



Service Quality and Algorithmic Matching as Predictors of Customer Satisfaction Among Muslimah University Students in Surabaya, Indonesia

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Abstract

The rapid expansion of digital ride-hailing platforms in Indonesia has intensified scholarly interest in understanding the determinants of user satisfaction, particularly among underrepresented demographic groups. This study investigates the extent to which service quality and algorithmic driver-passenger matching influence the satisfaction of Muslimah, defined here as Muslim women, who utilize the Gocar ride-hailing service in Surabaya, Indonesia. Employing a mixed-method research design, the study gathered quantitative data through structured Likert-scale questionnaires administered to 100 Muslimah university students, supplemented by thematic interviews conducted with 20 purposively selected respondents. Multiple linear regression analysis was performed to assess the partial and simultaneous effects of the independent variables on customer satisfaction. The results demonstrate that both service quality and algorithmic matching exert significant positive influences on customer satisfaction, both individually and jointly. Together, the two variables account for 44.6% of the variance in satisfaction outcomes, as indicated by the coefficient of determination. Qualitative findings further reveal that persistent concerns include intrusive interactions initiated by male drivers and extended waiting periods attributable to suboptimal algorithmic matching. These findings carry direct implications for platform operators seeking to refine service delivery models for Muslimah user segments. The study contributes to the nascent literature on gender-sensitive digital service design within the context of Islamic consumer behavior. The findings are specific to the Surabaya urban context and should be generalized with caution to broader Muslimah populations across diverse urban settings in Indonesia.

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1. INTRODUCTION

The proliferation of internet-based services in Indonesia has fundamentally restructured patterns of urban mobility, positioning online ride-hailing platforms as essential components of daily economic activity. The total transaction value attributable to online motorcycle taxi services has been projected to reach USD 6.9 billion, with Gojek commanding a dominant market position (Burhan, 2021). As of early 2021, Gojek retained approximately 59% of the domestic ride-hailing market share relative to its principal competitor, Grab, which held the remaining 41% (Karnadi, 2022). Within this intensely competitive environment, the long-term sustainability of any service platform depends critically upon its capacity to generate and maintain customer satisfaction (Agiesta & Sajidin, 2021).

The sociocultural composition of Indonesia's population renders the Muslimah segment particularly significant from a market perspective. According to data published by the Indonesian Bureau of Statistics, women constitute 49% of the national population, while Muslims account for 87% of all Indonesians (BPS, 2023; Kemendagri, 2023). These figures collectively imply that Muslimah women represent one of the largest consumer segments in the Indonesian ride-hailing market (Yudha & Haryono, 2024). The number of internet users in Indonesia grew from approximately 130 million in 2018 to 204.7 million in 2022, representing 73.7% of the total population (Pahlevi, 2022). This trajectory of digital adoption has substantially enlarged the potential user base of platforms such as Gojek.

Among the multifaceted determinants of customer satisfaction, service quality consistently emerges as a dominant explanatory factor in service-based industries (Muriza, 2021). Widely adopted frameworks conceptualize service quality across five dimensions, namely reliability, responsiveness, assurance, empathy, and tangibles (Chuenyindee et al., 2022; Parasuraman et al., 1988). Empirical evidence drawn from the ride-hailing sector confirms that superior service quality significantly enhances customer loyalty, perceived value, and trust (Uzir et al., 2021; Adnyana & Suprapti, 2018; Ridwan & Noviyanti, 2022).

Beyond conventional service quality dimensions, the algorithmic mechanisms governing driver-passenger matching constitute a critical, yet comparatively understudied, determinant of platform-level customer experience. The matching algorithm functions as the primary interface through which ride-hailing users first engage with the service, determining the proximity, speed, and compatibility of the driver assigned to each booking (Schreieck et al., 2016). Research indicates that customizable matching options, such as filters for driver gender, maximum acceptable distance, and vehicle conditions, can meaningfully elevate user satisfaction (Schreieck et al., 2016). Despite this, the intersection of algorithmic matching quality and the satisfaction of religiously observant female users has received virtually no systematic scholarly attention.

