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Website quality evaluation of OKE garden using webqual, the marketing mix, and importance-performance analysis

Nadya Kamilia Faiqoh*[1], Popong Nurhayati [1], Heny Kuswanti Suwarsinah[1]
Business Management Program, IPB University, Bogor, Indonesia[1]

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*Corresponding author.
Nadya Kamilia Faiqoh
E-mail address:
kamiliafaiqoh@apps.ipb.ac.id

Abstract
The rapid advancement of digital technologies has significantly impacted various service sectors, including the garden landscaping industry. In response to this development, OKE Garden has implemented a website-based e-commerce platform aimed at improving service accessibility and operational efficiency. This study seeks to evaluate the usability and service quality of this digital platform from the user's perspective by adopting the Technology Acceptance Model (TAM) as the analytical framework. Within this framework, Perceived Ease of Use (PEOU) is assessed using WebQual 4.0 indicators, while Perceived Usefulness (PU) is measured through the four elements of the marketing mix, namely Product, Price, Place, and Promotion. To analyze the alignment between user expectations and actual service performance, the Importance-Performance Analysis (IPA) method was utilized. Data were obtained from 57 respondents in the Greater Jakarta area (Jabodetabek), primarily first-time users who had previously interacted with the OKE Garden website. Prior to analysis, the data underwent validity and reliability testing to ensure robustness. The findings show that users rated the importance of website attributes higher than their actual performance, indicating a gap that highlights areas requiring improvement. Several key indicators were identified—including ease of navigation, clarity of information, data security, and pricing strategy—which were categorized in Quadrant I (high importance, low performance), indicating areas that require immediate attention. Overall, the results suggest that although digital technology adoption has taken place, user acceptance remains suboptimal. Therefore, a more comprehensive enhancement of usability and service quality is necessary to meet user expectations and improve overall satisfaction.

1. Introduction

In Indonesia, landscaping services are gaining prominence amid rapid urbanization and environmental challenges. The government's mandate for 30% urban green open space (*Ruang Terbuka Hijau*—RTH) underscores the urgency of sustainable city planning, yet many metropolitan regions still fall short of this target [1]. Meanwhile, public awareness of health and sustainability has fueled interest in home gardens, edible gardens, and urban farming [2]. These trends demonstrate that landscaping is no longer purely aesthetic but also closely linked to ecological balance and climate resilience. However, digital adoption in this sector remains limited, with few businesses leveraging websites as service platforms [3]. The rapid pace of digital transformation has encouraged the use of websites as a core business infrastructure, particularly for disseminating information, engaging customers, and processing transactions [4]. In today's e-commerce ecosystem, value creation is increasingly collaborative, prompting both large enterprises and MSMEs to adopt digital platforms to expand market reach and improve competitiveness [5][6]. According to APJII data (2024), 50.4% of internet users in Indonesia utilize online platforms to seek product or service inspiration, indicating that website quality significantly influences consumer perceptions and purchasing decisions [7]. Nevertheless, despite accelerating digital transformation across various industries, empirical evidence on how digital platforms are adopted and evaluated within landscaping service sector remains scarce, leaving a critical gap that this study aims to address.

OKE Garden, a digital startup specializing in gardening services, responded to this opportunity by launching an e-commerce website in April 2024. The website, okegarden.com, was intended to serve as a hub for design selection, service information, transactions, and customer interaction. However, since its launch, users have reported issues related to confusing navigation, incomplete information, and limited feature usability. In fact, the company recorded a 23.78% decline in service sales throughout 2024, despite a national increase in e-commerce users to 58.63 million [8], indicating a misalignment between digitalization goals and actual user experience. Moreover, no formal evaluation of the website has been conducted. Therefore, this situation highlights a critical gap: although digital adoption is advancing rapidly in Indonesia, there is little empirical evidence on how users evaluate and accept digital platforms for landscaping

services. Without such evaluation, businesses risk developing digital initiatives that fail to improve competitiveness and user trust.

