cronbach's alpha	Composite reliability	R square
CONV	0.747	0.839	
CST	0.752	0.843	0.492
EFF	0.789	0.863	
FUL	0.802	0.863	
PROM	0.707	0.837	
SEC	0.755	0.845	
SYS	0.809	0.873	
TR	0.754	0.844	

This study evaluates the measurement model's internal consistency using Cronbach's Alpha and Composite Reliability (CR). Cronbach's Alpha values above 0.70 indicate good internal consistency [56]. Composite Reliability assesses the reliability of indicators for latent constructs, with recommended values between 0.70 and 0.90. Cronbach's Alpha values ranged from 0.707 to 0.809, showing adequate reliability. Table 7 shows Composite Reliability ranged from 0.837 to 0.873, indicating good internal consistency of the constructs in this model. Cronbach's Alpha indicates the minimum reliability, whereas Composite Reliability represents the maximum. The Composite Reliability value typically ranges between these two figures, indicating a reliable level of internal consistency. The results show that the measurement model in this study has strong internal consistency.

Additionally, R Square serves as a metric to assess the influence of the independent variable on the dependent variable. The R Square value for Customer Satisfaction is 0.492 (Table 7), indicating that approximately 49.2% of its variability is explained by the independent variables in the model. This value is categorized as moderate [35] indicating that the model effectively explains how perceived use of digital bank services impacts customer satisfaction.

5.5. Inner Model (Structural Model)

The significance of the association between latent variables in a model is ascertained using the path coefficient. The bootstrapping process in the SmartPLS will yield a t-statistic value, which is then provided as a p-value. The t-statistic value and the t-table value are compared in this investigation. If the p-value is less than 0.05 or the t-statistic value is more than the t-table value, the link between the variables is deemed significant [56]. With a 95% confidence level (or 5% significance level), the reference t-table value is 1.96.

Table 8.
Path Coefficient, T-Statistics, and P values.

Hypothesis	Variable	Path Coefficient	T statistics	P values	Interpretation
H1	EFF -> CST	0.257	3.888	0.000	Significant
H2	FUL -> CST	-0.004	0.099	0.921	Insignificant
H3	SYS -> CST	0.100	1.819	0.069	Insignificant
H4	SEC -> CST	0.064	1.198	0.231	Insignificant
H5	TR -> CST	0.149	2.310	0.021	Significant
H6	CONV -> CST	0.203	2.650	0.008	Significant
H7	PROM -> CST	0.103	2.148	0.032	Significant

Customer satisfaction is significantly impacted by efficiency, trust, convenience, and promotion policies, according to the analysis results, which are displayed in Table 8. This suggests that advertising policies, ease, trust, and service effectiveness are critical components in raising customer satisfaction. Fulfillment, System Availability, and Security, on the other hand, do not exhibit a significant effect,

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

suggesting that consumers may not truly perceive how these characteristics affect their level of satifaction in digital banking services.

5.6. Discussion of the Results

Based on the findings of the bootstrapping analysis of the hypothesis testing shown in Table 8, the following thoroughly explains each hypothesis. The analysis results indicate that H1, which posits that the efficiency of digital bank services significantly impacts customer satisfaction among Generation Z, is accepted. The findings show a value of $\beta = 0.257$, a t-statistic of 3.888 (above 1.96), and a p-value of 0.000. A p-value less than 0.05 suggests that efficiency significantly impacts customer satisfaction. The concept of efficiency in this study pertains to the accessibility and rapidity of utilizing digital banking services. Generation Z, known for its emphasis on quick service, demonstrates significant satisfaction regarding this element. This is further evidenced by indicator EFF1 (My digital bank service platform allows me to make transactions quickly), which achieved the highest mean score of 4.378. The findings indicate that transaction speed significantly influences customer satisfaction, aligning with the high expectations for speed and usability in digital banking services among Generation Z. The findings align with previous studies Raza, et al. [24]; Nguyen and Dang [26]; Balbin-Romero, et al. [33]; Bankuoru, et al. [18]; Ketema [37] and Mwiya, et al. [39]. Efficiency, which includes the site's speed and simplicity of use, is one of the most essential elements of website service quality, according to the E-S-QUAL theory. Efficiency is crucial because customer satisfaction can be directly raised by the speed and simplicity of access to digital bank services or other electronic services, consistent with their expectations of valuable and efficient services [17].