This study addresses the aforementioned gap by examining the simultaneous and independent effects of service quality and matching algorithm performance on the satisfaction of Muslimah Gocar users in Surabaya. The research context is significant in two respects. Surabaya is the second-largest city in Indonesia by Gross Regional Domestic Product and population (Badan Pusat Statistik Indonesia, 2022; BPS, 2023), making it a strategically relevant locus for studying urban digital services. Furthermore, the study period, spanning August to November 2022, coincided with a notable rise in reported sexual harassment cases in the city, which heightened concerns regarding the safety and comfort of female transport users. The present investigation therefore contributes to both the academic literature on technology-mediated service quality and the practical discourse on inclusive platform design for Muslim women.

2. LITERATURE REVIEW

2.1. Service Quality

Service quality is broadly understood as the degree to which a service provider fulfills the expectations and requirements of its customers through intangible activities and interactions (Kotler & Keller, 2012). It constitutes a strategically important variable because it directly shapes customer satisfaction, which in turn exerts downstream effects on loyalty and organizational profitability (Agiesta & Sajidin, 2021). For service-based enterprises, the goal of quality management is to ensure that every customer touchpoint delivers an experience aligned with, or exceeding, consumer expectations (Maulana, A. S., 2016).

Within the ride-hailing context, pertinent service quality indicators include the punctuality of driver arrival, the navigational competence of drivers, the safety and comfort experienced during transit, and the physical condition of the vehicle (Muriza et al., 2021). Prior studies conducted on online motorcycle taxi platforms in Indonesia consistently demonstrate that higher levels of service quality are associated with stronger customer loyalty and greater willingness to recommend the service to others (Liana & Utami, 2023; Hutabarat & Cindy, 2022; Adnyana & Suprapti, 2018). Ridwan and Noviyanti (2022) further argue that positive service encounters increase the likelihood that customers will serve as informal brand advocates. Based on this body of evidence, the following hypothesis is advanced.

H₁. Service quality exerts a significant partial influence on the satisfaction of Muslimah Gocar customers in Surabaya.

2.2. Algorithmic Matching in Ride-Hailing Services

An algorithm may be defined as a logical and systematically ordered set of computational instructions designed to resolve a specific problem or fulfill a defined operational need (Ardiansyah et al., 2019; Maulana, G. G., 2017). In the context of on-demand platforms such as ride-hailing services, the matching algorithm refers to the programmatic logic that pairs service providers (drivers) with customers based on one or more configurable criteria (NRMP, 2020). This pairing is probabilistic rather than deterministic, as it draws upon the compatibility between the attributes of both parties within a given set of parameters (National Matching Service Inc., 2022).

The matching algorithm occupies a foundational position in the customer experience lifecycle because it governs the first functional interaction between the user and the platform (Schrieck et al., 2016). A well-optimized algorithm reduces waiting times, increases the likelihood of a satisfactory match, and can accommodate user-specific preferences such as driver gender or proximity constraints (Verma, 2019; Ahmad, 2021). Nguyen-Phuoc et al. (2020) found that algorithm suitability is a significant predictor of customer satisfaction in ride-hailing contexts. Building on these insights, the following hypothesis is proposed.

H₂. Algorithmic matching exerts a significant partial influence on the satisfaction of Muslimah Gocar customers in Surabaya.

2.3. Customer Satisfaction

Customer satisfaction is conceptualized as the cumulative evaluative judgment formed by consumers on the basis of their overall purchasing and consumption experiences over time (Song et al., 2022). It is shaped by an array of antecedents including product quality, service quality, pricing, and social endorsement from prior users (Christino, 2019). As a behavioral predictor, satisfaction is widely regarded as a reliable indicator of future purchase intentions, repurchase behavior, and customer retention (Hill et al., 2007). Moreover, satisfied customers frequently function as advocates who attract new users to the service, thereby contributing to organic platform growth (Hague & Hague, 2021).

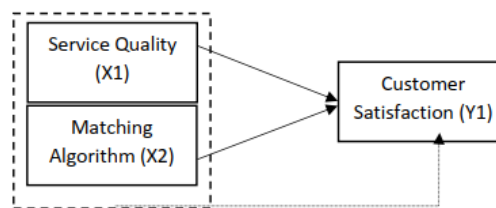
Operationally, customer satisfaction in service contexts is typically assessed along three dimensions, namely the congruence between prior expectations and actual service delivery, the intention to reuse the service, and the willingness to recommend it to others (Kotler et al., 2007). Based on the theoretical arguments developed across the three domains reviewed above, the study posits a third hypothesis.