To address these issues, this research applies the Technology Acceptance Model (TAM) as a conceptual framework to evaluate user perceptions of Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) [9]. To contextualize TAM in this setting, PEOU is measured using WebQual 4.0 dimensions—usability, information quality, and service interaction—while PU is operationalized through the digital marketing mix (4P), covering Product, Price, Place, and Promotion [10][11]. The resulting indicators are statistically validated and analyzed using Importance-Performance Analysis (IPA), which maps service attributes into priority quadrants to guide improvement strategies [12]. Previous studies have investigated website quality and digital marketing strategies as separate domains. Usability and service interaction, as components of WebQual 4.0, have been found to significantly influence user satisfaction [13][14][15], while pricing and service quality are critical to e-marketing effectiveness [11]. Other findings emphasize that implementing digital marketing mix strategies can enhance MSME competitiveness, and that service interaction and engagement features foster loyalty in e-commerce environments [17][18]. Building on these findings, this study does not seek to extend TAM theoretically; rather, it employs TAM as a conceptual framework that integrates WebQual 4.0 and the 4P marketing mix to capture both usability and usefulness dimensions within a unified model. This integration is novel in the context of digital landscaping services, and the contribution of this research lies in providing a comprehensive evaluation framework while offering practical strategies to enhance user satisfaction and competitiveness.

2. Research Method

2.1 Framework Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by Davis (1989), is widely recognized for explaining user adoption of new technologies through two core constructs: Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) [19]. PEOU is defined as the degree to which a user believes that a system is easy to use, while PU refers to the belief that the system enhances user performance [20][21]. In this study, TAM is used solely as a conceptual framework for evaluating digital service quality, with Behavioral Intention and Actual Use omitted because the goal is not to predict adoption but to assess user perceptions of OKE Garden's e-commerce website. This study does not extend TAM theoretically; rather, it adapts the model as an evaluative lens. Thus, TAM serves as an evaluation-oriented structure that supports the validation of WebQual and the 4P framework in a niche service context, rather than extending the TAM framework itself [22]. The proposed TAM framework for evaluating website service quality is illustrated in Figure 1.

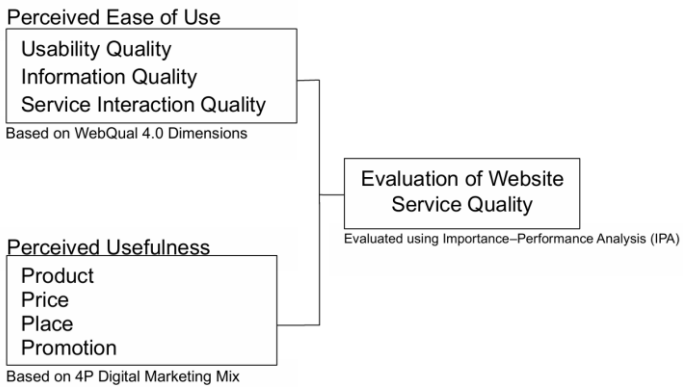

Figure 1.TAM Framework for Evaluating Website Service Quality

As illustrated in Figure 1, PEOU is operationalized through WebQual 4.0 dimensions: usability (ease of navigation and interface design), information quality (clarity and accuracy), and service interaction quality (responsiveness and user comfort). PU is assessed using the 4P of digital marketing: product (service features), price (perceived value), place (digital channels), and promotion (effectiveness of campaigns) [23], [24]. This framing integrates TAM as the overarching structure: PEOU is represented through WebQual dimensions (usability, information quality, and service interaction), while PU is represented through the marketing mix (4P). Thus, TAM provides the conceptual link that unifies WebQual and 4P into a single evaluation framework. The novelty of this study lies in applying WebQual and the 4P framework to the niche context of landscape gardening e-commerce, which has not been widely examined in prior research. This validation provides new insights into how these frameworks operate in digital service industries beyond their commonly studied domains. By excluding Behavioral Intention and Actual Use, the model emphasizes evaluation over prediction. Prior studies support this adaptation. Herowati (2023) found that PEOU does not always significantly

influence behavioral intention, indicating its relevance for service quality evaluation [25]. Other research also demonstrates that TAM can be integrated with evaluative methods like IPA to assess system quality without predicting behavior [26]. Consequently, the TAM-based framework offers a contextual and relevant foundation for evaluating the service quality of OKE Garden's e-commerce platform.