Fulfillment does not significantly impact Customer Satisfaction. The path coefficient of -0.004, a T-statistic of 0.099 (significantly below the 1.96 threshold), and a p-value of 0.921 indicate a lack of statistical significance, as the criterion of p-value < 0.05 is not met. This suggests that Fulfillment exerts a negligible influence on customer satisfaction. As a result, Hypothesis 2 is rejected. This finding is elucidated by the inconsistency identified in Indicator FUL4 (Digital banks consistently meet their commitments regarding transaction completion times). The inconsistency in meeting transaction time commitments seems to reduce the significance of Fulfillment in affecting customer satisfaction. The findings correspond with the study by Mahadevan and Joshi [61] which indicated that the influence of Fulfillment in digital services may be reduced when users encounter inconsistencies in their service experience. The variability in the indicators associated with Fulfillment suggests that it may not consistently meet the elevated expectations of Generation Z, which requires high consistency in service delivery [61, 62].

System availability does not significantly impact customer satisfaction. The path coefficient is 0.100, while the T-statistic is 1.819, failing to reach the 1.96 threshold. The P-value is 0.069, which exceeds the 0.05 significance threshold. This suggests that, while system availability may positively affect customer satisfaction, its impact is not statistically significant in this analysis. As a result, Hypothesis 3 is rejected. E-SQUAL theory posits that system availability is crucial, yet it is affected by external factors beyond the company's control, including the customer's device and internet connection [17]. The reliance on these factors renders the effect on Customer Satisfaction negligible within the realm of digital banking, leading to the rejection of the hypothesis. This finding aligns with prior research in electronic banking, indicating that system availability does not significantly impact customer satisfaction [43].

The impact of security on Customer Satisfaction is not significant. The positive path coefficient of 0.064 and a T-statistic of 1.198, which falls below the 1.96 threshold, along with a P-value of 0.231, indicate that the significance level of P-value < 0.05 is not achieved. As a result, Hypothesis 4 is rejected. In E-S-QUAL theory, security encompasses the protection of users against risks, including fraud and financial loss, as well as the confidentiality of personal information [17]. In the realm of digital banking services, Generation Z users have not completely understood the mechanisms of security in digital banks or the degree to which it safeguards them. Two prior studies indicate that the security dimension does not significantly influence customer satisfaction in mobile commerce

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

applications and electronic banking services. Security exhibits a minor negative correlation with satisfaction, suggesting a degree of skepticism among customers regarding security risks. This indicates that customers may retain concerns about potential risks despite a lack of security measures, suggesting that security features do not entirely enhance their satisfaction [39, 63].

Trust significantly influences customer satisfaction. The path coefficient is 0.149, and the T-statistic is 2.310, exceeding the 1.96 threshold. The P-value is 0.021, demonstrating that this relationship is statistically significant at the 0.05 level (P-value < 0.05). This indicates that trust has a positive and significant effect on customer satisfaction. As a result, Hypothesis 5 has been accepted. The findings of this study align with prior research [52, 64-66] indicating that trust significantly contributes to enhancing customer satisfaction across different banking contexts. In digital banking, trust is a critical factor that underpins service interactions, as customer confidence in the institution's professionalism and security is essential for enhancing satisfaction. Moreover, the rise of stringent government regulations within the financial sector has prompted the adoption of professional practices that foster trust, including relationship management strategies and trust-building initiatives, thereby enhancing Customer Satisfaction [67].

