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Mobile Service Quality's Impact on Customer Repurchase Intention in Food and Beverage Mobile Applications

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Abstract

This study aims to assess the impact of mobile service quality on customer repurchase intention in Indonesia's food and beverage mobile applications. The research identifies key dimensions such as application design, ease of use, privacy, and customer support and evaluates their influence on customer e-satisfaction and repurchase behavior. A quantitative approach was employed, utilizing purposive sampling to gather data from 401 active users of these applications. The analysis, conducted using Structural Equation Modeling-Partial Least Squares (SEM-PLS), revealed that these dimensions significantly enhance overall mobile service quality, which in turn positively affects customer e-satisfaction and repurchase intention. The findings underscore the importance of a minimalist and user-friendly design, robust privacy measures, and responsive customer support—particularly for Gen-Z users in Indonesia, where privacy concerns are increasingly prominent. This study contributes to the existing literature by providing insights specific to the Indonesian market and offering practical recommendations for the food and beverage industry to improve mobile service quality, thereby fostering stronger customer loyalty and increasing repurchase rates. The novelty of this research lies in its focus on the rapidly growing mobile app market in Indonesia, addressing unique regional challenges and opportunities.

Keywords: Mobile Service Quality; Food and Beverage Mobile Application; Customer e-Satisfaction; Repurchase Intention.

1. Introduction

In this age of technology, our daily lives revolve significantly around mobile phones, or what is commonly referred to as smartphones, serving as repositories for almost everything we possess, concealed behind the screen [1]. In recent decades, mobile technologies have undergone remarkable and swift advancements, making smartphones increasingly accessible to a broader range of consumers. These smartphones serve numerous functions, including social media interaction, music and video streaming, gaming, photo sharing, online shopping, food ordering, and digital payments. Indonesia is also one of the countries that is highly responsive to these technological advancements. With an estimated 187.62 million smartphone users in 2022, Statista reveals that Indonesia is ranked fourth among the nations with the most smartphone users worldwide [2, 3]. This is further affirmed by survey data from the Indonesian Central Bureau of Statistics, which revealed that in 2022, 67.88 percent of the Indonesian population owned a mobile phone [4]. As smartphones and mobile devices gain more power, the growing utilization of these devices significantly influences the evolution of mobile applications that consumers use daily for accessing information or making purchases of products and services.

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In Indonesia, with a population exceeding 270 million and over 180 million internet users as of 2022, mobile devices have emerged as the predominant platform for e-commerce, representing approximately 66% of the population [4]. According to some online shopping platforms, approximately 75% of online shoppers use their smartphones instead of desktop computers [5]. Quoting data from GlobalWebIndex on CNN Indonesia [6], around 90% of internet users aged 16 to 64 in Indonesia engage in online shopping, placing this country as one of the global leaders in e-commerce adoption in 2020. In 2022, Indonesia emerged as the leading ASEAN nation in e-commerce revenue, with approximately $51.9 billion [7]. With the extensive number of online transactions happening on smartphones in Indonesia, mobile applications are becoming the dominant form of digital interaction.

In Indonesia, the food and beverage industry is increasingly recognizing the importance of mobile applications as a key marketing and operational tool. Recently, CNBC Indonesia [8] reported that over 8,000 Indonesian merchants have integrated mobile applications into their business operations. These applications streamline processes like ordering, pickup, delivery, and payments. With the increasingly competitive food and beverage industry, business professionals recognize an opportunity to create an application that could enhance the customer experience. However, in the highly competitive food and beverage industry, global brands face challenges in aligning their applications with user expectations. Despite being designed to enhance the customer experience, these applications often underperform, as evidenced by App Store and Play Store ratings falling below four stars. This decline in ratings is primarily due to user dissatisfaction, often related to technical issues like frequent crashes, bugs, and transactional errors within the applications, leading to ratings as low as one star. This raises questions about whether application quality impacts businesses in the food and beverage industry.

Previous research has extensively examined the impact of mobile service quality on customer repurchase intention across various industries. Mirza et al. [9] provided critical insights into how mobile service quality influences customer behavior, particularly highlighting its significance in driving repurchase intention across diverse sectors. Similarly, Ginting et al. [10] explored the effect of e-service quality within the e-commerce realm, and Sasono [11] investigated e-service quality in the context of internet banking in Indonesia, both studies underscoring the importance of service quality in shaping customer satisfaction and loyalty. However, despite the insights these studies offer, there is a notable gap in the literature concerning mobile service quality, specifically within the food and beverage industry in Indonesia. The sector's increasing reliance on mobile applications lacks a thorough understanding of how service quality in these apps impacts customer repurchase intention.

This study aims to bridge this gap by investigating how mobile service quality in food and beverage mobile applications affects customer repurchase intention in Indonesia. By analyzing the adoption and usage patterns of these applications, as well as assessing their effectiveness in meeting customer expectations, this research will contribute to a deeper understanding of the role mobile service quality plays in driving repurchase intentions. The findings will provide food and beverage businesses in Indonesia with data-driven insights to optimize their mobile applications, enhance customer experience, and sustain competitive advantage in a dynamic digital marketplace.

2. Literature Review

2.1. Food and Beverage Mobile Application

Mobile application is a software program designed specifically for use on mobile devices. It should be easy to understand, user-friendly for inexperienced users, and easy to access and run on most mobile devices. Most interactions happen through mobile applications created to cater to the user's specific needs, such as shopping, entertainment, information, and socializing. There are many types of mobile applications available today, one of which is branded applications. Branded applications are mobile apps crafted by companies to actively engage users, fostering and strengthening meaningful connections with the brand [12]. Many industries have adopted this type of application, from healthcare and education to entertainment, fashion, and the food and beverage industry. Various restaurants and coffee shops in Indonesia, like McDonald's, Domino's Pizza, KFC, and Starbucks Indonesia, have developed their own mobile applications. According to the Google Play Store, more than 10 million users in Indonesia have downloaded these applications, making food and beverage mobile applications one of the most popular application categories in the country.

2.2. Overall Mobile Service Quality

The definition of mobile service quality can be derived from the broader concept of e-service quality, which was defined by Wirapraja et al. [13] as the application's capability to facilitate tasks such as the purchasing and sale of goods and services. It plays a vital role in boosting customer contentment and confidence, contributing to the competitive success of organizations [11]. Fundamentally, e-service quality, a concept applicable to both websites and mobile applications, involves the evaluation of several factors. Considering the significant resemblance in the factors assessed between websites and mobile applications and recognizing the limited extent of previous research on mobile service quality, the methodology employed involves a transformation wherein factors from website service quality can be

applied to the quality of mobile services. This approach is driven by the need for a comprehensive understanding and assessment of the quality parameters associated with mobile services.

