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The Effect of Brand Awareness and Perceived Quality on User Loyalty Through Satisfaction as a Mediating Variable

Didin
Universitas Widyatama, Indonesia
Email : didin@widyatama.ac.id

Abstract. The rapid digital transformation has made cloud-based accounting software a vital solution in Indonesia, offering automated, real-time, and easily accessible financial management with greater flexibility, efficiency, and scalability than traditional systems. This study aims to analyze the effect of brand awareness and perceived quality on user loyalty through satisfaction as a mediating variable among Zahir Accounting Online users. The background of this study highlights the importance of building loyalty in an increasingly competitive digital accounting software market, where brand awareness and perceived quality are major factors influencing consumer decisions. The research employs a quantitative method using Partial Least Square–Structural Equation Modeling (PLS-SEM) analysis, based on data collected from 60 Zahir Accounting Online users. The results show that brand awareness and perceived quality have a positive and significant effect on loyalty, while user satisfaction partially mediates this relationship. The R^2 value of 0.657 indicates that the model explains 65.7% of the variance in user loyalty, demonstrating strong predictive power. These findings support Aaker's theory on the role of brand awareness and perceived quality in brand equity, as well as Oliver's theory on satisfaction as a determinant of consumer loyalty. This study emphasizes the importance of strategies to enhance brand awareness, service quality, and user satisfaction as key factors in maintaining the loyalty of digital accounting application users.

Keywords: *Brand Awareness; Perceived Quality;* User Satisfaction; Loyalty; PLS-SEM; Zahir Accounting Online

INTRODUCTION

In this era of rapid digital transformation, online-based software has become a basic necessity in various sectors, including accounting and finance. This digitalization has driven the growth of the cloud-based accounting software market in Indonesia, where companies, MSMEs, and even individuals are now competing to adopt financial recording systems that are more automated, real-time, and easily accessible from various locations (Febriana et al., 2025; Surateman Surateman et al., 2025). Cloud computing technology offers flexibility, efficiency, and scalability that were previously difficult to achieve through manual methods or traditional desktop-based software (Lan et al., 2025; Stoica & Niţu, 2024; Wang & Reani, 2017; Zhang et al., 2025).

Amidst increasingly fierce competition among accounting software platforms, various brands have emerged, each offering their own advantages, from Accurate Online and Jurnal by Mekari to Zahir Accounting Online (Ammar, 2025; Shamsudin, 2025). This competition focuses not only on price, features, and technology, but also on how a brand builds emotional connections and positive perceptions in the minds of users. In today's era, where information is so easily accessible, users no longer only look at product quality, but also how strongly the brand is present in their consciousness, as well as how their experience using the product can meet their personal expectations.

Table 1. Post Subscribe and Active Zahir Accounting Online

No	Year	Active	Post Subscribe
1	2020	520	312
2	2021	582	489
3	2022	556	304
4	2023	505	433

Source: PT. Zahir Internasional documents

Based on data from 2020 to 2023 regarding Zahir Accounting Online users, it can be seen that the number of active users each year is quite volatile, while the number of post-subscribers, which is the number of users who do not renew their subscription after their subscription period expires, tends to increase. Post-subscription describes users who initially subscribed in the current year but chose not to continue in the following year. For example, in 2020 there were 520 active users, 312 of whom did not renew in the following year. This post-subscribe rate continues to increase from year to year, indicating an upward trend in discontinuation of service use. This shows that even though there are new active subscribers every year, most users do not maintain their subscriptions after one year. This phenomenon is an important signal for companies to evaluate the factors that affect user loyalty and improve retention strategies so as not to lose customers in subsequent years.

In this context, two important factors to consider in building user loyalty are Brand Awareness and Perceived Quality. Brand Awareness plays an important role because it determines whether a brand comes to mind when users need an accounting solution. A brand with a high level of awareness will be easier to choose than a lesser-known brand, because in many purchasing decisions, consumers tend to choose familiar brands to reduce the risk of (Fatmasari, 2018)(Fatmasari, 2018). Meanwhile, Perceived Quality is users' subjective assessment of a product's superiority and reliability(Puteri & Anomsari, 2023) . This perception is built from direct experience using the software, including its ease of use, feature completeness, customer service responsiveness, and data security.

However, in practice, the relationship between Brand Awareness, Perceived Quality, and user loyalty is not always direct (Saleem et al., 2015). Often, other variables that are more psychological in nature act as intermediaries, namely user satisfaction. Satisfaction is the result of a comparison between user expectations and the reality they experience after using the product(Pranata & Pramudana, 2018) . If the actual experience exceeds or meets expectations, satisfaction is formed, which in turn strengthens loyalty. Conversely, if there is a gap between expectations and reality, even if Brand Awareness and Perceived Quality are high, loyalty remains difficult to achieve.