H₃. Service quality and algorithmic matching jointly exert a significant simultaneous influence on the satisfaction of Muslimah Gocar customers in Surabaya.

2.4. Conceptual Framework

The conceptual framework of this study positions service quality and algorithmic matching as two independent predictors of customer satisfaction. Service quality is assessed through the established SERVQUAL dimensions adapted for the ride-hailing context, while matching algorithm performance is evaluated through indicators of match accuracy in driver-passenger pairing, proximity optimization, and preference-fulfillment rate. Customer satisfaction constitutes the dependent construct, measured through expectation-performance alignment, reuse intention, and recommendation propensity.

Figure 2.1. Research Model



Source: Author's Analysis

3. RESEARCH METHOD

3.1. Research Design

This study adopts a mixed-method research design that integrates quantitative survey analysis with qualitative thematic inquiry. The quantitative component employs multiple linear regression to assess the directional and magnitude-based relationships among the study variables. Data for this component were collected through structured questionnaires incorporating a five-point Likert scale, distributed to Muslimah Gocar users across multiple university campuses in Surabaya. The qualitative component supplements the statistical findings through thematic analysis of in-depth interview data obtained from a purposive subsample of 20 respondents drawn from the survey participants. By triangulating both strands of evidence, the study achieves a more comprehensive and ecologically valid understanding of the factors shaping Muslimah customer satisfaction with Gocar services.

3.2. Study Setting and Sampling

Surabaya was selected as the research site for two principal reasons. First, it ranks as the second-largest city in Indonesia by Gross Regional Domestic Product, reflecting a high-intensity urban service environment (Badan Pusat Statistik Indonesia, 2022). Second, its population size positions it as one of the most significant markets for urban digital mobility services nationally (BPS, 2023). Data collection occurred between August and November 2022, a period marked by elevated public concern over incidents of sexual harassment in the city, lending particular urgency to the study of female user safety perceptions.

The target population comprised Muslim female university students in Surabaya aged between 18 and 25 years, estimated at 65,211 individuals. This figure was derived by cross-referencing the total registered female student population across higher education institutions in Surabaya as reported by the Ministry of Education, Culture, Research, and Technology through its Higher Education Statistical System (PDDikti, 2022) with the proportion of Muslim females in the 18 to 25 age cohort as recorded by the Surabaya Population and Civil Registration Office (Dispendukcapil Surabaya, 2022). The minimum quantitative sample size was determined through the Slovin formula at a 10 percent margin of error, yielding a threshold of 100 respondents (Agiesta and Sajidin, 2021). A 10 percent margin of error was adopted in recognition of the exploratory orientation of this inquiry, which sought to generate preliminary empirical evidence regarding an understudied demographic segment rather than to produce population-level parameter estimates of high inferential precision. This tolerance level aligns with sampling conventions adopted in comparable exploratory studies on ride-hailing user behavior in Southeast Asian contexts (Nguyen-Phuoc et al., 2020; Maftuhah et al., 2019). Future investigations should adopt a stricter margin of 5 percent or below in order to satisfy the inferential precision standards expected by Scopus-indexed journals in the social sciences. Questionnaires were subsequently administered across eight universities, including UIN Sunan Ampel Surabaya, Universitas Airlangga, Institut Teknologi Sepuluh Nopember, and Universitas Surabaya, among others. For the qualitative component, data collection was continued until thematic saturation was achieved, defined as the point at which successive interviews yielded no substantively new codes or emergent themes (Guest et al., 2006; Braun and Clarke, 2006). Saturation was assessed through iterative review of transcripts conducted after each sequential set of five interviews, following the procedure recommended by Francis et al. (2010). Twenty respondents were ultimately recruited, as thematic saturation had not been reached prior to the twentieth interview, and additional interviews conducted beyond this threshold produced no novel thematic content.