Mobile service quality dimensions are key factors that not only ensure customer satisfaction but also improve the overall quality of mobile services [14]. Tandon et al. [15] also identified the key dimensions of website service quality as ease of understanding, ease of use, ease of ordering, information usefulness, security and privacy, website design, navigation, customization, and consistency. Another study validated that certain system reliability and security are the primary factors impacting mobile service quality [16]. Efficiency, system availability, fulfillment, and privacy/security were utilized by Khan et al. [17] as individual independent variables to assess e-service quality. Parasuraman et al. [18] found that efficiency, fulfillment, system availability, privacy, responsiveness, compensation, and contact are the main dimensions that influence e-service quality. All these variables have underscored crucial facets of e-service quality. As the research is centered on mobile service quality within the food and beverage industry, the present paper has identified application design, ease of use, ease of understanding, ease of ordering, privacy, and contact as the primary dimensions of mobile service quality.

Application design encompasses a broad range of visual elements that contribute to the overall user experience. This includes not just the superficial aspects like graphics and aesthetics but also the strategic arrangement of elements and clear product information within the application [15]. Application design involves all elements of the user experience, from information quality, website aesthetics, convenience, and system availability [19]. Effective application design is pivotal for enhancing user experience and engagement. According to Rita et al. [19], a well-designed app should prioritize usability, reflect a strong brand image, and attract users through appealing aesthetics.

H1: *Application design is positively correlated with overall mobile service quality.*

Ease of use in applications measures how convenient it is for users to interact with and navigate through an application [20]. This concept encompasses three key dimensions: ease of learning, ease of use, and ease of navigation. It is critical to influencing both customer satisfaction and the likelihood of using the application. Prior to engaging with an application, users regard ease of use as a significant criterion, valuing its capacity to offer convenience and elevate the overall user experience [21].

H2: *Ease of use is positively correlated with overall mobile service quality.*

Ease of understanding refers to the importance of creating an application structure that is comprehensible to users, considering its functionality, interface, and content. This notion emphasizes the need to use clear and understandable language, provide straightforward explanations, and offer lucid product information. It is about designing an application in such a way that users can easily navigate and utilize it without confusion, thus enhancing their overall experience and satisfaction with the application [15].

H3: *Ease of understanding is positively correlated with overall mobile service quality.*

Ease of ordering refers to the simplicity and efficiency with which customers can place orders. This concept is vital, especially for developing countries, to create a positive customer experience based on a straightforward, quick, and simple ordering process [15]. Based on a study conducted by Tandon et al. [15], ease of ordering is included as one of the factors affecting website service quality. Given the study's focus on mobile service quality, ease of ordering will also be added as one of the factors in the context of overall mobile service quality. Additionally, it further explains that ease of ordering consists of four primary features, which are to place, track, modify, and cancel orders.

H4: *Ease of ordering is positively correlated with overall mobile service quality.*

Privacy, defined as the extent to which a website ensures safety and safeguards customer information [22], is especially crucial for food and beverage mobile applications. Given the vast number of devices, services, and individuals sharing information on the Internet of Things (IoT), privacy becomes an essential security principle. This includes not only ensuring that data remains secured and under the exclusive control of the designated user, preventing unauthorized access or other forms of data breach [23], but also implementing specific measures such as secure payment gateways and clear privacy policies to build trust and confidence. For businesses in the food and beverage industry, these measures can be effectively implemented by integrating robust privacy and security protocols into their mobile applications, thereby enhancing user satisfaction and encouraging repeat use [24].

H5: *Privacy is positively correlated with overall mobile service quality.*

Contact points refer to the availability of the company to provide customers with assistance through various media, such as contact information, telephone, or customer representatives, in troubleshooting specific issues encountered with the e-service. Further, the study by Ataburo et al. [25] shows that providing contact assistance will positively influence the level of satisfaction. The study by Broadbent & Lodge [26] demonstrated that live chat, as a form of contact, results in high user satisfaction due to the prompt and quick responses provided, creating a sense of connection between users and the representatives.

H6: *Contact is positively correlated with overall mobile service quality.*

Based on previous research [19], which shows a high correlation between e-service quality and customer satisfaction and confirms the effect of mobile service quality on satisfaction and purchase intentions, this study formulated the hypothesis to test the effect of mobile service quality on customer e-satisfaction.

H7: *Overall mobile service quality positively influences customer e-satisfaction.*

2.3. Customer e-Satisfaction

To grasp the concept of e-satisfaction, it is essential first to comprehend the broader notion of satisfaction. Satisfaction, or its opposite, dissatisfaction, arises from a comparison between what customers expect and the actual quality of service they perceive [27]. E-satisfaction refers to a customer's level of satisfaction with online interactions and transactions with food and beverage applications in the context of digital customer experiences.

Within the food and beverage industry, customer satisfaction is of utmost importance. Studies suggest that increased levels of customer satisfaction correlate with increased profitability. This is because satisfied customers are more inclined to develop loyalty and express a stronger inclination to make repeat purchases [28]. Conversely, customers who experience lower e-satisfaction are more inclined to explore alternatives and can find it more challenging to win back [29]. This is particularly significant in the era of social media and online reviews, where customer opinions can impact a brand's reputation and attract new customers. This phenomenon is especially pertinent within the realm of loyalty applications for food and beverages. Hence, the hypothesis suggests:

H8: *Customer e-satisfaction positively influences repurchase intention.*

2.4. Repurchase Intention

To understand the concept of repurchase intention, it is crucial to understand its definition and significance in the realm of consumer behavior. Repurchase intention reflects a consumer's tendency to consistently purchase a product or service [30]. This tendency is fueled by how well the product's performance aligns with their expectations and the advantages they gain from using it. Similarly, another study describes it as customer readiness for subsequent purchases, influenced by their prior experiences [31]. The importance of repurchase intention in the business landscape cannot be overstated. Previous research underscores its pivotal role in business success [32]. Repeat customers, who are often more familiar with the online purchasing process, tend to reduce the time needed for evaluation and decision-making. This efficiency translates into reduced maintenance costs for companies, making these customers more profitable. The effect of repurchase intention on business operations is intrinsically linked to customer e-satisfaction. With a product or service that pleases the customer, they are inclined to revisit the same provider for future purchases. This connection is substantiated by multiple studies, which have identified a positive correlation between customer satisfaction and their intent to repurchase [33].

The flowchart of the research methodology that was used to achieve the study's aims is shown in Figure 1.