The current phenomenon in Indonesia shows that user loyalty to online accounting software tends to be volatile. Based on data compiled by the Indonesian Cloud Computing Association (ACAI) in 2023, it was found that the rate of users switching from one software to another is still relatively high, reaching 37% in one year (Appkey, 2023) . This shows that even though a brand is well-known and has complete features, users will not hesitate to switch to another platform if they are dissatisfied, whether due to price, service quality, ease of use, or other technical issues. Specifically for Zahir Accounting Online, even though this brand has existed for more than two decades and is well-known in the domestic market, challenges still arise. Internal surveys indicate a gap between high brand awareness and stable user loyalty, suggesting that other factors, such as satisfaction, may not be optimally maintained.

This situation indicates a research gap that needs to be bridged (Birkinshaw et al., 2016; Clark et al., 2018; Engert & Baumgartner, 2016; Sun et al., 2023). Most previous studies tend to examine the direct relationship between brand awareness and loyalty, or perceived quality and loyalty, without explicitly testing how satisfaction acts as a mediating variable in these relationships, especially in the context of online accounting software in Indonesia. Several studies in the retail or general services sectors have indeed shown the importance of satisfaction as a mediator, but specific studies on the cloud-based accounting software sector, especially for local brands such as Zahir Accounting Online, are still very limited (Rawashdeh et al., 2023; Tran et al., 2024; Vo Van et al., 2024). In addition, given the characteristics of accounting software users who are more rational and functionally-based, the pattern of loyalty formation may differ from that of ordinary consumer products, thus requiring a more contextual approach to the study.

Therefore, to fill this gap in research and provide theoretical and practical contributions to the development of customer relationship management in the field of online accounting software, the researcher wishes to conduct a study entitled: "The Effect of Brand Awareness and Perceived Quality on User Loyalty through Satisfaction as a Mediating Variable (A Case Study of Zahir Accounting Online Users)".

This study aims to analyze the extent to which brand awareness and perceived quality influence user loyalty directly and indirectly through user satisfaction. Thus, this study is expected to provide a more comprehensive picture of how psychological and perceptual factors interact in shaping loyalty in the cloud-based accounting software industry. The results of this study are also expected to provide strategic input for companies such as Zahir Accounting to improve or strengthen aspects that can increase user satisfaction, extend the loyalty cycle, and reduce user churn rates amid increasingly dynamic competition.

By adopting a quantitative analysis approach based on mediation models, this study will provide a deeper understanding of the mechanisms of inter-variable relationships. Not only will it reveal whether brand awareness and perceived quality influence loyalty, but it will also reveal the extent to which satisfaction plays an important role in this relationship. This understanding will be invaluable in designing marketing and product development strategies that are more oriented towards user experience and satisfaction, rather than merely brand promotion or technical feature enhancements.

Through this research, it is hoped that contributions to the development of technology-based service marketing management literature in Indonesia can be strengthened, while also providing new references for practitioners in managing customer loyalty in an era of increasingly competitive service digitalization.

This study stems from the challenge of declining user loyalty to Zahir Accounting Online amid fierce competition from other accounting software (e.g., Jurnal by Mekari, Accurate Online, SAP Business One). Although Zahir has competitive features and prices, brand awareness alone is not enough: perceptions of quality (ease of use, reliability, security, technical support) and real-world experience determine satisfaction, which then mediates loyalty. A gap emerges when high awareness is not followed by retention; many new users quickly switch, raising questions about the power of brand awareness and perceived quality in driving satisfaction and loyalty.

Theoretically, this research contributes to enriching digital marketing literature, particularly concerning the relationship between Brand Awareness, Perceived Quality, Satisfaction, and Loyalty in cloud-based accounting services, while reinforcing the mediating role of satisfaction. Practically, the findings serve as an evaluation tool for Zahir to strengthen its branding strategy, enhance product and service quality, and develop user retention strategies; provide insights for other industry players to understand key factors influencing customer loyalty; and help users make more rational decisions in choosing accounting software based on quality, satisfaction, and long-term experience.

MATERIALS AND METHOD

This study focuses on Zahir Accounting Online users, with the unit of analysis being the relationship between brand awareness, perceived quality, satisfaction, and user loyalty. The analysis was conducted to understand how perceptions of brand image, service quality, and user experience affect customer satisfaction and loyalty. The observation unit consists of active and former users, including financial managers, accountants, financial staff, and business owners who have direct experience in using cloud-based accounting software. Data was collected through questionnaires and interviews, with a quantitative approach to explore the direct and indirect effects between the research variables.

Data collection was conducted through an online survey using a Likert scale instrument, with samples determined using purposive sampling and the number of respondents calculated using the Slovin formula. Data were analyzed using the Structural Equation Modeling–Partial Least Square (SEM-PLS) method with the help of SmartPLS 4 software to test validity, reliability, and relationships between variables, including the mediating effect of customer satisfaction. Through this method, the study is expected to provide a comprehensive understanding of how Brand Awareness and Perceived Quality affect the loyalty of Zahir Accounting Online users, while also providing an empirical basis for the development of strategies to increase customer retention in the cloud-based accounting software industry.