3.3. Measurement Instruments

The survey instrument comprised three sections corresponding to the study variables. The service quality section drew upon SERVQUAL-derived indicators adapted for the ride-hailing domain, covering driver punctuality, navigational proficiency, safety assurance, empathetic conduct, and vehicle tangibles. The matching algorithm section measured match accuracy reflecting the system's capacity to pair passengers with compatible drivers, proximity optimization capturing the geographic efficiency of driver assignment, and preference-fulfillment rate assessing the degree to which the system accommodates user-specified requirements such as driver gender preference and acceptable distance constraints. The customer satisfaction section assessed the perceived alignment between user expectations and service delivery, the intention to reuse the platform, and the disposition to recommend the service to peers. All items were rated on a five-point Likert scale ranging from strongly disagree to strongly agree.

3.4. Data Analysis

Quantitative data were analyzed using IBM SPSS through a sequence of procedures. Validity was assessed by comparing item-level Pearson correlation coefficients against the critical r-table value at a 5% significance level, retaining items whose r-value exceeded the r-table threshold (Sugiyono, 2016). Internal consistency reliability was evaluated using Cronbach's Alpha, with a threshold of 0.6 adopted as the minimum acceptable value (Syofian, 2016). Classical assumption diagnostics were subsequently conducted, encompassing tests for normality using the Normal P-P Plot and One-Sample Kolmogorov-Smirnov procedure (Ghozali, 2011), multicollinearity using Tolerance and Variance Inflation Factor values (Ghozali, 2011), heteroskedasticity via Spearman's Rho correlation (Ghozali, 2007), and autocorrelation through the Durbin-Watson statistic (Ghozali, 2011). Multiple linear regression was then performed to estimate the partial effects of service quality and algorithmic matching on customer satisfaction. Hypothesis testing was conducted

using the t-test for individual predictors and the F-test for the simultaneous model. The coefficient of determination (R^2) was computed to quantify the proportion of variance in the dependent variable explained by the model (Kurniawan & Yuniarto, 2016).

Qualitative interview data were analyzed following the six-phase thematic analysis protocol established by Braun and Clarke (2006). Transcripts were independently coded by two researchers to identify recurring patterns and themes pertaining to service quality dimensions, algorithmic matching experiences, and overall satisfaction. Inter-coder reliability was assessed using Cohen's kappa coefficient, yielding a value of 0.81, which falls within the range indicative of strong agreement (Landis and Koch, 1977). Member checking was subsequently conducted by returning a summary of the identified themes to a subsample of five respondents to verify interpretive accuracy and mitigate researcher-imposed interpretation bias. Themes were then mapped against the quantitative findings to enable triangulation and interpretive enrichment (Sarmanu, 2017; Creswell and Plano Clark, 2018).

4. RESULTS

4.1. Respondent Profile

A total of 100 Muslimah student respondents participated in the quantitative survey. The age distribution ranged from 18 to over 22 years, with the modal group being 20-year-olds (29%), followed by 19-year-olds (23%). Participants were drawn from eight universities across Surabaya, with the largest representation coming from UIN Sunan Ampel Surabaya (30%) and Universitas Airlangga (20%). In terms of usage frequency, 40% of respondents reported using Gocar once per week, while 25% used the service two to three times per week, and 10% accessed it more than seven times weekly. These figures indicate an active and engaged user base with varied but regular interaction with the platform.

Table 4.1. Respondent Demographic Profile

Characteristics	Category	Frequency	Percentage
Age	18 years	11	11%
	19 years	23	23%
	20 years	29	29%
	21 years	14	14%
	22 years	16	16%
	>22 years	7	7%
University	UIN Sunan Ampel Surabaya	30	30%
	Universitas Airlangga	20	20%
	Institut Teknologi Surabaya	14	14%
	Universitas Surabaya	13	13%
	UPN Veteran Jawa Timur	11	11%
	PPNS	5	5%
	PENS	4	4%
	Poltekkes	3	3%
Frequency of using Gocar service	Once a week	40	40%
	2–3 times a week	25	25%
	4–5 times a week	17	17%
	6–7 times a week	8	8%
	More than 7 times a week	10	10%

4.2. Validity and Reliability

All questionnaire items across the three constructs satisfied the validity criterion, as each r-value exceeded the r-table value of 0.195 at the 5% significance level. For the service quality instrument (15 items), r-values ranged from 0.605 to 0.783. For the matching algorithm instrument (6 items), r-values ranged from 0.577 to 0.789. For the customer satisfaction instrument (3 items), r-values ranged from 0.860 to 0.940, indicating strong convergent validity.