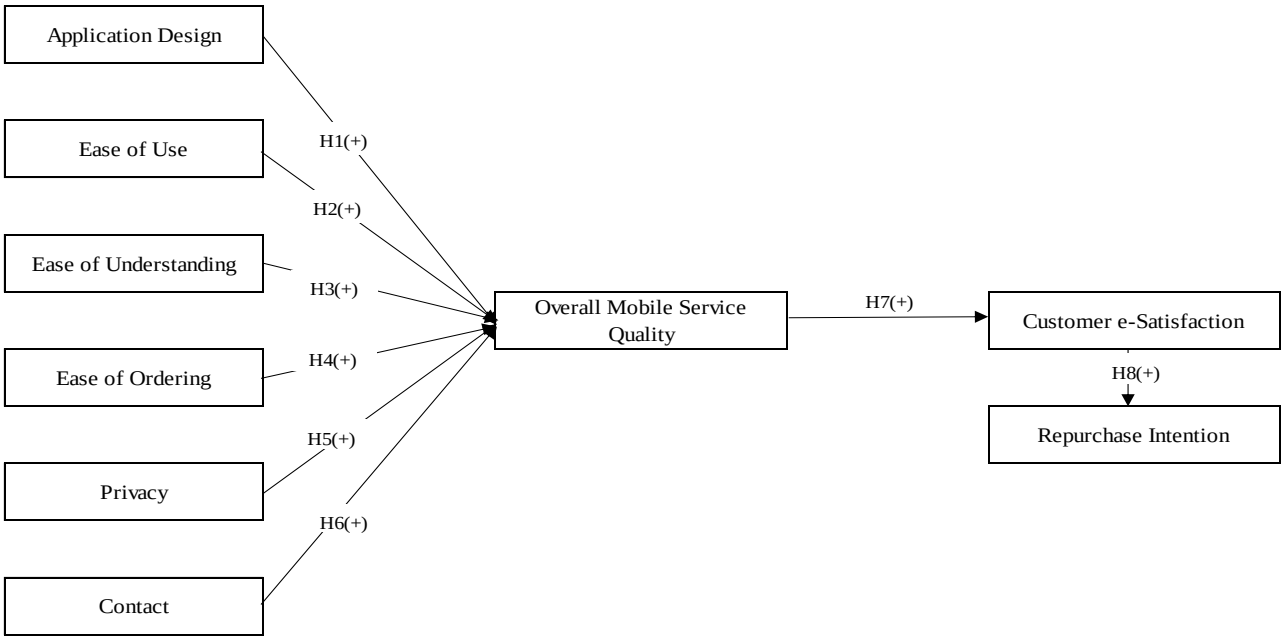

Figure 1. Research methodology and framework

3. Research Methodology

3.1. Population and Samples

The study focused on Indonesians who use mobile food and beverage applications. Due to the study's limited scope and data availability in this specific sector, defining a clear population and sample for research is challenging. As a result, a non-probability sampling approach, namely purposive sampling, was chosen. Purposive sampling involves deliberately selecting participants based on characteristics relevant to the study [34]. This method allows researchers to focus on individuals who meet specific criteria, making it particularly suitable when initial research phases require participant selection based on predetermined screening criteria.

Although purposive sampling can introduce selection bias, which may affect the generalizability of the findings, it was deemed the most effective approach in this context. The targeted nature of purposive sampling ensures that the participants are highly relevant to the research objectives, providing meaningful insights from a group that is directly engaged with mobile food and beverage applications in Indonesia. This approach was essential for gathering data from a specific user group, where random sampling might not yield participants with the necessary experience or familiarity with the applications being studied. Thus, despite its limitations, purposive sampling was the most practical and insightful method for this study's goals.

To conduct purposive sampling, the Lemeshow Method was chosen for the analysis. This decision was primarily driven by the lack of available population data. This method provides a robust alternative, allowing us to proceed effectively even without specific population figures. A survey was utilized and distributed across various social media platforms (WhatsApp, Instagram, and Line). The characteristics set for the purposive sampling were individuals who use food and beverage mobile applications.

$$n = \frac{z^2.p(1-p)}{d^2} \quad (1)$$

where: n = Sample Size; z = Confidence Level (1,96 / 95%); p = Estimated Prevalence (0,5); d = margin of error (5%).

The minimum sample size required for this study was calculated using the formula above, where z is the z-value corresponding to a 95% confidence level (1.96), p is the estimated prevalence (0.5), and d is the margin of error (5%). This margin of error was chosen to ensure more accurate results by reducing potential errors. Based on this calculation, the minimum sample size needed is 384. Researchers distributed questionnaires and successfully gathered 445 responses, exceeding the minimum sample size requirement.

3.2. Data Collection Methodology

This study utilized a questionnaire with a Likert scale (1 = "strongly disagree," 5 = "strongly agree") in assessing participants' responses and measuring their attitudes or opinions on the specified variables. The specified variables were divided into several different sections. The first section of the questionnaire includes confirmation of whether the respondent has used any mobile food and beverage applications. The second section of the questionnaire consists of the respondent's profile, such as gender, age, education, and others. The third-to-tenth section of the questionnaire covered questions related to mobile service quality, including ease of use, efficiency, application design, and others. The eleventh segment of the questionnaire covered questions related to customer satisfaction. The last segment covered questions related to repurchase intention. The questionnaire was developed through a comprehensive literature review on mobile service quality and customer satisfaction, ensuring all relevant user experience aspects were addressed. The questions were divided into sections to understand the demographic, application usage, and various aspects of mobile service quality.

3.3. Data Analysis Methodology

This study will use SmartPLS as the data processing tool to further test the hypothesis of this study. SEM-PLS is one of the most used techniques, with SmartPLS as the graphical user interface for analyzing multivariate data among scholars in multiple fields [35]. SEM (Structural Equation Modeling) enables the evaluation of the reliability and validity of multi-item construct measures, along with testing the relationships within the structural model [36]. While Partial Least Squares (PLS) is an alternative approach within SEM that proves beneficial in scenarios where researchers encounter certain challenges. Specifically, it addresses situations where the theoretical basis for relationships between hypothesized variables might be weak despite having a sufficiently large sample size, which makes PLS useful when dealing with complex relationships among variables despite having a small data sample size [37].

SEM-PLS offers distinct advantages, with its user-friendly visual interface being a key factor in its widespread adoption. This interface empowers researchers to scrutinize complex models, exploring the associations between observed and latent variables simultaneously. Additionally, it facilitates the implementation of numerous robustness assessments, acknowledging the inherent measurement errors present when assessing abstract concepts [35]. PLS-SEM

is a suitable option for this research as it enables the estimating of complex models involving numerous constructs, indicator variables, and structural paths, all without the need for specific distributional assumptions on the dataset [37]. In Table 1, all the variables and indicators are shown in this study, including variables related to mobile service quality, comprising indicators such as application design, ease of use, ease of understanding, ease of ordering, privacy, and contact. Additionally, it explores customer satisfaction and repurchase intention as subsequent variables in the research.