RESULTS AND DISCUSSION

Variable Categories

The description of variables in this study aims to provide an overview of how respondents responded to questions related to the variables of Brand Awareness, Perceived Quality, User Satisfaction, and User Loyalty. This analysis uses the index analysis method to quantitatively evaluate the respondents' response trends for each variable.

Through index calculations, it is possible to identify general patterns in respondents' answers and their level of perception of Zahir Accounting Online services. This analysis provides important insights into user behavior and perceptions, and helps to understand the role of each variable in shaping user loyalty. The following are the descriptive results for each variable.

Brand Awareness

Based on the data, Zahir Accounting Online users show a high level of brand awareness. The average score for each statement is above 4 on a scale of 5, with a total of 1,744. This shows that most respondents are familiar with the Zahir brand and can easily remember it. The highest score was for the statement that Zahir is more memorable than its competitors. This finding shows that Zahir's brand awareness is quite strong, and this can affect user satisfaction, which in turn can increase loyalty. In other words, the more recognizable and memorable a brand is, the greater the chance that users will be satisfied and remain loyal to the product. This is shown in Table 2 below.

Table 2. Summary of Respondents' Perceptions of Brand Awareness of Zahir Accounting Online

No.	Question	Score					Actual Score	Average
		SS	S	N	TS	STS		
1	I have known the Zahir Accounting Online brand for a long time.	15	37	8	0	0	247	4.12
2	I can easily recognize the Zahir Accounting Online logo.	15	33	11	1	0	242	4.03
3	Zahir Accounting Online is one of the first brands that comes to mind when I think of accounting software.	16	33	10	1	0	244	4.07
4	I have seen advertisements or promotions for Zahir Accounting Online in various media.	17	37	6	0	0	251	4.18
5	I am familiar with the name Zahir Accounting Online.	19	28	12	1	0	245	4.08
6	I can distinguish Zahir from other accounting software brands.	24	28	7	1	0	255	4.25
7	Zahir Accounting Online is easier to remember than its competitors.	25	30	5	0	0	260	4.33
	Total	**131**	**226**	**59**	**4**	**0**	**1744**	**29.07**

source: processed data

Perceived Quality

Based on the summary table of respondents' scores for Perceived Quality of Zahir Accounting Online, the results are very positive. The average score for each statement is above 4 on a scale of 5, with the highest scores for the statements that Zahir is easy to use (average 4.37) and provides effective solutions for financial reporting needs (average 4.35). The total overall score reached 1,798 with an aggregate average of 29.97. These results indicate that users rate the quality of Zahir Accounting Online as very good, in terms of features, ease of use, reliability, and suitability to expectations. This high perception of quality can contribute to increased user satisfaction and loyalty, in line with the research focus on the influence of Perceived Quality on loyalty through satisfaction as a mediating variable. As shown in Table 3. below.

Table 3. Summary of Respondents' Perceptions of Perceived Quality of Zahir Accounting Online

No.	Question	Score					Actual Score	Average
		SS	S	N	TS	STS		
1	Zahir Accounting Online performs well in carrying out its functions.	22	31	6	1	0	254	4.23
2	I feel that Zahir has complete features.	22	34	3	1	0	257	4.28
3	I find Zahir Accounting Online easy to use	23	36	1	0	0	262	4.37

No.	Question	Score					Actual Score	Average
		SS	S	N	TS	STS		
4	I trust the reliability of the Zahir system in storing financial reports.	25	29	4	2	0	257	4.28
5	The quality of Zahir Accounting Online meets my expectations.	24	31	3	2	0	257	4.28
6	Zahir Accounting Online provides an effective solution for my financial reporting needs.	23	35	2	0	0	261	4.35
7	Zahir Accounting Online is superior to its competitors in terms of quality.	21	28	11	0	0	250	4.17
Total		**160**	**224**	**30**	**6**	**0**	**1798**	**29.97**

source: processed data

Customer Satisfaction

Based on the summary table of respondents' perceptions of user satisfaction (customer satisfaction) with Zahir Accounting Online, it appears that the majority of respondents are satisfied with the services and features offered. All statements received an average score above 4, except for the last statement, which received a slightly lower score (3.93) for " ," which was related to regret in choosing Zahir. The highest score (4.35) was for the statement that respondents were satisfied with Zahir overall. The actual total score reached 1,765 with an aggregate average of 29.42. In general, these results show that the level of user satisfaction with Zahir is quite high, especially in terms of the suitability of features to needs, value for money, and customer service quality. This high level of satisfaction reinforces the role of the mediating variable in the study, namely that user satisfaction is an important bridge between brand and quality perception and user loyalty, as shown in Table 4 below.