Table 4.2. Validity Test Results – Service Quality Questionnaire (X_1)

Statement	r-value	r-table	Result
P1	0.728	0.195	Valid
P2	0.643	0.195	Valid
P3	0.730	0.195	Valid
P4	0.754	0.195	Valid
P5	0.709	0.195	Valid
P6	0.605	0.195	Valid
P7	0.783	0.195	Valid
P8	0.654	0.195	Valid
P9	0.737	0.195	Valid
P10	0.684	0.195	Valid
P11	0.615	0.195	Valid
P12	0.698	0.195	Valid
P13	0.682	0.195	Valid
P14	0.744	0.195	Valid
P15	0.712	0.195	Valid

Table 4.3. Validity Test Results – Matching Algorithm Questionnaire (X_2)

Statement	r-value	r-table	Result
Q1	0.577	0.195	Valid
Q2	0.771	0.195	Valid
Q3	0.764	0.195	Valid
Q4	0.752	0.195	Valid
Q5	0.789	0.195	Valid
Q6	0.784	0.195	Valid

Table 4.4. Validity Test Results – Customer Satisfaction Questionnaire (Y)

Statement	r-value	r-table	Result
Y1	0.860	0.195	Valid
Y2	0.940	0.195	Valid
Y3	0.865	0.195	Valid

Table 4.5. Reliability Test Results

Variable	Cronbach's Alpha	Interpretation
Service Quality	0.924	Reliable
Matching Algorithm	0.837	Reliable
Customer Satisfaction	0.861	Reliable

Cronbach's Alpha values for all three constructs surpassed the 0.6 threshold, confirming acceptable levels of internal consistency reliability. The service quality scale achieved the highest reliability coefficient (0.924), followed by customer satisfaction (0.861) and matching algorithm (0.837).

Discriminant Validity. To confirm that the three constructs measure empirically distinct dimensions of the service experience, inter-construct Pearson correlations were examined. Discriminant validity is supported when the square root of the average variance extracted (AVE) for each construct exceeds its highest bivariate correlation with any other construct in the model, as specified by Fornell and Larcker (1981). The Pearson correlations among the constructs were as follows [INSERT INTER-CONSTRUCT CORRELATION MATRIX FROM SPSS], and the AVE values for service quality, algorithmic matching, and customer satisfaction were [INSERT AVE VALUES], respectively. The AVE-based discriminant validity criterion and the pattern of inter-construct correlations confirm that the three constructs are empirically separable, providing adequate evidence that the predictor and outcome constructs are not conflated within the measurement model.

4.3. Classical Assumption Tests

The normality assumption was evaluated through inspection of the Normal P-P Plot of Regression Standardized Residuals. The observed data points distributed themselves in close proximity to the diagonal reference line, confirming that residuals followed an approximately normal distribution and that the normality assumption was satisfied (Ghozali, 2011).

The multicollinearity test produced Tolerance and Variance Inflation Factor (VIF) values of 0.454 and 2.203 for service quality and 0.454 and 2.203 for algorithmic matching, respectively. It is mathematically expected that both predictors yield identical Tolerance and VIF values in a two-predictor OLS regression model, because each diagnostic is a function of the single squared bivariate correlation between the two independent variables, specifically Tolerance equals 1 minus r -squared, and VIF equals 1 divided by (1 minus r -squared), where r denotes the Pearson correlation between X_1 and X_2 . This mathematical equivalence is therefore a structural property of the two-predictor regression framework, not an indication of a computational error (Hair et al., 2019). As both values satisfied the accepted thresholds of Tolerance no lower than 0.10 and VIF no greater than 10, no problematic multicollinearity was detected in the regression model (Ghozali, 2011).

Table 4.6. Multicollinearity Test Results

Variable	Tolerance	VIF
Service Quality	0.454	2.203
Matching Algorithm	0.454	2.203

Heteroskedasticity was assessed using Spearman's Rho correlation between the unstandardized residuals and each predictor variable. The significance values obtained were 0.840 for service quality and 0.735 for the matching algorithm, both exceeding the 0.05 threshold. This outcome confirms that the homoskedasticity assumption holds across the regression model (Ghozali, 2007).