Table 1. Variables and Indicators

Variable		Indicator	References
Application Design [AD]	[AD1] System Availability	The application launches and runs right away.	Ataburo et al. [25]
	[AD2] Information Quality	The information at this application is well organized.	
	[AD3] Application Aesthetic	Application is visually appealing and entertaining.	
Ease of Use [EOUSE]	[EOUSE1] Easy to Learn	It was easy to learn using mobile food and beverage applications.	Tandon et al. [15]
	[EOUSE2] Easy to Use	Mobile food and beverage applications are easy to use.	
	[EOUSE3] Easy to Navigate	Navigation within the application is easy for me.	
Ease of Understanding [EOUND]	[EOUND1] Language Used	The language used by food and beverage applications is easy to understand.	Tandon et al. [15]
	[EOUND2] Display Page Information	The display pages in the application provide clear and comprehensible information.	
	[EOUND3] Transaction Process	The process of transaction in mobile food and beverage applications is understandable.	
Ease of Ordering [EOO]	[EOO1] Track Order	The application simplifies the process of monitoring online orders.	Tandon et al. [15]
	[EOO2] Modify Order	The application provides clear and concise guidelines to modify orders made online.	
	[EOO3] Cancel Order	The application provides clear and concise guidelines to cancel orders made online.	
Privacy [PR]	[PR1] Security	I trust the application's ability to safeguard my personal information.	Rita et al. [19]
	[PR2] Privacy	I trust that the administrators of the application will handle my personal information responsibly and will not misuse it.	
Contact [CON]	[CON1] Contact Information	The application offers a phone number for contacting the company.	Ataburo et al. [25]
	[CON2] Support Accessibility	The IT staff and administrators are available at any time to help when needed.	
	[CON3] Live Assistance	The application provides the option to speak with a live representative in case of any issues.	
Overall Mobile Service Quality [MSQ]	[MSQ1] Purchase Experience	The overall experience of shopping with this application is remarkable.	Rita et al. [19]
	[MSQ2] Service	The overall service quality offered by this application is remarkable.	
	[MSQ3] Feeling	I am highly satisfied with the overall performance of this application.	
Customer e-Satisfaction [CS]	[CS1] Revisit	I am always happy to visit the application.	Ataburo et al. [25]
	[CS2] Application Quality	I am satisfied with the quality of the application's online services.	
	[CS3] Expectation	The application's e-services meet my expectations.	
Repurchase Intention [RI]	[RI1] Intensify Mobile Purchases	I intend to make more purchases through mobile food and beverage applications in the future.	Rita et al. [19]
	[RI2] Boost Mobile Spending	I intend to increase my purchases through mobile food and beverage applications in the future.	
	[RI3] Increase Application Transactions	I plan to increase transaction quantities through mobile food and beverage applications in the near future.	

4. Results

4.1. Demographics of Respondents

The study focused on individuals using mobile food and beverage applications, spanning from Generation Z to Baby Boomers. To determine the sample size, the Lemeshow method was employed with a 95% confidence level, resulting in the need for 385 samples. Researchers successfully gathered responses from 463 participants, of whom 401 (86.6%) reported using food and beverage mobile applications, while 62 (13.4%) indicated that they do not use these applications. Therefore, the research will proceed with the data from the 401 respondents who are users of food and beverage mobile applications. The demographics of the respondents are shown in Table 2.

The demographic characteristics of the respondents are likely to significantly influence the results of this study. Table 2 indicates an overrepresentation of certain demographic groups, particularly students and high school graduates, which may skew the findings and limit their generalizability. The high proportion of women and individuals aged 15–25 suggests a potential bias toward the preferences of younger people. Younger individuals, being more accustomed to using technology, tend to have different expectations and satisfaction levels compared to older adults. Additionally, the fact that most respondents are students means that the conclusions of this research may be heavily shaped by the lifestyle and consumption habits typical of this group.

Table 2. Demographics of Respondents

Variable	N	%
Gender		
Male	139	34.7%
Female	262	65.3%
Age		
15 - 25	287	71.6%
26 - 40	71	17.7%
41 - 60	43	10.7%
Occupations		
Student	217	54.1%
Employee	69	17.2%
Others	115	28.7%
Education Level		
High School Diploma	182	45.4%
Associate's Degreee	32	8.0%
Bachelor's Degreee	176	43.9%
Master's Degree	11	2.7%

4.2. Measurement Model: Validity and Reliability

The measurement model passes the validity test, as indicated by Average Variance Extracted (AVE) for each construct. The AVE scores, ranging from 0.666 to 0.913, all exceed the acceptable threshold of 0.5. This value ensures that the constructs explain more than 50% of the variance in their indicator, indicating that a substantial portion of the variance in the observed variables is attributable to the underlying latent constructs they are intended to measure, thereby substantiating the model's validity. Meanwhile, the reliability of the model is demonstrated by the composite reliability (CR) and Cronbach's alpha scores. Composite reliability values range from 0.713 to 0.911, confirming that the items consistently represent the underlying constructs, while Cronbach's alpha values between 0.741 and 0.908 indicate sufficient correlation among items within each construct (see Table 3). All constructs exceed the recommended minimum threshold of 0.7. These results affirm that the measurement model demonstrates a strong level of internal consistency, with items within each construct reliably measuring the same underlying concept, thereby substantiating the model's reliability.

Table 3. Validity & Reliability Construct SmartPLS

Variable	Cronbach's alpha	Composite reliability *(rho_a)*	Composite reliability *(rho_c)*	Average Variance Extracted (AVE)
Application Design [AD]	0.722	0.730	0.843	0.642
Ease of Use [EOUSE]	0.851	0.852	0.910	0.770
Ease of Understanding [EOUND]	0.803	0.804	0.884	0.717
Ease of Ordering [EOO]	0.841	0.844	0.904	0.759
Privacy [PR]	0.908	0.911	0.956	0.915
Contact [CON]	0.851	0.852	0.910	0.771
Overall Mobile Service Quality [MSQ]	0.712	0.713	0.839	0.635
Customer e-Satisfaction [CS]	0.853	0.854	0.911	0.774
Repurchase Intention [RI]	0.900	0.903	0.938	0.834

Furthermore, the measurement model's indicator reliability was assessed through an examination of the outer loadings. This test is crucial to ensuring that each individual indicator's association with its respective construct is strong. The results revealed that all outer loading values were well above the 0.7 benchmark, further solidifying the constructs' validity within the model. These high loadings indicate that each item is a good measure of its construct, providing further confidence in the use of these indicators to represent their respective latent variables accurately. The outer loading test evaluates the degree of correlation between the observed variables (indicators) and the latent constructs they are meant to measure. Typically, a higher outer loading suggests a more robust relationship between the indicator and the latent construct (Figure 2).