The impact of convenience on Customer Satisfaction is significant. The positive path coefficient of 0.203, along with a T-statistic of 2.650 that surpasses the 1.96 threshold, and a P-value of 0.008, demonstrates statistical significance at the 0.05 level, as the P-value is less than 0.05. This indicates that convenience has a positive and significant effect on customer satisfaction. As a result, Hypothesis 6 is accepted. The concept of convenience in digital banking pertains to the accessibility and user-friendliness of digital services, highlighting the capability for users to engage with these services at any time and from any location. The findings indicate that Generation Z, emphasizing convenience in transactions, exhibits higher satisfaction levels with services that provide flexible and straightforward access. This study demonstrates that the ease of utilizing digital banking services has a direct impact on customer satisfaction levels. This convenience leads to customer satisfaction and increases the likelihood of continued use of services that eliminate time and location constraints for transactions. Previous studies support these findings, demonstrating that convenience significantly influences customer satisfaction [43, 45].

There is a significant relationship between Promotion Policies and Customer Satisfaction. The path coefficient is positive at 0.103, accompanied by a T-statistic of 2.148, which exceeds the critical threshold of 1.96. Additionally, the P-value is 0.032, which meets the significance criterion of P-value < 0.05. As a result, Hypothesis 7 is accepted. The results of the descriptive analysis indicate that promotion-related indicators, such as PROM2 (The promotions offered by this digital bank are appealing and add value for me), exhibit a relatively high average value. This suggests that customers like promotions that offer direct advantages, such as discounts or cashback, so enhancing the value of the services they obtain. Previous research by Le, et al. [28] showed that promotional policies have a significant impact on customer satisfaction. In addition, promotions such as cashback and discounts have proven to be relevant to Generation Z, encouraging them to more actively use digital services [68, 69]

6. Conclusion and Suggestion

This research examines the determinants affecting Generation Z's satisfaction with digital banking services in Jabodetabek, employing the extended E-S-QUAL model. The research findings indicate that Efficiency, Trust, and Convenience (H1, H5, H6, H7) significantly positively impact Generation Z customer satisfaction. The primary factors influencing satisfaction are transaction speed and ease of access, aligning with Generation Z's preference for efficiency in transactions. Trust is significant; a greater level of customer trust in digital banks correlates with increased satisfaction. The 24/7 accessibility significantly enhances the satisfaction of Generation Z customers, who prioritize flexibility in financial management. Conversely, Fulfillment, System Availability, and Security (H2, H3, H4) did not demonstrate a significant impact on customer satisfaction in this study. While these factors are significant within the E-S-QUAL theory, Generation Z does not directly perceive them in their

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250

experiences with digital banking services. This suggests that while these features are present, users do not perceive them as significantly contributing to their satisfaction with the services offered. The findings indicate that Generation Z emphasizes factors associated with service convenience and efficiency, including transaction speed, app usability, and trust in digital banking institutions. Digital banking service providers must prioritize enhancements and feature development in these areas to align with the expectations of Generation Z customers and enhance their satisfaction.

Future research could explore alternative service quality frameworks or enhance current frameworks to yield comparable and comprehensive results. Other moderating variables, including economic status, may be examined to investigate the determinants of customer satisfaction and loyalty towards their bank. This framework may be integrated with additional models to identify the factors influencing customers' decisions to sustain a digital banking relationship. Subsequent studies could examine the moderating influence of gender variables by incorporating additional constructs that address variations in service needs or preferences. The notable moderating effect of gender indicates that male customer satisfaction is more influenced by the environmental quality of the bank. Therefore, further investigation into male customers' specific expectations concerning the environmental quality aspect of banking services is necessary. A comprehensive examination of these distinct preferences will allow banks to improve service quality for gender-specific customer segments, thereby more effectively increasing customer satisfaction. Expanding the research sample to include Generation Y and Generation Z may enhance the understanding of inter-generational preferences, allowing digital banks to develop more comprehensive service strategies. Broadening the demographic scope of respondents across various age groups will facilitate the identification of universal satisfaction factors as well as the distinct needs of each generation. This approach will provide digital banks with a comprehensive understanding necessary to meet diverse customer expectations.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Copyright:

References

[1] J. F. Rodrigues, F. A. Ferreira, L. F. Pereira, E. G. Carayannis, and J. J. Ferreira, "Banking digitalization: (Re) thinking strategies and trends using problem structuring methods," *IEEE Transactions on Engineering Management*, vol. 69, no. 4, pp. 1517-1531, 2020. https://doi.org/10.1109/TEM.2020.2993171

[2] N. A. Windasari, N. Kusumawati, N. Larasati, and R. P. Amelia, "Digital-only banking experience: Insights from gen Y and gen Z," *Journal of Innovation & Knowledge*, vol. 7, no. 2, p. 100170, 2022. https://doi.org/10.1016/j.jik.2022.100170

[3] World Bank, *World development report 2021: Data for better lives*. Washington, DC: World Bank, 2021.

[4] Bank Indonesia, *Monetary policy review December 2024*. Jakarta, Indonesia: Bank Indonesia, 2024.

[5] I. Agárdi and M. A. Alt, "Do digital natives use mobile payment differently than digital immigrants? A comparative study between generation X and Z," *Electronic Commerce Research*, vol. 24, no. 3, pp. 1463-1490, 2024. https://doi.org/10.1007/s10660-022-09537-9

[6] S. Ahmed and S. Sur, "Change in the uses pattern of digital banking services by Indian rural MSMEs during demonetization and Covid-19 pandemic-related restrictions," *Vilakshan-XIMB Journal of Management*, vol. 20, no. 1, pp. 166-192, 2023. https://doi.org/10.1108/xjm-09-2020-0138

[7] P. Yadav and A. Prakash, "Understanding customer perceptions in digital banking: A comprehensive review educational administration," *Theory and Practice*, vol. 2024, no. 1, pp. 3923–3930, 2024. https://doi.org/10.53555/kuey.v30i1.6344

[8] Populix, *Ecosystem analysis and perception study of digital banks in Indonesia*. Jakarta, Indonesia: Populix Research, 2024.

[9] A. F. Flores, E. S. Saldanha, and M. Vong, "The mediation effect of customer satisfaction on the relationship between service quality and customer loyalty," *Timor Leste Journal of Business and Management*, vol. 2, pp. 56-65, 2020. https://doi.org/10.51703/bm.v2i2.22

[10] M. Butt, S. R. Muhammad, F. Qureshi, and G. Abbas, "E-banking system in Pakistan and its impact on customers satisfaction: A case study of full-fledged Islamic banks," *COMSATS Journal of Islamic Finance*, vol. 3, no. 2, pp. 63–87, 2018. https://doi.org/10.26652/cjif.3201824

[11] V. A. Zeithaml, A. Parasuraman, and A. Malhotra, "Service quality delivery through web sites: A critical review of extant knowledge," *Journal of the Academy of Marketing Science*, vol. 30, no. 4, pp. 362-375, 2002. https://doi.org/10.1177/009207002236911

[12] Z. Yaseen and S. Kamran, "Exploring the impediments faced by the banking customers to adopt Islamic banking services in Pakistan," *Journal of Islamic Business and Management*, vol. 9, no. 1, pp. 25-41, 2019.

[13] A. G. Khan, R. P. Lima, and M. S. Mahmud, "Understanding the service quality and customer satisfaction of mobile banking in Bangladesh: Using a structural equation model," *Global Business Review*, vol. 22, no. 1, pp. 85-100, 2021. https://doi.org/10.1177/0972150918795551

[14] B. Kaur, S. Kiran, S. Grima, and R. Rupeika-Apoga, "Digital banking in Northern India: The risks on customer satisfaction," *Risks*, vol. 9, no. 11, p. 209, 2021. https://doi.org/10.3390/risks9110209

[15] S. Sedkaoui, "Analyzing the relationship between servqual model, customer satisfaction, and loyalty in Algerian Banking Sector Using Pls-Sem," *International Journal for Quality Research*, vol. 18, no. 2, pp. 627–642, 2024. https://doi.org/10.24874/IJQR18.02-20