2.2 Importance-Performance Analysis (IPA)

Importance-Performance Analysis is an effective technique used to identify which service attributes should be prioritized for improvement [27]. IPA helps illustrate which performance attributes require enhancement or maintenance based on user perceptions and priorities. The IPA model consists of four quadrants, where the X-axis represents website performance and the Y-axis represents its importance to users [22]. This method combines measurements of importance and satisfaction into a two dimensional graph, simplifying data interpretation and facilitating practical recommendations [12]. The formula used to determine the conformity level is presented as follows:

$$\mathrm{TK_i} = \frac{\mathrm{X_i}}{\mathrm{Yi}} \times 100\% \quad (1)$$

In Equation 1, TK_i represents the conformity level, which expresses the degree of alignment between performance and user expectations. The variable X_i refers to the importance score as perceived by users, while Y_i denotes the performance score based on users' actual experiences [28]

2.3 Research Method

In defining the research problem, preliminary case observations were conducted on the OKE Garden website to identify key issues related to usability and user experience. This was followed by a literature review and the selection of a theoretical framework that combines the Technology Acceptance Model (TAM), WebQual 4.0 dimensions, and the E-Marketing Mix (4P), forming the foundation for problem formulation and the determination of research objectives.

Based on the identified constructs, a questionnaire was developed incorporating relevant indicators. The questionnaire items were constructed based on the dimensions of WebQual 4.0, which include usability, information quality, and service interaction, along with the four components of the marketing mix, including product, price, place, and promotion. Responses were measured using a 4-point Likert scale, ranging from 1 (Strongly Disagree) to 4 (Strongly Agree), to encourage respondents to provide clear and non-neutral responses. This type of scale is useful for grouping data and facilitating further analysis. Before proceeding with data analysis, validity and reliability tests were conducted to ensure the accuracy and consistency of the instrument. If any items were found to be invalid, the instrument would be revised and re-tested. Once the instrument was confirmed to be valid, the data collection phase was carried out, targeting users who had interacted with the OKE Garden website between September 2024 and April 2025.

The data were then analyzed using the Importance-Performance Analysis (IPA) method with SPSS software. The Importance Performance Analysis (IPA) method was employed to map user perceptions by comparing the importance and performance level of each indicator. The average importance and performance scores were calculated to obtain the mean values. In this study, gap analysis was conducted as part of the IPA, calculated as the difference between performance and importance scores to support quadrant mapping. The results were then plotted into four quadrants to determine priority areas for improvement. The complete research procedure is illustrated in Figure 2, which presents the sequence of steps undertaken during the study, from case observation to conclusion and recommendations.

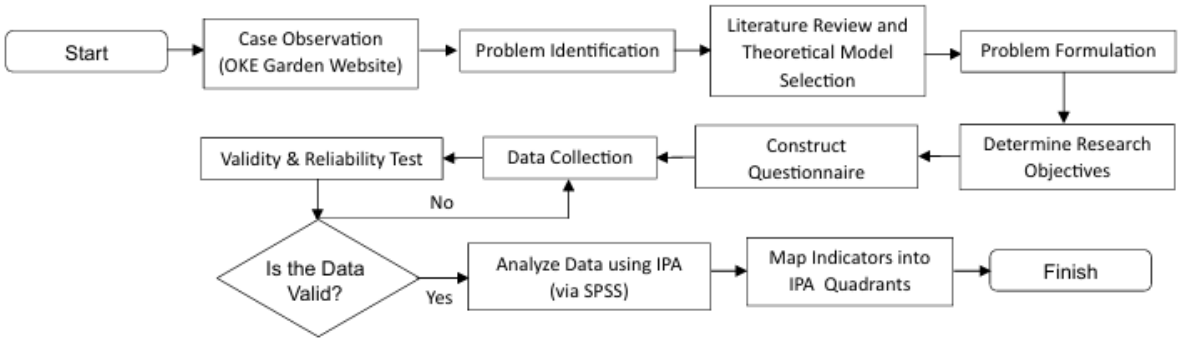

Figure 2. Research Flowchart

2.4 Data, Population, and Sample

The data were collected through a literature review and questionnaire distribution. The literature review provided supporting theories and contextual information, while the questionnaires, distributed via Google Forms, yielded quantitative data from OKE Garden service users for the Importance-Performance Analysis (IPA). The questionnaire was developed based on the operational variables presented in Table 1. These variables represent key dimensions of website quality and marketing mix that influence user perceptions of OKE Garden's website. Each variable was operationalized into measurable indicators to ensure consistency and clarity in data collection.