Table 4. Summary of Respondents' Perceptions of User Satisfaction with Zahir Accounting Online

No.	Question	Score					Actual Score	Average
		SS	S	N	TS	STS		
1	I am satisfied with using Zahir Accounting Online.	26	29	5	0	0	261	4.35
2	The features offered by Zahir meet my needs.	22	30	7	1	0	253	4.22
3	I am happy using Zahir Accounting Online.	26	25	9	0	0	257	4.28
4	I feel that Zahir Accounting Online provides value that is comparable to the cost incurred.	22	32	6	0	0	256	4.27
5	Zahir's customer service is satisfactory.	17	35	7	0	1	247	4.12
6	I feel that Zahir pays attention to customer satisfaction	22	32	5	1	0	255	4.25
7	I don't regret choosing Zahir Accounting Online.	18	25	12	5	0	236	3.93
Total		**153**	**208**	**51**	**7**	**1**	**1765**	**29.42**

source: processed data

Customer Loyalty

Based on the recapitulation of scores on the user loyalty variable, it appears that the majority of respondents show a fairly high level of loyalty to Zahir Accounting Online. The average score ranges from

3.88 to 4.37 on a scale of 5, with the highest score appearing on the statement "I am satisfied and want to continue using Zahir's services" (4.37). The total overall score of 1,767 with an aggregate average of 29.45 shows that respondents tend to be willing to recommend, continue using, and remain loyal to Zahir even though there are similar products on the market. These results support the conclusion that Zahir has succeeded in building strong user loyalty, which can be formed through satisfaction and positive perceptions of the quality and brand offered, in line with the focus of this study. This is shown in Table 5. below.

Table 5. Summary of Respondents' Perceptions of User Satisfaction with Zahir Accounting Online

No	Question	Score					Actual Score	Average
		SS	S	N	TS	STS		
1	I feel comfortable using Zahir for the long term.	17	26	12	3	2	233	3.88
2	I would recommend Zahir to others.	24	30	6	0	0	258	4.30
3	I am not interested in trying other brands besides Zahir.	27	23	9	1	0	256	4.27
4	I am willing to provide input for the development of Zahir.	25	29	3	3	0	256	4.27
5	I am satisfied and want to continue using Zahir's services.	27	28	5	0	0	262	4.37
6	I still choose Zahir even though there are other options on the market.	22	26	12	0	0	250	4.17
7	I feel that Zahir is the best choice for me in terms of accounting software.	21	30	9	0	0	252	4.20
Total		**163**	**192**	**56**	**7**	**2**	**1767**	**29.45**

source: processed data

Outer Model Test

Outer Loading

In the Brand Awareness (BA) construct, the indicators used in the final model are BA1, BA4, BA5, BA6, and BA7, with loading values ranging from 0.772 to 0.901. However, two indicators, BA2 and BA3, were not included in the final model because they had loading values below the threshold of 0.70, namely 0.485 and 0.344, respectively. The removal of these indicators was done to improve the quality of the measurement model, in line with the recommendation from Hair et al. (2019) which states that indicators with loading values below 0.70 should be eliminated due to their weak contribution to the construct they represent. This step also supports the principle of convergent validity, which requires that indicators within a construct must have a high correlation with each other.

The Perceived Quality (PQ) construct consists of seven indicators (PQ1–PQ7), with loading values between 0.741 and 0.850. Meanwhile, the User Satisfaction (KP) construct is measured using seven indicators (KP1–KP7) with loading values between 0.715 and 0.858. These values indicate that all indicators in this construct are valid and reliable in measuring users' perceived quality of Zahir Accounting Online. The User Loyalty (LP) construct showed excellent performance, where all indicators (LP1–LP7) had high loading values, between 0.820 and 0.913. This indicates that user loyalty to Zahir Accounting Online can be measured accurately and reliably using these indicators.

Structurally, the influence path from Brand Awareness to User Satisfaction has a coefficient of 0.360, while the influence of Perceived Quality on User Satisfaction is 0.374. These two values indicate that both brand awareness and perceived quality contribute positively to the level of user satisfaction. Furthermore, the influence of User Satisfaction on User Loyalty has a coefficient of 0.580, which indicates a strong and significant influence. These results reinforce previous findings in the literature, as stated by Oliver (1999), that satisfaction is a major determinant in the formation of loyalty.

Thus, the results of the evaluation of the measurement model show that the constructs in this study have been formed by valid and reliable indicators. The indicator selection process was carried out carefully to ensure that each construct was only measured by items that made a substantial contribution. This approach not only strengthens the statistical quality of the model, but also supports the accuracy of theoretical interpretation in analyzing the relationship between Brand Awareness, Perceived Quality, Satisfaction, and User Loyalty towards Zahir Accounting Online. The refined measurement model can be seen visually in Figure 1 below.