[16] F. Al Qaisi and M. Alrosan, "Measuring customers satisfaction of Islamic banking sector in Jordan," *Humanities and Social Sciences Letters*, vol. 8, no. 3, pp. 310-322, 2020. https://doi.org/10.18488/JOURNAL.73.2020.83.310.322

[17] A. Parasuraman, V. A. Zeithaml, and A. Malhotra, "ES-QUAL: A multiple-item scale for assessing electronic service quality," *Journal of Service Research*, vol. 7, no. 3, pp. 213-233, 2005. https://doi.org/10.1177/1094670504271156

[18] E. S. Bankuoru, D. Boateng, and S. Aboagye Mensah, "To leave or retain? An interplay between quality digital banking services and customer satisfaction," *International Journal of Bank Marketing*, vol. 39, no. 7, pp. 1420-1445, 2021. https://doi.org/10.1108/IJBM-02-2021-0072

[19] Y. Ramli, Y. Harwani, M. Soelton, S. Hariani, F. Usman, and F. Rohman, "The implication of trust that influences customers' intention to use mobile banking," *The Journal of Asian Finance, Economics and Business*, vol. 8, no. 1, pp. 353-361, 2021. https://doi.org/10.13106/jafeb.2021.vol8.no1.353

[20] V. T. Phong and V. M. D. Anh, "Impact of the Bank's image and reputation on customer's loyalty through customer's trust: A case of commercial banks in Ho Chi Minh City," *Open Journal of Business and Management*, vol. 11, no. 5, pp. 2652-2685, 2023. https://doi.org/10.4236/ojbm.2023.115145

[21] P. K. Ozili, *Causes and consequences of the 2023 banking crisis. In Governance and Policy Transformations in Central Banking*. United States: IGI Global Scientific Publishing, 2024.

[22] A. Cardoso and M. Cardoso, "Bank reputation and trust: Impact on client satisfaction and loyalty for portuguese clients," *Journal of Risk and Financial Management*, vol. 17, no. 7, p. 277, 2024. https://doi.org/10.3390/jrfm17070277

[23] M. Mujinga, *Online banking service quality: A South African E-S-QUAL Analysis," in Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Springer. https://doi.org/10.1007/978-3-030-44999-5_19, 2020.

[24] S. A. Raza, A. Umer, M. A. Qureshi, and A. S. Dahri, "Internet banking service quality, e-customer satisfaction and loyalty: The modified e-SERVQUAL model," *The TQM Journal*, vol. 32, no. 6, pp. 1443-1466, 2020. https://doi.org/10.1108/TQM-02-2020-0019

[25] Financial Services Authority, *Financial services authority regulation Number 12/POJK.03/2018 concerning the implementation of digital banking services by commercial banks*. Jakarta, Indonesia: Financial Services Authority, 2018.

[26] P. M. Nguyen and T. H. Dang, "Factors affecting digital banking services acceptance: An empirical study in Vietnam during the COVID-19 pandemic," *Entrepreneurial Business and Economics Review*, vol. 12, no. 1, pp. 101-117, 2024. https://doi.org/10.15678/eber.2024.120106

[27] R. R. Ahmed, D. Streimikiene, Z. A. Channar, R. H. Soomro, and J. Streimikis, "E-banking customer satisfaction and loyalty: Evidence from serial mediation through modified ES-QUAL model and second-order PLS-SEM," *Engineering Economics*, vol. 32, no. 5, pp. 407-421, 2021. https://doi.org/10.5755/J01.EE.32.5.28997

[28] N. P. Le, N. T. H. Ninh, and N. M. Hung, "Factors influencing customers' perception of digital banking service quality in Vietnam," *International Journal of Professional Business Review*, vol. 8, no. 7, p. 106, 2023. https://doi.org/10.26668/businessreview/2023.v8i7.2861