Table 1. Operational Variables

Variables	Code	Indicator
Usabilty Quality (UQ)	UQ1	Ease of website use
	UQ2	Ease of navigating the website
	UQ3	Attractive visual appearance
	UQ4	Website conveys a professional impression
	UQ5	Website provides a positive experience
Information Quality (IQ)	IQ1	Information is trustworthy
	IQ2	Service instruction information
	IQ3	Relevant information
	IQ4	Information is easy to understand
	IQ5	Security of personal information
	IQ6	Security features in transactions
Service Interaction Quality (SIQ)	SIQ1	Variety of payment methods
	SIQ2	Creating a sense of personalization
	SIQ3	Conveying a sense of community
	SIQ4	Communication facilities with admin
	SIQ5	Timeline suitability
Product (PR)	PR1	Knowledge about the website
	PR2	Understanding benefits of the website
	PR3	Availability of products
	PR4	Variety of products
	PR5	Ease of access to similar services
Place (TM)	TM1	Ease of finding the website
	TM2	Ease of payment via website
	TM3	Multi-Platform Access
	TM4	Affordability of sales region
	TM5	Availability of substitute platforms
Price (HR)	HR1	Price transparency
	HR2	Discount offers
	HR3	Price conformity with quality
	HR4	Price affordability
	HR5	Price competitiveness with competitors
Promotion (PM)	PM1	Attractiveness of advertisement content
	PM2	Customer testimonials
	PM3	Advertising intensity
	PM4	Advertisement quality
	PM5	Seller Credibility

As shown in Table 1, Usability Quality (UQ) evaluates the ease of use, navigation, and visual appeal of the website. Information Quality (IQ) measures the accuracy, relevance, clarity, and security of information and transactions. Service Interaction Quality (SIQ) assesses interaction-related aspects, including communication facilities, personalization, payment options, and service timelines. Furthermore, the marketing mix variables—Product (PR), Place (TM), Price (HR), and Promotion (PM)—were included to capture product availability, accessibility, pricing perception, and promotional effectiveness of the website.

This research focused on a specific population that met particular criteria: customers located in the Greater Jakarta area (Jabodetabek) who had used the OKE Garden website (www.okegarden.com) at least once, specifically those who had either completed or cancelled a transaction between September 2024 and April 2025. Notably, most respondents were first-time users, as the garden design service usually represents their initial interaction with OKE Garden. By including individuals who had navigated the website through to the payment stage, the study ensured that participants had sufficient exposure to the platform's features and interface to provide valid and reliable evaluations. To

determine the minimum sample size, Cochran's formula was applied with a 90% confidence level and a 10% margin of error, as shown in Equation 2.

$$n_0 = \frac{z^2 \cdot P \cdot (1-P)}{e^2} \quad (2)$$

In Equation 2, n_0 represents the initial estimated sample size, Z is the Z-score corresponding to the selected confidence level, p denotes the estimated population proportion (set at 0.5 to maximize sample variability), and e refers to the margin of error. Using Z = 1.645, p = 0.5, and e = 0.1, the calculated initial sample size (n_0) was 67.65.

Since the total population size was known (N = 319), a finite population correction (FPC) was applied to adjust the sample size, as presented in Equation 3.

$$n = \frac{n_0}{1+\frac{n_0-1}{N}} = 55{,}96 \quad (3)$$

In Equation 3, n represents the adjusted sample size after considering the finite population. Based on this calculation, the final required sample size was 55.96, which was rounded up to 57 respondents to ensure adequate representation of the target population.

3. Results and Discussion

3.1 Validity and Reliability Test

The validity test was conducted to determine whether the research instrument accurately measured the intended constructs. All questionnaire items for both expectation and performance data were deemed valid, with correlation coefficients (r values) exceeding the minimum threshold of 0.302. The r values ranged from 0.553 to 0.869 for expectation data and from 0.529 to 0.857 for performance data, indicating strong consistency in capturing users' perceptions and experiences. These results confirm that the questionnaire instrument is appropriate for further analysis, as it accurately represents the constructs and is clearly understood by respondents.

The reliability test was conducted to assess the internal consistency of the instrument. The results show that all variables, for both expectations and performance data, achieved Cronbach's alpha values above 0.930, indicating a very high level of internal consistency. Therefore, the instrument is considered highly reliable and capable of measuring user perceptions in a stable manner.

3.2 Gap Analysis

The gap values serve as indicators of service discrepancies. Negative values suggest that performance remains below the level of importance expected by customers, and therefore requires further evaluation or improvement. The gap value was calculated using Equation 4.

$$Qi\ (Gap) = Performance\ (i) - Importance\ (i) \quad (4)$$

In Equation (4), Q_i represents the gap value for indicator i, Performance *(i)* refers to the mean score of users' perceived performance, and Importance *(i)* denotes the mean score of users' perceived importance. A positive gap value (greater than 0) indicates that website performance meets or exceeds user expectations, whereas a negative gap value (less than 0) indicates that performance falls below the expected level of importance and therefore requires improvement.