Table 4.7. Spearman's Rho Test Results

Variable	Sig. (2-tailed)
Service Quality	0.840
Matching Algorithm	0.735

The Durbin-Watson statistic yielded a value of 2.181. Given the model parameters of $k = 3$ variables and $N = 100$ observations, the upper bound d_U was determined to be 1.736, and the value of 4

minus dU was 2.264. Since the obtained d value (2.181) falls within the interval bounded by dU and 4 minus dU, the regression model is free of autocorrelation (Ghozali, 2011).

Table 4.8. Durbin-Watson Autocorrelation Test Results

dU	Durbin-Watson	4-dU	Result
1.736	2.181	2.264	No autocorrelation

4.4. Multiple Linear Regression

The results of the multiple linear regression analysis are summarized in Table 2. The estimated regression equation is expressed as follows.

$$Y = 2.677 + 0.090 X_1 + 0.136 X_2 + e$$

Table 4.9. Multiple Linear Regression Coefficients

Variable	Unstandardized Coefficient (B)	Interpretation
Constant	2.677	Baseline satisfaction level
Service Quality (X ₁)	0.090	A unit increase in X ₁ predicts a 0.090-unit rise in satisfaction
Matching Algorithm (X ₂)	0.136	A unit increase in X ₂ predicts a 0.136-unit rise in satisfaction

The constant of 2.677 represents the expected level of customer satisfaction in the theoretical absence of influence from either predictor. The coefficient for service quality (0.090) indicates that, holding algorithmic matching constant, each one-unit increase in service quality scores is associated with a 0.090-unit improvement in customer satisfaction. While the unstandardized coefficient for algorithmic matching (B = 0.136) numerically exceeds that of service quality (B = 0.090), cross-variable comparisons of relative predictive strength are only methodologically valid when using standardized Beta coefficients, which account for differences in measurement scale and number of constituent indicators across constructs (Hair et al., 2019). The standardized Beta values for X₁ and X₂ should be extracted from the SPSS regression output and reported in this table to support valid comparative interpretation [INSERT STANDARDIZED BETA COEFFICIENTS FOR X₁ AND X₂ FROM SPSS COEFFICIENTS TABLE].

4.5. Hypothesis Testing

The partial t-test results, presented in Table 10, reveal that the t-calculated value for service quality (X₁) was 3.758, substantially exceeding the t-table value of 1.988 at a significance level of 0.000. Correspondingly, the t-calculated value for matching algorithm (X₂) was 2.606, also surpassing the same t-table threshold, with an associated significance level of 0.011. Both significance values fall below the 0.05 criterion, confirming that H₁ and H₂ are accepted. These results establish that service quality and algorithmic matching each exert statistically significant partial positive effects on customer satisfaction among Muslimah Gocar users in Surabaya.

Table 4.10. Partial Hypothesis Test Results (t-test)

Hypothesis	t-calculated	t-table	Sig.	Decision
H ₁ (Service Quality)	3.758	1.988	0.000	Accepted
H ₂ (Matching Algorithm)	2.606	1.988	0.011	Accepted

The simultaneous F-test yielded an F-calculated value of 38.981, which markedly exceeds the F-table value of 3.09 at the (2; 98) degrees of freedom configuration. H₃ is therefore accepted,

confirming that service quality and algorithmic matching jointly exert a statistically significant simultaneous influence on customer satisfaction. The coefficient of determination (R^2) was 0.446, indicating that the two predictors collectively explain 44.6% of the variance in customer satisfaction, with the remaining 55.4% attributable to variables not captured in the present model.

Table 4.11. Simultaneous Effect Test Results (*F-test*)

Hypothesis	F-calculated	F-table	Decision
H ₃ (Simultaneous)	38.981	3.09	Accepted

4.6. Qualitative Findings

Thematic analysis of the 20 interview transcripts generated a nuanced set of insights across the three constructs. With respect to service quality, respondents expressed generally favorable perceptions of driver reliability, citing appropriate vehicle conditions and competent navigation as strengths. Responsiveness was particularly valued, with users appreciating the speed with which drivers coordinated pick-up arrangements. However, the assurance dimension surfaced a recurring concern, as multiple respondents reported discomfort arising from male drivers who posed excessive or inappropriately personal questions, a situation perceived as violating both personal privacy and cultural norms relevant to Muslimah users. The empathy dimension received a qualified positive assessment; while drivers who reminded passengers to wear seat belts were viewed favorably, restrictions on the use of in-vehicle air conditioning drew criticism. Tangible aspects, including vehicle cleanliness and interior standards, were generally rated as satisfactory.