[29] C. Bhuvaneswari and K. Maruthamuthu, "Analysing the art of service quality and customer satisfaction of digital banking services: A SEM approach," *International Review of Management and Marketing*, vol. 14, no. 4, pp. 202-209, 2024. https://doi.org/10.32479/irmm.16234

[30] S. Rahi and M. Abd. Ghani, "Investigating the role of UTAUT and e-service quality in internet banking adoption setting," *The TQM Journal*, vol. 31, no. 3, pp. 491-506, 2019. https://doi.org/10.1108/TQM-02-2018-0018

[31] N. Mustafa, A. Bajrami, and X. Islami, "Electronic services management in local governance–evidence from a transitional economy," *International Journal of Sustainable Development and Planning*, vol. 17, no. 2, pp. 615-621, 2022. https://doi.org/10.18280/ijsdp.170226

[32] A. Pooya, M. Abed Khorasani, and S. Gholamian Ghouzhdi, "Investigating the effect of perceived quality of self-service banking on customer satisfaction," *International Journal of Islamic and Middle Eastern Finance and Management*, vol. 13, no. 2, pp. 263-280, 2020. https://doi.org/10.1108/IMEFM-12-2018-0440

[33] G. Balbin-Romero, E. Carrera-Mija, A. Serrato-Cherres, and F. Cordova-Buiza, "Relationship between e-banking service quality based on the e-SERVQUAL model and customer satisfaction: A study in a Peruvian bank," *Banks and Bank Systems*, vol. 17, no. 4, pp. 180-188, 2022. https://doi.org/10.21511/bbs.17(4).2022.15

[34] T. L. Liu, M. M. Naveed, S. Mustafa, and M. T. Naveed, "Analysing the impact of digital technology diffusion on the efficiency and convergence process of the commercial banking industry of Pakistan," *Humanities and Social Sciences Communications*, vol. 11, no. 1, pp. 1-27, 2024. https://doi.org/10.1057/s41599-024-03184-1

[35] M. A. Saif, N. Hussin, M. M. Husin, A. Alwadain, and A. Chakraborty, "Determinants of the intention to adopt digital-only banks in Malaysia: The extension of environmental concern," *Sustainability*, vol. 14, no. 17, p. 11043, 2022. https://doi.org/10.3390/su141711043

[36] S. Carbó-Valverde, P. J. Cuadros-Solas, F. Rodríguez-Fernández, and J. J. Sánchez-Béjar, "Digital innovation and de-branching in the banking industry: Customer perception and satisfaction," *Global Policy*, vol. 15, pp. 8-20, 2024. https://doi.org/10.1111/1758-5899.13313

[37] E. Ketema, "The impact of M-banking quality service on customers satisfaction during Covid-19 lock down: The case of Bank of Abyssinia, Ethiopia," *African Journal of Marketing Management*, vol. 12, no. 2, pp. 21-37, 2020. https://doi.org/10.5897/AJMM2020.0651

[38] G. Zouari and M. Abdelhedi, "Customer satisfaction in the digital era: evidence from Islamic banking," *Journal of Innovation and Entrepreneurship*, vol. 10, pp. 1-18, 2021. https://doi.org/10.1186/s13731-021-00151-x

[39] B. Mwiya *et al.*, "Examining the effects of electronic service quality on online banking customer satisfaction: Evidence from Zambia," *Cogent Business & Management*, vol. 9, no. 1, p. 2143017, 2022. https://doi.org/10.1080/23311975.2022.2143017

[40] S. Sardana and V. N. Bajpai, "E-banking service quality and customer satisfaction: An exploratory study on India," *International Journal of Services and Operations Management*, vol. 35, no. 2, pp. 223-247, 2020.