Table 2. Gap Analysis Results

Symbol	Indicators	Importance	Performance	Gap	Quadrant
UQ1	Ease of website use	3.439	3.281	-0.158	I
UQ2	Ease of navigating the website	3.456	3.281	-0.175	I
UQ3	Attractive visual appearance	3.421	3.246	-0.175	III
UQ4	Website conveys a professional impression	3.439	3.263	-0.175	I
UQ5	Website provides a positive experience	3.386	3.175	-0.211	III
IQ1	Information is trustworthy	3.456	3.333	-0.123	II
IQ2	Service instruction information	3.404	3.158	-0.246	III
IQ3	Relevant information	3.386	3.263	-0.123	III
IQ4	Information is easy to understand	3.474	3.228	-0.246	I
IQ5	Security of personal information	3.509	3.228	-0.281	I
IQ6	Security features in transactions	3.579	3.351	-0.228	II

Symbol	Indicators	Importance	Performance	Gap	Quadrant
SIQ1	Variety of payment methods	3.509	3.404	-0.105	II
SIQ2	Creating a sense of personalization	3.404	3.333	-0.070	IV
SIQ3	Conveying a sense of community	3.140	3.105	-0.035	III
SIQ4	Communication facilities with admin	3.351	3.298	-0.053	IV
SIQ5	Timeline suitability	3.456	3.228	-0.228	I
PR1	Knowledge about the website	3.404	3.298	-0.105	IV
PR2	Understanding benefits of the website	3.404	3.263	-0.140	III
PR3	Availability of products	3.386	3.281	-0.105	III
PR4	Variety of products	3.509	3.333	-0.175	II
PR5	Ease of access to similar services	3.211	3.140	-0.070	III
TM1	Ease of finding the website	3.421	3.263	-0.158	III
TM2	Ease of payment via website	3.386	3.298	-0.088	IV
TM3	Multi-Platform Access	3.474	3.368	-0.105	II
TM4	Affordability of sales region	3.596	3.526	-0.070	III
TM5	Availability of substitute platforms	3.439	3.386	-0.053	II
HR1	Price transparency	3.526	3.456	-0.070	II
HR2	Discount offers	3.474	3.281	-0,193	I
HR3	Price conformity with quality	3.596	3.421	-0.175	II
HR4	Price affordability	3.474	3.246	-0.228	I
HR5	Price competitiveness with competitors	3.404	3.228	-0,175	III
PM1	Attractiveness of advertisement content	3.491	3.386	-0.105	II
PM2	Customer reviews about products	3.474	3.316	-0.158	II
PM3	Advertising intensity	3.386	3.281	-0.105	III
PM4	Advertisement quality	3.456	3.333	-0.123	II
PM5	Seller Credibility	3.491	3.351	-0.140	III
	Average	3.439	3.295	-0.144	

As shown in Table 2, the average gap value of −0.144 indicates that the OKE Garden website underperforms relative to user expectations. Negative gaps are observed across most indicators, with the largest discrepancies found in usability, data security, and pricing. This indicates that several critical website features do not yet deliver the value expected by users, confirming the need for targeted improvements. To interpret the practical significance of the gap, the obtained range of the gap values (– 0.281 to – 0.035) was divided into three equal intervals, following the approach commonly applied in IPA studies [27]. Based on this classification, the average gap of –0.144 falls into the moderate category, confirming that users' expectations of OKE Garden's digital services have not been fully met and highlighting the need for improvement in key website features.

3.3 Results of Importance-Performance Analysis

The Importance-Performance Analysis (IPA) compares perceived importance and actual performance of service attributes to identify priorities for improvement. In this study, 40 indicators were analyzed and mapped onto a Cartesian diagram generated using SPSS. The diagram is divided into four quadrants by two perpendicular lines intersecting at the point ($\bar{X}$, $\bar{Y}$), which represent the mean scores of importance (3.439) and performance (3.295), respectively, as illustrated in Figure 3.