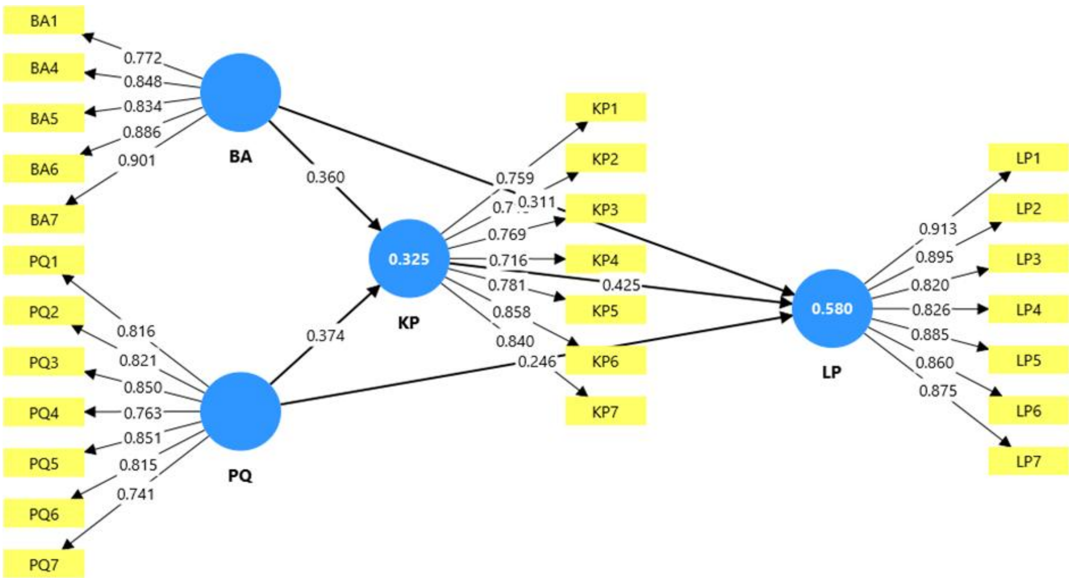

Figure 1. Outer Loading Results

source: processed data

AVE (Average Variance Extracted)

Average Variance Extracted (AVE) is an important indicator in evaluating convergent validity in measurement models in the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. AVE measures the proportion of indicator variance successfully explained by latent constructs compared to variance due to measurement error. Theoretically, the recommended AVE value is ≥ 0.50, which indicates that the construct is able to adequately explain more than 50% of the variance of its indicators.

Based on the results of the analysis in the table below, all constructs in the research model have met the recommended AVE threshold. The User Loyalty (LP) construct shows the highest AVE value of 0.754, which reflects a very strong level of convergent validity. Then, the Brand Awareness (BA) construct also has a good level of convergent validity with an AVE value of 0.722. Furthermore, the Perceived Quality (PQ) construct recorded an AVE value of 0.655, while the User Satisfaction (KP) construct obtained an AVE value of 0.606. All of these values are above the minimum threshold of 0.50, so statistically it can be stated that the constructs in this model have adequate convergent validity.

Thus, it can be concluded that all constructs in the research model have been formed by indicators that consistently reflect the constructs being measured. This reinforces the reliability and accuracy of the model in describing the relationship between Brand Awareness, Perceived Quality, User Satisfaction, and User Loyalty towards the use of Zahir Accounting Online. The details of the AVE values for each construct are presented in Table 6 below.

Table 6. AVE Test Results

Construct	Average Variance Extracted (AVE)
Brand Awareness (BA)	0.722
User Satisfaction (KP)	0.606
User Loyalty (UL)	0.754
Perceived Quality (PQ)	0.655

source: processed data

Composite Reliability

Composite Reliability (CR) is used to evaluate the internal consistency of indicators in measuring a latent construct in the PLS-SEM model. Unlike Cronbach's Alpha, which tends to provide conservative estimates, CR provides more accurate estimates because it considers the contribution of each indicator based on its outer loading value. Theoretically, the recommended CR value to indicate good construct reliability is at least 0.70, as stated by Hair et al. (2019). Based on the analysis results, all constructs in this model have a Composite Reliability value that exceeds the recommended minimum threshold. The User Loyalty (UL) construct recorded the highest CR value of 0.955, indicating that the indicators in this construct have very high internal consistency. This is followed by the Perceived Quality (PQ) construct with a CR value of 0.930, and Brand Awareness (BA) with a value of 0.928. Meanwhile, the User Satisfaction (KP) construct also shows excellent reliability with a CR value of 0.915.

Thus, all constructs in this study can be said to have excellent reliability. This indicates that each construct is measured by consistent and stable indicators, so that the model as a whole can be trusted to describe the relationship between variables in the context of Zahir Accounting Online users. Details of the Composite Reliability values for each construct are presented in Table 7. below:

Table 7. Composite Reliability (CR) Test Results

Construct	Composite Reliability (CR)
Brand Awareness (BA)	0.928
User Satisfaction (KP)	0.915
User Loyalty (UL)	0.955
Perceived Quality (PQ)	0.930

source: processed data

Cronbach's Alpha

Cronbach's Alpha is one of the most commonly used measures of internal reliability to assess the consistency between items in measuring a latent construct. Cronbach's Alpha values reflect the extent to which indicators in a construct are related and consistent in measuring the same concept. According to Hair et al. (2019), a good Cronbach's Alpha value is ≥ 0.70, a value of ≥ 0.80 indicates high reliability, and a value of ≥ 0.90 indicates excellent or superior reliability.