[41] D. Malc, J. Dlačić, A. Pisnik, and B. Milfelner, "The development of E-banking services quality measurement instrument: MPQe-BS," *Sustainability*, vol. 15, no. 16, p. 12659, 2023. https://doi.org/10.3390/su151612659

[42] R. R. Ahmed, G. Romeika, R. Kauliene, J. Streimikis, and R. Dapkus, "ES-QUAL model and customer satisfaction in online banking: Evidence from multivariate analysis techniques," *Oeconomia Copernicana*, vol. 11, no. 1, pp. 59-93, 2020. https://doi.org/10.24136/oc.2020.003

[43] S. G. Ayinaddis, B. A. Taye, and B. G. Yirsaw, "Examining the effect of electronic banking service quality on customer satisfaction and loyalty: an implication for technological innovation," *Journal of Innovation and Entrepreneurship*, vol. 12, no. 1, p. 22, 2023. https://doi.org/10.1186/s13731-023-00287-y

[44] M. C. O. Mendoza, R. R. C. Santos, and J. E. H. Magdaraog, "Assessment of E-service quality dimensions and its influence on customer satisfaction: A study on the online banking services in the Philippines," in *2020 IEEE 7th International Conference on Industrial Engineering and Spplications (ICIEA)*, 2020: IEEE, pp. 1076-1081.

[45] M. M. Mohan, T. H. Kumar, and N. Rao, *Factors influencing customers to use digital banking services in twin cities of Telangana State*. Turkey: Badebio Biotechnology Ltd, 2021.

[46] A. Tahtamouni, "E-banking services and the satisfaction of customers in the Jordanian banks," *Journal of Science and Technology Policy Management*, vol. 14, no. 6, pp. 1037-1054, 2023. https://doi.org/10.1108/JSTPM-06-2021-0082

[47] R. Patel, A. K. Mishra, M. Z. Chishti, and T. M. Modi, "Relationship between internet banking service quality, e-customer satisfaction, and loyalty: A comparative study of India and Pakistan," *Journal of Central Banking Theory and Practice*, vol. 13, no. 2, pp. 213-228, 2024. https://doi.org/10.2478/jcbtp-2024-0019

[48] E. R. Indriyarti, M. Christian, H. Yulita, T. Aryati, and R. J. Arsjah, "Digital bank channel distribution: Predictors of usage attitudes in Jakarta's gen Z," *Journal of Distribution Science*, vol. 21, no. 2, pp. 21-34, 2023.

[49] M. Merhi, K. Hone, A. Tarhini, and N. Ameen, "An empirical examination of the moderating role of age and gender in consumer mobile banking use: a cross-national, quantitative study," *Journal of Enterprise Information Management*, vol. 34, no. 4, pp. 1144-1168, 2021. https://doi.org/10.1108/JEIM-03-2020-0092

[50] A. K. Kar, "What affects usage satisfaction in mobile payments? Modelling user generated content to develop the "digital service usage satisfaction model"," *Information Systems Frontiers*, vol. 23, no. 5, pp. 1341-1361, 2021. https://doi.org/10.1007/s10796-020-10045-0

[51] H. Beyari, "The role of trust and its impacts on consumer satisfaction in the context of social commerce," Retrieved: https://www.researchgate.net/publication/344457974, 2020.

[52] C. I. Mbama and P. O. Ezepue, "Digital banking, customer experience and bank financial performance: UK customers' perceptions," *International Journal of Bank Marketing*, vol. 36, no. 2, pp. 230-255, 2018. https://doi.org/10.1108/IJBM-11-2016-0181