Outer loadings - Matrix

	AD	CON	CS	EOO	EOUND	EOUSE	MSQ	PR	RI
AD1	0.841								
AD2	0.791								
AD3	0.770								
CON1		0.867							
CON2		0.886							
CON3		0.881							
CS1			0.868						
CS2			0.903						
CS3			0.867						
EOO1				0.844					
EOO2				0.892					
EOO3				0.877					
EOUND1					0.820				
EOUND2					0.863				
EOUND3					0.858				
EOUSE1						0.884			
EOUSE2						0.875			
EOUSE3						0.874			
MSQ1							0.791		
MSQ2							0.785		
MSQ3							0.814		
PR1								0.960	
PR2								0.954	
RI1									0.893
RI2									0.926
RI3									0.920

Figure 2. Outer Loading Test

4.3. Normality Testing

In the context of quantitative research, skewness and kurtosis statistics are essential for evaluating the normality of data distribution, which is a critical assumption for many parametric statistical tests. Statistically, Skewness and Kurtosis values should range within ±2.5 values as the assumption of normality [38]. Skewness: With a value of -0.77605, the result for skewness is well within the +/- 2.5 range. This indicates that the data is moderately skewed to the left but not excessively so. This level of skewness does not violate the assumption of normality and is not likely to significantly affect most parametric statistical tests. Kurtosis: With a value of 0.28742, the result for kurtosis is also within the +/- 2.5 range. The result suggests that the data has lighter tails than a normal distribution (platykurtic), but the deviation is minor and within a range that is not a concern for the assumption of normality. Given these results and the standard threshold of +/- 2.5, the data would be considered to meet the normality assumption for the purposes of many statistical analysis in this research. Based on this result, it can be concluded that the estimated parameters, such as means and variances, are unbiased and the confidence intervals are precise, leading to more reliable p-values for hypothesis testing.

4.4. Hypothesis Testing

The researchers assessed the statistical significance of all structural parameters to confirm the hypothesized relationships. In this study, the objective is to evaluate the relationships between aspects of mobile service quality and customer e-satisfaction, as well as repurchase intention in the context of food and beverage mobile applications. Two methods for hypothesis testing are the p-value approach and the critical value approach. The p-value approach compares the obtained p-value to a predetermined significance level, indicating the significance of the result. Meanwhile, the critical value approach involves comparing the t-statistic value to a predefined threshold (critical value) [39].

In this study, considering the researchers utilized a confidence level of 95%, it implies that the significance level used is 0.05 (i.e., $\alpha = 0.05$). If the p-value is equal to or greater than α, the null hypothesis (H0) is not rejected. Conversely, when the p-value is less than α (<0.05), the null hypothesis is rejected in favor of the alternative hypothesis (Hi, for i = 1-8) [36]. To determine the critical values of t, the researcher needs to establish several factors:

- Significance level (α) = 0.05.
- Degree of Freedom (*df*), which is calculated as *n* - 1, where *n* is the sample size. If the sample size of 400, the *df* will be 400 - 1 = 399.
- The tail of the test = one-tail test, as the hypothesis involves a specific positive direction (upper tail).

Based on the information, the critical value of +1.645 will be obtained from the t-statistic table. Therefore, the decision rule is to reject H0 or support the alternative hypothesis if t-Stat > +1.645; otherwise, do not reject H0.

By utilizing both the critical value and p-value approaches, researchers can derive conclusions based on the outcomes of hypothesis testing using SEM-PLS. In Table 4, the analysis reveals that the hypotheses concerning Application Design (t-Stat = 2.316; p = 0.021), Ease of Use (t-Stat = 2.030; p = 0.042), Privacy (t-Stat = 2.086; p = 0.037), and Contact (t-Stat = 4.754; p = 0.00) exhibit statistical significance towards overall mobile service quality, with the t-Stat showing > 1.645 and the p-value as < 0.05. However, Ease of Understanding (t-Stat = 0.674; p = 0.501) and Ease of Ordering (t-Stat = 0.302; p = 0.763) lack statistical significance. Hence, hypotheses H1, H2, H5, and H6 are validated, indicating that Application Design, Ease of Use, Privacy, and Contact respectively have statistically significant relationships with overall mobile service quality. Nonetheless, hypotheses H3 and H4 are not supported, as the analysis does not reject the null hypothesis for Ease of Understanding and Ease of Ordering, signifying no statistically significant associations with overall mobile service quality. The insignificance of both Ease of Ordering and Ease of Understanding could be due to the high level of tech-savvy among the respondents, predominantly from younger demographics. Additionally, the widespread use of popular third-party online food ordering apps like GoFood, GrabFood, and ShopeeFood in Indonesia may lead to a reduced need for ordering through the application. Consequently, users might prioritize other factors, such as application design, ease of use, privacy, and customer support, which have a more significant impact on their overall experience and satisfaction.

Table 4. Results of Hypothesis Testing

Hypothesis No.	Hypothesis Statement	t-Stat Value	p-Value	Conclusion
H1	Application Design is positively correlated with the overall quality of mobile services.	2.316	0.021	Supported
H2	Ease of Use is positively correlated with the overall quality of mobile services.	2.030	0.042	Supported
H3	Ease of Understanding is positively correlated with the overall quality of mobile services.	0.674	0.501	Not Supported
H4	Ease of ordering is positively correlated with the overall quality of mobile services.	0.302	0.763	Not Supported
H5	Privacy is positively correlated with the overall quality of mobile services.	2.086	0.037	Supported
H6	Contact is positively correlated with the overall quality of mobile services.	4.754	0.000	Supported
H7	Overall mobile service quality positively influences customer e-satisfaction.	15.014	0.000	Supported
H8	Customer e-satisfaction positively influences repurchase intention.	17.198	0.000	Supported

The hypothesis that overall mobile service quality positively influences customer e-satisfaction (t-Stat = 15.014; p = 0.000) and that customer e-satisfaction positively influences repurchase intention (t-Stat = 17.198; p = 0.000) are both statistically significant. Therefore, hypothesis H7 is supported in explaining customer e-satisfaction, and hypothesis H8 is supported in explaining repurchase intention. As a result, through the hypothesis testing conducted, researchers can conclude that there is a strong relationship where mobile service quality affects customer e-satisfaction, which in turn influences customers' intention to repurchase. To enhance mobile service quality, four key factors should be prioritized: application design, ease of use, privacy, and contact.