Based on the results of the analysis obtained, all constructs in this research model showed high Cronbach's Alpha values, even above the threshold of 0.90. The User Loyalty (UL) construct had the highest value, namely 0.946, which indicates very strong internal consistency among its indicators. Furthermore, the Perceived Quality (PQ) construct recorded a value of 0.912, followed by Brand Awareness (BA) at 0.903, and User Satisfaction (KP) at 0.892. Although the KP value is slightly lower than the other constructs, it still shows high reliability and is statistically acceptable.

These results indicate that all indicators in each construct show excellent levels of consistency and internal reliability. Therefore, it can be concluded that the measurement instruments used in this study have met the reliability criteria based on Cronbach's Alpha values. Table 8 below presents the Cronbach's Alpha values for each construct used in the model:

Table 8. Cronbach's Alpha Test Results

Construct	Cronbach's Alpha
Brand Awareness (BA)	0.903
User Satisfaction (KP)	0.892
User Loyalty (UL)	0.946
Perceived Quality (PQ)	0.912

source: processed data

Discriminant Validity (HTMT)

Discriminant validity indicates the extent to which a construct in a model differs empirically from other constructs. One approach that is considered more sensitive and accurate in testing discriminant validity in PLS-SEM models is the Heterotrait-Monotrait Ratio of Correlations (HTMT) method. Discriminant validity is fulfilled if the HTMT value between two constructs is below the threshold of 0.90. If the HTMT value exceeds this threshold, it can be indicated that the two constructs may not be conceptually different enough.

Based on the analysis results, all HTMT values in the construct pairs in this model are well below the 0.90 limit. The highest HTMT value is between the User Satisfaction (KP) and User Loyalty (LP) constructs at 0.703, which is still within the safe limit and indicates a clear conceptual difference between the two constructs. Furthermore, the Brand Awareness (BA) – LP construct pair has a value of 0.581, followed by the KP – BA pair at 0.463. Meanwhile, the lowest HTMT value is recorded in the Perceived Quality (PQ) – BA pair at 0.222, which confirms that the two constructs are empirically very different from each other.

Thus, it can be concluded that all constructs in this model have met the criteria for discriminant validity based on the HTMT approach. This shows that each construct measures a unique concept and does not overlap with other constructs, thereby strengthening the structural validity of the measurement model used in this study. The following is Table 9 HTMT between constructs:

Table 9. Results of the Discriminant Validity Test (HTMT)

	BA	KP	LP	PQ
BA	-	-	-	-
KP	0.463	-	-	-
LP	0.581	0.703	-	-
PQ	0.222	0.458	0.513	-

source: processed data

VIF (Collinearity)

The Variance Inflation Factor (VIF) is used to detect potential multicollinearity between indicators in a measurement model. Multicollinearity occurs when two or more indicators in a single construct have a very high correlation, which can affect the stability of estimates and the accuracy of the overall model interpretation. In general, a VIF value below 5.0 is considered safe, while some literature, such as Hair *et al.* (2019), suggests a value below 3.3 as the ideal threshold to ensure there is no significant multicollinearity.

Based on the analysis results, all indicators in the model have VIF values that are still within the tolerance limit, which is below the critical value of 5.0. Several indicators show fairly high values but are still acceptable, such as LP1 (4.611), LP2 (4.479), LP5 (3.954), BA7 (3.615), and KP6 (3.086). These values indicate that there is a high correlation between several indicators in one construct, but not to the extent of causing disruptive multicollinearity. Meanwhile, most of the other indicators have lower VIF values, ranging from 1.7 to 3.0, which reflects that the correlation between indicators is still at a reasonable and not excessive level.

Thus, it can be concluded that the measurement model in this study is free from harmful multicollinearity issues. No indicator has a VIF value exceeding 5.0, so all indicators can still be retained to measure their respective constructs. This condition ensures that the parameter estimates in the model remain stable and accurate.

Inner Model Test

The results of structural model analysis using the PLS-SEM method show that all indicators and paths between constructs in the model are statistically significant. Based on the bootstrapping results, all indicators have a p-value = 0.000, indicating a significant contribution to their respective latent constructs. The main paths between constructs are also significant, including Brand Awareness → User Satisfaction (p=0.001), Perceived Quality → User Satisfaction (p=0.000), and User Satisfaction → User Loyalty (p=0.000). Even the direct paths Brand Awareness → User Loyalty and Perceived Quality → User Loyalty are also significant with p=0.000 and p=0.023. This indicates that the model has a strong and statistically valid relationship structure.