[53] E. Melinda, O. Usman, and S. Aditya, "The effect of e-service quality and e-trust on e-loyalty with e-satisfaction as an intervening for mobile banking user," Retrieved: http://journal.unj.ac.id/unj/index.php/jdmb, 2023.
[54] S. K. Taken, "Longitudinal study of digital marketing strategies targeting Millennials," *Journal of Consumer Marketing*, vol. 29, no. 2, pp. 86-92, 2012. https://doi.org/10.1108/07363761211206339
[55] J.-M. Lee and H.-J. Kim, "Determinants of adoption and continuance intentions toward Internet-only banks," *International Journal of Bank Marketing*, vol. 38, no. 4, pp. 943-965, 2020.
[56] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "When to use and how to report the results of PLS-SEM," *European Business Review*, vol. 31, no. 1, pp. 2-24, 2019. https://doi.org/10.1108/EBR-11-2018-0203
[57] J. F. Hair, M. Sarstedt, C. M. Ringle, and J. A. Mena, "An assessment of the use of partial least squares structural equation modeling in marketing research," *Journal of the Academy of Marketing Science*, vol. 40, pp. 414-433, 2012. https://doi.org/10.1007/s11747-011-0261-6
[58] J. F. Hair, G. Tomas, M. Hult, C. M. Ringle, and M. Sarstedt, "A primer on partial least squares structural equation modeling (PLS-SEM)," Retrieved: https://www.researchgate.net/publication/354331182, 2021.
[59] C. Fornell and D. F. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," *Journal of Marketing Research*, vol. 18, no. 1, pp. 39-50, 1981.
[60] J. Henseler, C. M. Ringle, and M. Sarstedt, "A new criterion for assessing discriminant validity in variance-based structural equation modeling," *Journal of the Academy of Marketing Science*, vol. 43, pp. 115-135, 2015. https://doi.org/10.1007/s11747-014-0403-8
[61] K. Mahadevan and S. Joshi, "Impact of e-service quality dimensions on customer satisfaction and loyalty in online apparel shopping in India," *Indian Journal of Marketing*, vol. 52, no. 12, pp. 20-38, 2022.
[62] N. A. Hidayah, R. H. Kusumaningtyas, and A. A. Zalia, "Analysis of the effect of service quality on loyalty behavior of DANA e-wallet users using the E-SQUAL extended model," in *2021 9th International Conference on Cyber and IT Service Management (CITSM)*, 2021: IEEE, pp. 1-4.
[63] N. F. M. Zariman, N. Humaidi, and M. H. Abd Rashid, "Mobile commerce applications service quality in enhancing customer loyalty intention: Mediating role of customer satisfaction," *Journal of Financial Services Marketing*, vol. 28, no. 4, pp. 649–663, 2022. https://doi.org/10.1057/s41264-022-00190-9
[64] S. Agarwal, P. Malik, and S. Gautam, "Analysis of customer satisfaction and the customer experience in digital payments: A meta-analysis review," *International Journal of Business Science and Applied Management*, vol. 18, no. 1, pp. 1-17, 2023.
[65] M. Z. Rafiq, J. C. Jun, R. Ali, M. K. Majeed, and M. Mohsin, "Impact of corporate image, switching cost and customer trust on customer satisfaction: Evidence from listed banking sector," *SMART Journal of Business Management Studies*, vol. 16, no. 1, pp. 26-34, 2020. https://doi.org/10.5958/2321-2012.2020.00003.2
[66] I. G. A. A. M. Suariedewi and N. W. S. Suprapti, "Effect of mobile service quality to e-trust to develop e-satisfaction and e-loyalty mobile banking services," *International Research Journal of Management, IT and Social Sciences*, vol. 7, no. 1, pp. 185-196, 2020. https://doi.org/10.21744/irjmis.v7n1.836
[67] S. P. S. Ho and A. Wong, "The role of customer personality in premium banking services," *Journal of Financial Services Marketing*, vol. 28, no. 2, p. 285, 2022. https://doi.org/10.1057/s41264-022-00150-3
[68] M.-F. Wei, Y.-H. Luh, Y.-H. Huang, and Y.-C. Chang, "Young generation's mobile payment adoption behavior: Analysis based on an extended UTAUT model," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 16, no. 4, pp. 618-637, 2021. https://doi.org/10.3390/jtaer16040037
[69] T. Afrizal, J. Saputra, and R. J. Pinem, "The relationship of cashback, discount, and voucher toward decision to use digital payment in Indonesia the role of government and community participation in solid waste managemen : A case of tegal city view project the relationship of cashback, discount, and voucher toward decision to use digital payment in Indonesia," *Talent Development & Excellence*, vol. 12, no. 3, pp. 2766–2774, 2020.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 9, No. 3: 489-510, 2024
DOI: 10.55214/25768484.v9i3.5250