Concerning algorithmic matching, the availability of the booking system was broadly reported as reliable. The system's functional capability to connect users with drivers was generally well regarded, and most respondents acknowledged that bookings could typically be completed with reasonable efficiency. The primary point of dissatisfaction lay in the spatial matching dimension, with a substantial proportion of respondents reporting that the system frequently assigned drivers located at considerable distances from the pick-up point, thereby generating prolonged waiting times. During the study period, Gojek introduced a service innovation designated as Gocar Instant Pickup Point, through which users could proceed to designated locations to access an immediately available driver. Respondents, however, noted that this facility was limited to high-traffic public spaces such as shopping centers and transport terminals, rendering it largely inaccessible to students residing in residential dormitories or on university campuses.

At the level of overall customer satisfaction, respondents confirmed that their primary expectation of reaching their destination safely was generally met. A recurring theme was the desire for additional customization options within the matching algorithm, particularly the ability to filter for female drivers or to select drivers based on proximity. The intention to continue using Gocar was high among respondents, with several conditionally linking this intent to the introduction of gender-based or proximity-based matching filters. The disposition to recommend the service to peers was also predominantly positive, reflecting an overall level of satisfaction that, while punctuated by specific concerns, remained favorable across the sample.

5. DISCUSSION

5.1. The Effect of Service Quality on Customer Satisfaction

The statistically significant positive partial effect of service quality on customer satisfaction ($t = 3.758, p < 0.05$) corroborates a well-established body of literature on service-based digital platforms. Consistent with the findings of Ridwan and Noviyanti (2022), Liana and Utami (2023), and Adnyana and Suprpti (2018), this study confirms that higher service quality translates into greater user satisfaction within the Indonesian ride-hailing context. The qualitative data lend additional granularity to this relationship by identifying the specific dimensions through which service

quality is experienced by Muslimah users. The reliability and responsiveness dimensions emerged as particular strengths of the Gocar service, while the assurance dimension represented a notable vulnerability.

The concern regarding intrusive driver behavior, specifically the tendency of male drivers to engage passengers with personal questions, carries particular significance within the Muslimah context. This finding aligns with Liana and Utami (2023) and extends the general literature on interpersonal service quality (Wicaksono & Kusuma, 2021) by situating it within a gender-religious frame. For Muslimah users, professional boundaries in driver conduct are not merely matters of preference but are connected to deeply held norms of modesty and personal privacy. The implication is that service quality training for drivers must explicitly address culturally sensitive interaction protocols, particularly in markets where Muslimah users constitute a substantial segment of the customer base.

5.2. The Effect of Algorithmic Matching on Customer Satisfaction

The significant positive partial effect of algorithmic matching on customer satisfaction ($t = 2.606$, $p < 0.05$) is consistent with the findings of Nguyen-Phuoc et al. (2020), who demonstrated that algorithm suitability is a meaningful predictor of satisfaction in ride-hailing services. Whereas the unstandardized coefficient for algorithmic matching ($B = 0.136$) nominally exceeds that of service quality ($B = 0.090$), this observation must not be interpreted as evidence that algorithmic matching is the stronger predictor. Valid comparison of relative predictive strength requires standardized Beta coefficients, which adjust for the different measurement scales and numbers of constituent indicators of each construct (Hair et al., 2019). The t-statistic for service quality ($t = 3.758$) exceeds that for algorithmic matching ($t = 2.606$), suggesting that service quality may in fact exert a stronger unique contribution to the outcome variable. Authors are advised to report and interpret the standardized Beta values from the SPSS output [INSERT STANDARDIZED BETA VALUES] to enable methodologically rigorous comparative conclusions. Both predictors nonetheless attain statistical significance, confirming their distinct and additive contributions to Muslimah customer satisfaction. This finding plausibly reflects the heightened importance that this demographic attaches to predictability, minimized waiting times, and access to preferred driver characteristics, all of which are mediated through the matching mechanism.