5. Conclusion

This study investigates how mobile service quality in food and beverage mobile applications influences customer repurchase intention in Indonesia. Its principal objective is to discern the significant variables affecting mobile service quality and their subsequent impacts on customer e-satisfaction and repurchase intention. By examining adoption dynamics, effectiveness evaluations, and the comprehension of their impact on repurchase intentions, this study adds to a deeper comprehension of these applications. Our findings reveal that application design, ease of use, privacy, and contact emerge as the primary key dimensions that significantly impact mobile service quality within food and beverage mobile applications. These four dimensions exhibit a positive correlation with overall mobile service quality. Moreover, given the hypothesis testing results mentioned earlier, it may be summarized that overall mobile service quality positively affects customer e-satisfaction, thereby resulting in a favorable impact on repurchase intention.

The research highlights the significance of four main variables in determining the quality of mobile services within the food and beverage application sector. The design of a mobile application is crucial for enhancing the user experience and functionality, with its visual appeal and layout being key factors. For our demographic, predominantly Gen-Z users, specific design elements are particularly impactful. Gen-Z users tend to favor a minimalist aesthetic, which includes simpler icons and a strategic use of color. Moreover, the thoughtful placement of components contributes significantly to usability and visual appeal. Second, the application's navigation and user-friendliness are vital. Ensuring users can easily navigate and use the applications is crucial for fostering customer satisfaction. A seamless user experience not only enhances satisfaction but also boosts engagement and loyalty towards the product or service. Third, the importance of strong privacy measures is emphasized, as they build trust and confidence among users, influencing their satisfaction and likelihood of repurchasing. Especially in Indonesia, where data leakage happens quite often, ensuring user privacy

is essential. Finally, providing easily accessible customer support is crucial, as it enables users to receive timely assistance, which enhances their overall experience with the application. According to our survey, live chat is particularly valued due to its prompt responses. This preference is supported by Felix & Rembulan [40], who found that the responsiveness of customer support significantly influences customer experience and satisfaction.

When comparing these results with previous studies, they align with the broader body of research indicating that service quality directly influences customer satisfaction and repurchase intentions across various sectors. For instance, a study by Wu et al. [41] on food delivery services emphasized the importance of reliability, assurance, and security as critical dimensions of service quality that influence customer satisfaction and reuse intention. This study highlights that timely delivery, maintaining food quality, and ensuring data security are vital in building customer trust and driving repeat purchases.

Additionally, research published by Wang et al. [42] explored mobile service quality in non-gaming apps and found that user satisfaction with service quality is a key predictor of continued use and repurchase intention. This finding reinforces the idea that enhancing mobile application design, ease of use, and privacy measures is essential for maintaining customer loyalty. These comparisons strengthen the current study's conclusions, confirming the importance of the identified key dimensions within the specific context of food and beverage mobile applications in Indonesia. However, the findings suggest that while ease of understanding and ease of ordering are important, they may not be as critical in determining overall service quality in this context. Future research should explore these dimensions further, particularly by examining other sectors or expanding the study across different cultural contexts, to validate and refine these findings.

5.1. Theoretical Implication

This study provides significant insights for researchers and academics, especially concerning developing countries like Indonesia, where mobile app usage has recently experienced substantial growth [43]. However, applying these findings to other regions or countries requires a nuanced understanding of the unique factors specific to the Indonesian market. One important consideration is the rapid increase in internet adoption in Indonesia, which has significantly expanded the mobile app user base. This surge has highlighted privacy concerns, as Indonesian users are increasingly aware of data security issues. The emphasis on privacy as a crucial factor influencing customer e-satisfaction in our study may reflect this heightened awareness, which may not be as prominent in more established digital markets. Furthermore, while our model provides a useful framework for evaluating mobile service quality in food and beverage apps, the importance of factors such as privacy and ease of ordering may differ in other regions due to varying cultural, economic, or technological contexts. Therefore, although the model can be adapted for other developing countries, it is important for researchers to consider local market conditions and user expectations to ensure its relevance. In conclusion, while our findings lay a foundation for understanding mobile service quality in similar markets, it is essential to account for unique aspects of the Indonesian context, such as recent internet growth and increasing privacy concerns, when applying these insights to other regions.

5.2. Practical Implication

From this study, several recommendations can be provided to the food and beverage industry in Indonesia, particularly for businesses that either already have or are planning to develop food and beverage mobile applications. Firstly, regarding application design, the industry should ensure that the design is both visually appealing and effective in facilitating user interaction. The design should also incorporate visually appealing elements, such as high-quality images of food, appealing color schemes, and strategically placed buttons, without compromising functionality. According to the PACMAD usability model, these visual elements should enhance the effectiveness and efficiency of completing tasks, ultimately improving user engagement. In terms of navigation and usability, applications should prioritize a user-friendly interface that simplifies navigation. This includes clear and intuitive menu layouts, a minimalistic design to avoid overwhelming users, and easy access to essential features like ordering, payment, and tracking. As highlighted by An et al. [44], perceived ease of use significantly influences users' intention to use food delivery applications. Ensuring that users can effortlessly navigate the app can enhance their overall experience and satisfaction. Furthermore, businesses must guarantee that even non-technical users can understand how to use the application from the moment they download and start using it. Given the multitude of issues surrounding data privacy breaches, businesses should prioritize ensuring that every user's data is securely protected with robust security measures. F&B businesses should also ensure robust customer support through various channels like email, WhatsApp, call centers, or live chat to cater to diverse user needs. Specifically, integrating features like chatbots, Q&A sections, or AI-driven assistance can accommodate customer inquiries and provide timely responses, further enhancing the user experience.

Feedback from respondents highlights the importance of investigating promotional strategies, such as increasing exposure when launching a promotion or campaign. This entails exploring the effectiveness of different marketing channels, messaging techniques, and promotional offers in reaching and engaging users. Respondents expressed a desire for mobile food and beverage applications to provide more enticing and visually prominent promotions and campaigns within the application interface. By presenting promotions in a visually appealing and attention-grabbing manner, users can easily discover and engage with promotional offers, enhancing their overall experience with the application.

Additionally, enhancing order tracking functionalities within mobile applications emerges as a crucial area for future research. This involves investigating methods to simplify and streamline the order tracking process, ensuring that users can easily monitor the status and progress of their orders in real-time. By addressing these limitations and implementing suggested strategies, future research can aid in developing a more thorough comprehension of user behaviors and preferences, leading to more effective marketing strategies and user experiences.

5.3. Limitations and Future Research

In exploring user behaviors and preferences in mobile food and beverage applications, it is essential to acknowledge certain limitations and suggest potential areas for future research. While our study offered useful findings, there are notable limitations due to the use of purposive sampling, which may lead to selection bias and affect the generalizability of the findings as participants are not randomly selected and may not represent the broader population. Specifically, demographic biases related to gender, age, occupation, and education level should be addressed, as the overrepresentation of certain groups, such as students and high school graduates, may skew results. Different demographic groups may indicate different results, with younger users prioritizing convenience and novelty, while older users may value reliability and familiarity. This highlights the importance of considering diverse perspectives in future research by striving for more inclusive sampling strategies.