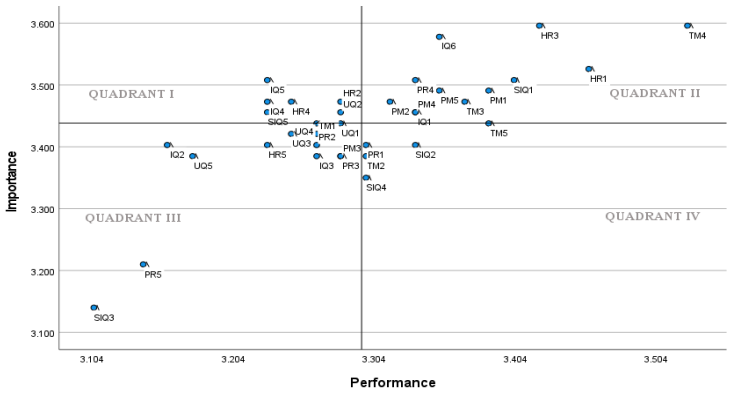

Figure 3. Cartesian Diagram of Importance-Performance Analysis

Figure 3 presents the distribution of indicators across the four IPA quadrants. The results indicate the following distribution. Quadrant I (*Concentrate here*) consists of 8 indicators: ease of website use, ease of navigation, clarity of information, personal data protection, timeline suitability, discount offers, professional impression, and price affordability. These attributes represent critical areas that require immediate improvement. Meanwhile, Quadrant II (*Keep up the good work*) comprises 11 indicators: information trustworthiness, transaction security, product variety, multi-platform access, substitute platform availability, price transparency, price–quality conformity, advertisement content, customer reviews, advertisement quality, and variety of payment methods. Quadrant III (*Low priority*) contains 13 indicators: visual appearance, positive experience, service instruction information, relevance of information, sense of community, understanding benefits, availability of products, access to similar services, ease of finding the website, affordability of sales region, price competitiveness, advertising intensity, and seller credibility. Quadrant IV (*Possible overkill*) includes 4 indicators: personalization, admin communication, knowledge about website, and ease of payment. Overall, this mapping emphasizes that OKE Garden should prioritize improvements in Quadrant I while maintaining the strong performance observed in Quadrant II. These descriptive results provide the basis for further analysis and implications, which are elaborated in the following discussion section.

3.4 Discussion and Implications

The findings reveal a misalignment between user expectations and OKE Garden's digital services, as overall performance falls short of perceived importance. The largest gap concerns information security, which falls into Quadrant I, indicating high importance but low performance. Within TAM, this issue relates to Perceived Ease of Use (PEOU) and trust as antecedents of adoption, while in WebQual it reflects weaknesses in reliability and information quality [29], [30], [31]. Users' concerns regarding personal data protection underscore the urgency of strengthening privacy and security protocols, as weak performance in this area constitutes a major barrier to consumer trust. Prior studies show that data protection is not only a regulatory issue but also a determinant of purchasing behavior [32], making robust authentication and authorization mechanisms essential to prevent misuse, including the risk of data circulation on the dark web [33]. Other Quadrant I priorities include service scheduling and price affordability. Scheduling reliability corresponds to Perceived Usefulness (PU) in TAM and timeliness in WebQual [31], while pricing reflects the *Price* element of the 4P marketing mix [34], [35]. These findings indicate that beyond usability, users demand trustworthy systems and transparent, competitive pricing. Website navigation (UQ2), information clarity (IQ4), and discount offers (HR2) also show negative gaps, signaling the need for broader improvements across usability, information quality, and marketing credibility [36]. By contrast, transaction security and product variety fall into Quadrant II, meaning they meet user expectations but require continuous maintenance. Quadrant III attributes—including visual appeal, enjoyable user experience, and advertising intensity—appear to have limited influence if core weaknesses remain unresolved. Quadrant IV attributes, including personalization, admin communication, and payment convenience, perform well but are considered less important. However, maintaining disproportionately high performance in these low-priority areas may result in resource inefficiency, as managerial focus could be diverted from Quadrant I attributes, which exhibit the largest negative gaps, suggesting that maintaining excessive emphasis on Quadrant IV features may dilute resources that should be reallocated to address critical weaknesses [27]. Overall, the most critical weaknesses are concentrated in Quadrant I, including security, scheduling reliability, pricing fairness, and usability—factors closely associated with TAM constructs (PEOU, PU), WebQual dimensions (usability, reliability, and information quality), and the 4P mix (Price and Promotion). Prior studies of product-based platforms have identified usability as a primary driver of adoption [26]; however, usability alone cannot guarantee user satisfaction if critical trust factors are overlooked [13]. In contrast, this study shows that in service-based platforms, information security and pricing transparency emerge as more urgent. This suggests that although TAM constructs remain relevant, their relative importance may shift depending on whether a platform delivers products or services.