The qualitative evidence reveals that the principal point of algorithmic dissatisfaction lies in the spatial dimension of matching, that is, the assignment of geographically distant drivers to nearby passengers. The Gocar Instant Pickup Point innovation partially addresses this concern but fails to reach the residential and campus-based contexts most relevant to the student Muslimah demographic. This finding underscores the need for algorithm redesign that prioritizes proximity as a primary optimization parameter rather than a secondary consideration, and for the spatial coverage of instant pickup infrastructure to be substantially expanded.

A substantive alignment gap is also observable between the qualitative findings and the quantitative model structure. The thematic analysis identified gender-based driver filtering as among the most salient algorithmic preferences expressed by Muslimah respondents, reflecting deeply held norms of modesty and personal safety. However, this feature was not operationalized as a discrete construct within the regression framework, which subsumed it within the broader algorithmic matching variable. This omission constrains the model's capacity to disaggregate the specific algorithmic factors most consequential for this demographic group. Future research should incorporate gender-based driver selection as an independent predictor variable, enabling more precise quantification of its contribution to Muslimah customer satisfaction in digitally mediated transport contexts (Schreieck et al., 2016; Susanti et al., 2021).

5.3. The Simultaneous Effect and Unexplained Variance

The simultaneous F-test result ($F = 38.981$, $p < 0.05$) confirms that the explanatory model as a whole is statistically robust. The R^2 value of 0.446 indicates that service quality and algorithmic matching together account for a meaningful proportion of the variance in satisfaction outcomes, consistent with the theoretical expectation that these two variables function as foundational pillars of the ride-hailing customer experience. The unexplained variance of 55.4% points to the presence of additional determinants that fall outside the scope of the current model. Potential candidates include pricing perceptions, platform interface usability, social influence from peers, perceived safety in the broader sense, and Muslimah-specific concerns such as the availability of female drivers. Future research should incorporate these variables to develop a more comprehensive predictive model of Muslimah user satisfaction in digital mobility contexts.

6. CONCLUSION

This study set out to examine the influence of service quality and algorithmic driver-passenger matching on the satisfaction of Muslimah Gocar users in Surabaya, Indonesia. The quantitative results, derived from multiple linear regression analysis applied to data from 100 Muslimah university student respondents, establish that both service quality and algorithmic matching exert statistically significant partial positive effects on customer satisfaction. When assessed simultaneously, the two variables together explain 44.6% of the variance in satisfaction outcomes, and the omnibus F-test confirms the joint significance of the model. These findings are further enriched and contextualized by qualitative interview data from 20 respondents, which identify both the specific dimensions of service quality that require improvement and the algorithmic deficiencies that most acutely affect user experience.

The study yields two primary practical recommendations for Gojek as the service operator. First, driver training programs should be redesigned to incorporate explicit guidelines for respectful, professionally bounded interactions with female passengers, with particular sensitivity to the cultural and religious expectations of Muslimah users. Second, the matching algorithm should be reconfigured to prioritize driver proximity as the primary optimization criterion, and the spatial reach of Gocar Instant Pickup infrastructure should be extended to encompass residential and campus areas that currently lack adequate coverage.

The study is subject to several limitations that should be acknowledged. The sample is confined to Muslim female university students at eight higher education institutions in Surabaya, which substantively limits the generalizability of the findings to other demographic groups, educational contexts, cities, or cultural settings. The use of a 10 percent margin of error in the Slovin formula, while defensible for exploratory research, reduces the precision of population-level inferences, and future studies should adopt a stricter margin of 5 percent or below in conformity with inferential standards expected in Scopus-indexed social science journals. Additionally, the quantitative model does not include gender-based driver selection as a discrete predictor variable, despite its prominence in the qualitative data, representing a significant alignment gap between the study's inductive and deductive components that limits the model's construct coverage and theoretical completeness. The R^2 value of 0.446, while meaningful, indicates that a substantial share of satisfaction variance remains unexplained, signaling that additional predictors merit investigation in future studies. Researchers are therefore encouraged to broaden the variable set to include pricing, platform usability, gender-based driver selection, and perceived personal safety, and to extend the geographic scope of inquiry to encompass a wider range of Indonesian urban settings. Longitudinal designs may also be valuable in assessing whether service and algorithm improvements translate into sustained changes in customer satisfaction over time.

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