SEM-PLS results showed moderately significant R-squared values for mobile service quality, customer e-satisfaction, and repurchase intention, ranging from 0.3 to 0.7. While sufficient for practical purposes, future research should aim to improve these values to better explain the variability in dependent variables. The general findings on food and beverage mobile applications in Indonesia may not be applicable to individual businesses. Future studies should focus on specific companies like McDonald's, Starbucks, or Kopi Kenangan for more actionable insights. Expanding research to sectors such as retail, healthcare, and banking, as well as exploring emerging technologies like AI and conducting longitudinal and cross-cultural studies, will be crucial for enhancing mobile service quality and increasing customer satisfaction and loyalty.

6. Declarations

6.1. Author Contributions

Conceptualization, T.O.; methodology, T.O.; software, R.S.; validation, J.C., K.K., and R.S.; formal analysis, T.O.; investigation, T.O.; resources, R.S.; data curation, K.K.; writing—original draft preparation, J.C., K.K., and R.S.; writing—review and editing, T.O.; visualization, J.C., K.K., and R.S.; supervision, T.O.; project administration, T.O.; funding acquisition, T.O. All authors have read and agreed to the published version of the manuscript.

6.2. Data Availability Statement

The data presented in this study are available in the article.

6.3. Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

6.4. Institutional Review Board Statement

Not applicable.

6.5. Informed Consent Statement

Not applicable.

6.6. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

7. References

[1] Angelova, N. (2019). Mobile Applications for Business. Trakia Journal of Sciences, 17(1), 853–859. doi:10.15547/tjs.2019.s.01.140.

[2] Statista. (2023). Indonesia: Smartphone users 2028. Statista Research Department, Statista, Hamburg, Germany. Available online: https://www.statista.com/forecasts/266729/smartphone-users-in-indonesia (accessed on May 2024).

[3] Laricchia, F. (2023). Smartphone users by country 2022 | Statista. Statista, Hamburg, Germany. Available online: https://www.statista.com/statistics/748053/worldwide-top-countries-smartphone-users/ (accessed on May 2024).

[4] BPS-Statistics Indonesia. (2023). Telecommunication Statistics in Indonesia 2022. BPS-Statistics Indonesia, Jakarta, Indonesia. Available online: https://www.bps.go.id/publication/2020/12/02/be999725b7aeee62d84c6660/statistik-telekomunikasi-indonesia-2019.html (accessed on June 2024).

[5] Brata, T. J. (2018). 75 Percent of Online Shopping Transactions Start from Fingertips - Jawa Pos. 75 Percent of Online Shopping Transactions Start from Fingertips - Jawa Pos, Indonesia. Available online: https://www.jawapos.com/ekonomi/0127189/75-persen-transaksi-belanja-online-bermula-dari-ujung-jari (accessed on May 2024).

[6] CNN Indonesia (2020). E-Commerce Industry Trends and Opportunities in Indonesia 2020. CNN Indonesia, Jakarta, Indonesia. Available online: https://www.cnnindonesia.com/teknologi/20200205204206-206-472064/tren-dan-peluang-industri-e-commerce-di-indonesia-2020 (accessed on July 2024).

[7] Trade (2024). Indonesia - eCommerce. International Trade Administration, U.S. Department of Commerce, United States. Available online: Available online: https://www.trade.gov/country-commercial-guides/indonesia-ecommerce (accessed on June 2024).

[8] Hidayah, A. (2023). Aplikasi Kuliner Menjamur, Startup Ini Punya 8.000 Rekanan. CNBC Indonesia. Available online: https://www.cnbcindonesia.com/entrepreneur/20230206174746-25-411499/aplikasi-kuliner-menjamur-startup-ini-punya-8000-rekanan (accessed on May 2024).

[9] Mirza, F., Younus, S., Waheed, N., & Javaid, A. (2021). Investigating the impact of product-related and service quality attributes on re-purchase intention. International Journal of Research in Business and Social Science, 10(3), 24–35. doi:10.20525/ijrbs.v10i3.1107.

[10] Ginting, Y. M., Chandra, T., Miran, I., & Yusriadi, Y. (2023). Repurchase intention of e-commerce customers in Indonesia: An overview of the effect of e-service quality, e-word of mouth, customer trust, and customer satisfaction mediation. International Journal of Data and Network Science, 7(1), 329–340. doi:10.5267/j.ijdns.2022.10.001.

[11] Sasono, I., Jubaedi, A. D., Novitasari, D., Wiyono, N., Riyanto, R., Oktabrianto, O., Jainuri, J., & Waruwu, H. (2021). The Impact of E-Service Quality and Satisfaction on Customer Loyalty: Empirical Evidence from Internet Banking Users in Indonesia. Journal of Asian Finance, Economics and Business, 8(4), 465–473. doi:10.13106/jafeb.2021.vol8.no4.0465.

[12] Seitz, V. A., & Aldebasi, N. M. (2016). The Effectiveness of Branded Mobile Apps on User's Brand Attitudes and Purchase Intentions. Review of Economic and Business Studies, 9(1), 141–154. doi:10.1515/rebs-2016-0029.

[13] Wirapraja, A., Aribowo, H., & Setyoadi, E. T. (2021). The Influence of E-Service Quality, and Customer Satisfaction on Go-Send Customer Loyalty in Surabaya. Indonesian Journal of Information Systems, 128–137, 128–137. doi:10.24002/ijis.v3i2.4191.

[14] Lin, P. M. C., Au, W. C. W., & Baum, T. (2024). Service quality of online food delivery mobile application: an examination of the spillover effects of mobile app satisfaction. International Journal of Contemporary Hospitality Management, 36(3), 906–926. doi:10.1108/IJCHM-09-2022-1103.

[15] Tandon, U., Kiran, R., & Sah, A. N. (2017). Customer Satisfaction as mediator between website service quality and repurchase intention: An emerging economy case. Service Science, 9(2), 106–120. doi:10.1287/serv.2016.0159.

[16] Patra, G., Datta, S., Omrane, A., & Bose, P. (2023). Perceived Service Quality of Mobile Providers Through the Lens of Indian Young Adults. Arts, research, innovation and society, 153–170. doi:10.1007/978-3-031-24101-7_9.

[17] Khan, M., Zubair, D. S. S., & Malik, M. (2019). An Assessment of E-Service Quality, E-Satisfaction and E-Loyalty. South Asian Journal of Business Studies, 8(3), 282–302.

[18] Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL a multiple-item scale for assessing electronic service quality. Journal of Service Research, 7(3), 213–233. doi:10.1177/1094670504271156.