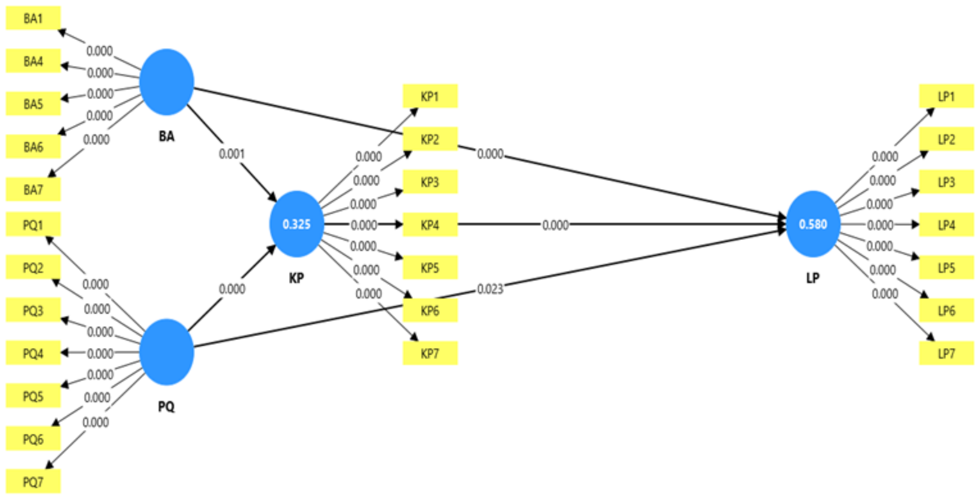

Figure 2. Bootstrapping Results Model
source: processed data

The path coefficient values reinforce these results, with a positive direction of influence across all paths. Brand Awareness has a significant effect on User Satisfaction (coef. 0.360) and User Loyalty (coef. 0.311), while Perceived Quality also affects User Satisfaction (coef. 0.374) and User Loyalty (coef. 0.246). The strongest influence is seen in the relationship between User Satisfaction and User Loyalty (coef. 0.425). All T-statistic values are > 1.96, indicating that all relationships are significant. Empirically, these results show that increased brand awareness and perceived quality will increase satisfaction, which in turn strengthens user loyalty to Zahir Accounting Online.

In addition to direct effects, the analysis of specific indirect effects shows that User Satisfaction partially mediates the relationship between Brand Awareness → User Loyalty ( ) (coef. 0.153; p=0.008) and Perceived Quality → User Loyalty (coef. 0.159; p=0.006). The R^2 value of 0.454 for User Satisfaction and 0.657 for User Loyalty indicates good predictive power, while the f^2 value indicates a moderate effect for most paths. Overall, the model has strong structural validity and explains more than 65% of the variation in user loyalty, confirming that the combination of Brand Awareness, Perceived Quality, and User Satisfaction plays an important role in shaping the loyalty of Zahir Accounting Online users.

Goodness of Fit Test (Model Fit)

Standardized Root Mean Square Residual (SRMR) is one of the measures used to evaluate model fit in the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. SRMR measures the average difference between observed covariances and covariances predicted by the model. The smaller the SRMR value, the better the model fit with the data used. An SRMR value of less than 0.10 is still acceptable, and a value below 0.08 indicates an excellent model fit.

Based on the results obtained, the SRMR value for both the estimated and saturated models is 0.088. Although this value is slightly above the threshold of 0.08, it is still within the statistically acceptable tolerance limit, as it remains below the maximum threshold of 0.10. This indicates that the difference between the actual covariance and the predicted model covariance is not significant, so the model can be said to have an adequate level of fit.

Thus, these SRMR results support that the structural model used in this study is appropriate and feasible, and can be used for further interpretation of the relationships between constructs, as shown in Table 10 below.

Table 10. SRMR Results

Model	Original Sample (O)	Sample Mean (M)	95% CI	99% CI
Saturated Model	0.088	0.072	0.086	0.093
Estimated Model	0.088	0.072	0.086	0.093

source: processed data

Hypothesis Testing

The hypothesis test results show that all relationships between variables in this study are significant. Brand Awareness has a positive effect on User Satisfaction (coefficient 0.360; T=3.297; p=0.001), which means that the higher the brand awareness of Zahir Accounting Online, the higher the user satisfaction. Perceived Quality also has a positive effect on User Satisfaction (coefficient 0.374; T=3.607; p=0.000), confirming that a good perception of service quality increases user satisfaction. Furthermore, User Satisfaction has a positive effect on Loyalty (coefficient 0.425; T=4.216; p=0.000), indicating that satisfaction is a strong predictor of loyalty. Brand Awareness also has a direct effect on Loyalty (coefficient 0.311; T=3.835; p=0.000), as does Perceived Quality (coefficient 0.246; T=2.267; p=0.023), although the effect is relatively weaker. In addition, the mediation test shows that Satisfaction acts as a partial mediator between Brand Awareness and Loyalty (indirect coefficient 0.153; T=2.650; p=0.008) and between Perceived Quality and Loyalty (indirect coefficient 0.159; T=2.768; p=0.006). Thus, all hypotheses H1 to H7 are accepted, confirming that brand awareness and perceived quality, both directly and through satisfaction, contribute significantly to the loyalty of Zahir Accounting Online users.