Practically, these results stress the need to improve Quadrant I attributes, including navigation, interface clarity, transparent pricing, and targeted promotions, through more intuitive design, responsive layouts, and segmented marketing strategies [37]. Future strategies should emphasize more targeted promotional approaches, such as digital advertising campaigns optimized through search engine marketing and social media retargeting to reach potential clients interested in landscaping services. Additionally, bundling garden design with aftercare services can enhance perceived value, while implementing tiered pricing based on garden categories (e.g., minimalist, tropical, Zen, and dry gardens) and land size can ensure greater transparency and fairness. This model not only clarifies the structure of materials and labor costs but also reduces the perceptions that OKE Garden's services are overpriced. These improvements are essential to increase user satisfaction and support the effective adoption of digital technology in the landscaping service industry. From a theoretical standpoint, this research adopted TAM as an analytical framework that integrates WebQual 4.0 and the marketing mix (4P) to provide a more holistic evaluation of digital service platforms. This approach highlights TAM's flexibility and contextual applicability beyond its original behavioral prediction scope [29]. Future studies may refine this integration by incorporating domain-specific factors such as trust, aesthetics, and environmental concerns, particularly in the context of landscape e-commerce services.

This study has several limitations. First, the research sample is dominated by users from the Greater Jakarta area (Jabodetabek), even though OKE Garden also serves clients in other cities. Second, while this study primarily focuses on garden design and construction services, future research should also address other service categories, such as maintenance and edible garden development, which may require different promotional and pricing strategies. Beyond pricing and promotional considerations, this study also highlights broader market dynamics. Climate change and urbanization are reducing green spaces in metropolitan areas, contributing to increased pollution and declining environmental quality [38], [39]. At the same time, public awareness of sustainable lifestyles is rising, as reflected in the growing trends of urban farming and household tree ownership [2], [40]. These developments suggest that digital platforms for gardening and landscaping not only address lifestyle needs but also play a meaningful role in promoting environmental sustainability. Positioning TAM within this niche context would provide stronger theoretical grounding while offering practical insights into how digital adoption in the gardening sector can contribute to broader ecological and societal goals.

4. Conclusion

Based on the analysis of OKE Garden website users, this study concludes that the digital service performance has not yet fully met user expectations. The gap analysis showed an average importance score of 3.439 and a performance score of 3.295, resulting in a negative gap of –0.144. This suggests that although many indicators are considered important by users, their implementation remains suboptimal. Through the Importance-Performance Analysis (IPA), several indicators in Quadrant I were identified as top priorities for improvement, particularly those related to usability, personal data protection, clarity of information display, and pricing strategy.

From a theoretical perspective, this study demonstrates how the Technology Acceptance Model (TAM) can be adopted as an analytical framework to integrate WebQual 4.0 dimensions with the marketing mix (4P). This integration demonstrates the adaptability of TAM beyond its classical behavioral prediction scope, as it is applied here as an evaluative framework rather than a behavioral prediction model. The findings highlight that usability, information reliability, and pricing transparency are not only critical determinants of user satisfaction but also important constructs that enrich the theoretical understanding of digital adoption in niche service contexts. In broader terms, this research underscores the role of digital platforms in supporting sustainable urban lifestyles, particularly in gardening and landscaping services, where digital adoption remains underexplored. Strengthening website usability and credibility is essential not only for enhancing customer experience but also for encouraging greater participation in environmentally beneficial practices, such as urban greening and home gardening.

Notation

TK_i : Performance value of the i-th attribute
X_i : Mean performance score of the *i*-th attribute (actual condition as perceived by users)
Y_i : Mean importance score of the *i*-th attribute (user-perceived level of importance)
n_0 : Initial sample size (prior to finite population correction)
n : Final sample size (after applying finite population correction)
Z : Z-score associated with the selected confidence level, where a value of 1.645 represents a 90% confidence level.
P : Represents the assumed proportion of the population exhibiting the characteristic being studied, with 0.5 commonly used to reflect maximum variability.
e : Margin of error or the desired level of precision (e = 0.1 or 10%)
N : Total population size (N = 319 in this study)

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