[19] Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. Heliyon, 5(10), 2690. doi:10.1016/j.heliyon.2019.e02690.

[20] Ilona, D., & Zaitul. (2024). Behavioural intention to use accounting application: perceived ease of use as mediating variable. Journal of Management Info, 7(4), 211–218. doi:10.31580/jmi.v7i4.1610.

[21] Anugrah, F. T. (2020). Effect of Promotion and Ease of Use on Customer Satisfaction and Loyalty on OVO Application Users. Quantitative Economics and Management Studies, 1(1), 44–50. doi:10.35877/454ri.qems77.

[22] Elsharnouby, T. H., & Mahrous, A. A. (2015). Customer participation in online co-creation experience: the role of e-service quality. Journal of Research in Interactive Marketing, 9(4), 313–336. doi:10.1108/JRIM-06-2014-0038.

[23] Lin, J., Yu, W., Zhang, N., Yang, X., Zhang, H., & Zhao, W. (2017). A Survey on Internet of Things: Architecture, Enabling Technologies, Security and Privacy, and Applications. IEEE Internet of Things Journal, 4(5), 1125–1142. doi:10.1109/JIOT.2017.2683200.

[24] Riaz, H., Davidaviciene, V., Ahmed, H., & Meidute-Kavaliauskiene, I. (2022). Optimizing Customer Repurchase Intention through Cognitive and Affective Experience: An Insight of Food Delivery Applications. Sustainability (Switzerland), 14(19), 12936. doi:10.3390/su141912936.

[25] Ataburo, H., Muntaka, A. S., & Quansah, E. K. (2017). Linkages among E-Service Quality, Satisfaction, and Usage of E-Services within Higher Educational Environments. International Journal of Business and Social Research, 7(3), 10–26. doi:10.18533/ijbsr.v7i3.1040.

[26] Broadbent, J., & Lodge, J. (2021). Use of live chat in higher education to support self-regulated help seeking behaviours: a comparison of online and blended learner perspectives. International Journal of Educational Technology in Higher Education, 18(1), 1–20. doi:10.1186/s41239-021-00253-2.

[27] Wani, A. Z., Bhatnagar, A., & Mir, M. A. (2023). The Impact of E-service Quality on E-loyalty and Revisit Intention through the Mediating Role of E-satisfaction and E-trust. African Journal of Hospitality, Tourism and Leisure, 12(2), 555–573. doi:10.46222/ajhtl.19770720.385.

[28] Bolanle Odunlami, I., Olawepo, G., & Temitope Emmanuel, A. (2013). Effect of Customer Satisfaction on Organizational Profitability, Using an Organization in the Food and Beverage Industry. International Journal of Management Sciences, 1(5), 159–166.

[29] Matzler, K., Strobl, A., Thurner, N., & Füller, J. (2015). Switching experience, customer satisfaction, and switching costs in the ICT industry. Journal of Service Management, 26(1), 117–136. doi:10.1108/JOSM-04-2014-0101.

[30] Matzler, K., Strobl, A., Thurner, N. and Füller, J. (2015), "Switching experience, customer satisfaction, and switching costs in the ICT industry", Journal of Service Management, Volume 26 No. 1, 117-136. doi:10.1108/JOSM-04-2014-0101.

[31] Filieri, R., & Lin, Z. (2017). The role of aesthetic, cultural, utilitarian and branding factors in young Chinese consumers' repurchase intention of smartphone brands. Computers in Human Behavior, 67, 139–150. doi:10.1016/j.chb.2016.09.057.

[32] Chiu, W., & Cho, H. (2019). E-commerce brand: The effect of perceived brand leadership on consumers' satisfaction and repurchase intention on e-commerce websites. Asia Pacific Journal of Marketing and Logistics, 33(6), 1339–1362. doi:10.1108/APJML-10-2018-0403.

[33] Ali, T. (2016). Factors Deriving Consumers' Repurchase Intention in Online Shopping: a Pakistani Consumer's Perspective. International Journal of Management Sciences and Business Research, 5(12), 261–270.

[34] Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. Journal of Research in Nursing, 25(8), 652–661. doi:10.1177/1744987120927206.

[35] Memon, M. A., Ramayah, T., Cheah, J. H., Ting, H., Chuah, F., & Cham, T. H. (2021). Pls-Sem Statistical Programs: a Review. Journal of Applied Structural Equation Modeling, 5(1), 1-14. doi:10.47263/JASEM.5(1)06.

[36] Jr., J. F. H., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. International Journal of Multivariate Data Analysis, 1(2), 107. doi:10.1504/ijmda.2017.087624.

[37] Purwanto, A., & Sudargini, Y. (2021). Partial Least Squares Structural Squation Modeling (PLS-SEM) Analysis for Social and Management Research : A Literature Review. Journal of Industrial Engineering & Management Research, 2(4), 114–123. doi:10.7777/jiemar.v2i4.168.

[38] Purwanto, A., & Sudargini, Y. (2021). Partial least squares structural squation modeling (PLS-SEM) analysis for social and management research: a literature review. Journal of Industrial Engineering & Management Research, 2(4), 114-123.

[39] Levine, D. M., Szabat, K. A., & Stephan, D. F. (2015). Business Statistics: A First Course (Global). Pearson, London, United Kingdom.

[40] Felix, A., & Rembulan, G. D. (2023). Analysis of Key Factors for Improved Customer Experience, Engagement, and Loyalty in the e-Commerce Industry in Indonesia. APTISI Transactions on Technopreneurship, 5(2Sp), 196–208. doi:10.34306/att.v5i2sp.350.

[41] Wu, M., Gao, J., Hayat, N., Long, S., Yang, Q., & Mamun, A. A. (2024). Modelling the significance of food delivery service quality on customer satisfaction and reuse intention. PLoS ONE, 19(2 February). doi:10.1371/journal.pone.0293914.

[42] Wang, W. T., & Chen, W. Y. (2016). Assessing the effects of mobile service quality on customer satisfaction and the continued usage intention of mobile service: A study of non-gaming mobile apps. Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 9741, 459–467. doi:10.1007/978-3-319-40093-8_46.

[43] Alamanda, D. T., Wibowo, L. A., Munawar, S., & Nisa, A. K. (2021). The Interest of Technology Adoption in E-Commerce Mobile Apps Using Modified Unified Theory of Acceptance and Use of Technology 2 in Indonesia. International Journal of Applied Business and International Management, 6(3), 35–45. doi:10.32535/ijabim.v6i3.1327.

[44] An, S., Eck, T., & Yim, H. (2023). Understanding Consumers' Acceptance Intention to Use Mobile Food Delivery Applications through an Extended Technology Acceptance Model. Sustainability (Switzerland), 15(1), 832. doi:10.3390/su15010832.