Discussion

Brand Awareness of Zahir Accounting Online Users

Brand Awareness among Zahir Accounting Online users is relatively high, with an average score above 4 on the Likert scale, indicating that users are familiar with and easily remember Zahir compared to its competitors. This brand awareness is formed through digital promotion, positive experiences, and user recommendations. This finding is in line with Aaker's (1991) theory, which states that brand awareness is the basis for loyalty because brands that are easy to remember tend to be more trusted. A strong level of awareness not only increases recognition but also builds trust, reduces perception risk, and encourages users to remain loyal to Zahir. Thus, Zahir's brand awareness is a strategic asset in strengthening its image and long-term loyalty.

Perceived Quality of Zahir Accounting Online Users

Users' perceived quality of Zahir is in the high category, with positive ratings for ease of use, reliability, and feature suitability. This reflects Zahir's success in meeting user expectations and strengthening its brand reputation in the accounting software market. These findings support Aaker's (1991) theory, which emphasizes that perceived quality is a key factor in shaping satisfaction and loyalty. Users consider Zahir to be not only functional, but also providing strategic added value in financial management. This positive perception of quality is an important asset for Zahir in maintaining user satisfaction and loyalty amid fierce digital competition.

The Influence of Brand Awareness on User Loyalty

The results of the study show that brand awareness has a positive and significant effect on user loyalty. Users who are familiar with Zahir tend to remain loyal and are reluctant to switch to other applications. High user satisfaction is also a factor that strengthens loyalty, where positive experiences and quality customer service play an important role in creating value that is commensurate with the cost. Thus, Brand Awareness not only increases brand recognition but also strengthens loyalty through user satisfaction and trust in the quality of Zahir.

The Effect of Perceived Quality on User Loyalty

Zahir user loyalty is relatively high, with an average score of 3.88–4.37, where most respondents intend to continue using and recommending Zahir. This loyalty is formed from perceptions of high quality and user satisfaction with the ease and benefits of the application. According to Oliver's theory (1999), loyalty develops from repeated satisfaction to emotional commitment. In this context, Perceived Quality and Brand Awareness interact to strengthen loyalty, making users not only loyal but also brand advocates ( ). Therefore, maintaining quality and a positive user experience is key to retaining long-term loyalty.

The Mediating Role of Satisfaction on the Influence of Brand Awareness on Loyalty

Satisfaction was found to partially mediate the relationship between brand awareness and loyalty, with an indirect coefficient of 0.153 and a p-value of 0.008. This means that brand awareness not only has a direct effect on loyalty, but also through increased user satisfaction. This shows that brand awareness creates positive expectations which, when met, result in satisfaction and strengthen loyalty. For Zahir, it is important not only to increase awareness through promotion, but also to maintain a user experience that meets user expectations so that the brand-customer relationship is stronger and more sustainable.

The Mediating Role of Satisfaction in the Influence of Perceived Quality on Loyalty

Satisfaction also partially mediates the relationship between Perceived Quality and loyalty, with an indirect coefficient of 0.159 and a p-value of 0.006. This means that perceived quality not only directly influences loyalty, but also through satisfaction formed from positive user experiences. Technical qualities such as ease of use, reliability, and feature suitability form the basis of satisfaction, which in turn strengthens loyalty. Therefore, Zahir developers need to maintain a balance between improving technical quality and creating a satisfying experience in order to maintain strong user loyalty amid digital competition.

Synthesis of Discussion

This study shows that Brand Awareness, Perceived Quality, and satisfaction have a significant influence on the loyalty of Zahir Accounting Online users, with an R^2 value of 0.657. Brand Awareness plays a role in shaping brand recognition, Perceived Quality reinforces positive perceptions, and satisfaction becomes a bridge to loyalty. These results are consistent with the theories of Aaker (1991) and Oliver (1999), confirming that loyalty is formed through the integration of brand awareness, perceived quality, and satisfying experiences. Practically speaking, Zahir needs to maintain consistency in brand communication, improve feature quality, and strengthen user services in order to maintain loyalty in the competitive digital accounting software market.

CONCLUSION

Based on the results of a study of 60 respondents who use Zahir Accounting Online, it can be concluded that user brand awareness is high and plays an important role in shaping a strong brand image and encouraging user loyalty. Perceived quality is also in the very good category, especially in terms of ease of use, reliability, and feature suitability, which has a positive effect on user confidence and engagement. Simultaneously, Brand Awareness and Perceived Quality are proven to have a significant effect on user loyalty, both directly and through customer satisfaction as a partial mediating variable. Thus, satisfaction is proven to play an important role in strengthening the influence of these two factors on user loyalty. Therefore, Zahir Accounting Online developers are advised to maintain a high level of Brand Awareness through consistent digital communication and promotion strategies, improve feature quality and system security, and prioritize user satisfaction through responsive and educational services. Further research is recommended to expand the number of respondents, add other variables such as brand trust or perceived value, and conduct comparative studies with other accounting applications to make the results more comprehensive and representative for the development of loyalty strategies in the cloud-based accounting software industry.

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