WIN THE COMPETITION BY LISTENING TO CUSTOMER VOICES: AN ANALYSIS OF THE RIDESHARING BUSINESS IN SURAKARTA, INDONESIA

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ABSTRACT

Ridesharing has attracted worldwide attention due to its contribution to the environment, notably in reducing the number of privately owned vehicles, alleviating traffic congestion, and mitigating air pollution arising from private transportation. Currently, Indonesia's ridesharing platform is a prominent player within the realm of popular e-commerce businesses. The use of technology has increased public interest in adopting ridesharing services. The goal of this study is to assess the competitive landscape among ridesharing companies operating in Surakarta, Indonesia. The participants are customers with experience with three ridesharing platforms: Grab, Go-Jek, and Maxim. This study implemented the Analytic Hierarchy Process to evaluate the competitiveness of ridesharing platforms. The benchmarks for platform selection include service quality, price, and promotional activities. Within the service quality domain, Parasuraman proposed five dimensions to serve as sub-criteria. The price criteria include three sub-criteria: low price, discounts, and affordability. Meanwhile, the promotional criteria encompass advertisement, vouchers, and digital influence as the sub-criteria. This study's findings reveal a preference hierarchy among ridesharing alternatives from the customer's perspective as follows: Grab (0.402), Go-Jek (0.365), and Maxim (0.226). Grab ranks highest in eight sub-criteria, whereas Go-Jek ranks highest in three sub-criteria. Conversely, Maxim consistently occupies the lowest rank. Notably, service quality emerges as the foremost priority, closely followed by price and promotion. Within the service quality criteria, assurance takes precedence, affordability leads the price criteria, and vouchers have the highest priority among promotional criteria.

Keywords: ridesharing; Analytic Hierarchy Process; service quality; Go-Jek; Grab; Maxim

1. Introduction

Ridesharing was initially promoted in North America during World War II in response to the escalating issues of traffic congestion and air pollution (Shaheen, 2016; Teubner & Flath, 2015). Studies show that ridesharing leads to a decrease in vehicle purchases

(Shaheen & Cohen, 2012) and vehicle usage, helping to alleviate traffic congestion (Wiyono & Astuti, 2019). Additionally, ridesharing efficiently matches customers with nearby rides, reducing travel time and conserving energy for transportation (Li et al., 2016). It also plays a role in energy conservation (Wegmann & Stokey, 1983; Yu et al., 2017). As a result, ridesharing is widely believed to have a positive impact on the environment (Furuhata et al., 2013).

Some barriers to the development of ridesharing include regulation and people's lack of interest in sharing with strangers (Correia & Viegas, 2011; Nurhidayah & Alkarim, 2017). Fortunately, the worldwide ridesharing business has flourished with the advent of new technology (Carrese et al., 2017). By 2010, ridesharing implementation had extended to 1,100 cities in 26 countries on five continents (Shaheen & Cohen, 2012). Notably, ridesharing achieved success in European countries. Moreover, countries like China (Jiang et al., 2018), Japan (Shaheen & Cohen, 2012), Bangladesh (Islam et al., 2019), Singapore, and Malaysia (Shaheen & Cohen, 2012) have also embraced ridesharing services.

Ridesharing businesses, also known as transportation network companies (TNCs) commenced operations in Indonesia in 2010/2011. The market share of online transportation businesses within the e-commerce sector in Indonesia was approximately 7.11% in 2019 (BPS, 2020). This figure represents a substantial market share, ranking higher than e-commerce segments such as food, fashion, cosmetics, and furniture.

Uber was Indonesia's pioneering global ridesharing platform operating within the country (Nurhidayah & Alkarim, 2017). Subsequently, Go-Jek emerged as the country's first ridesharing company, established in 2010 with its mobile application business debuting in 2015 (Stephanie, 2020). Grab, founded in Singapore in 2014, expanded its business platform to capture the Indonesian market the same year. Maxim, established in 2003, has been operational in Indonesia since 2018 (Setiadi, 2022). Furthermore, multiple ridesharing platforms, including Anterin, Bonceng, and FastGo have also operated in Indonesia. According to Bisnis.com, in 2019, 20 online transportation platforms operated in Indonesia (Azka, 2019). Consequently, robust competition among ridesharing companies has become an inevitable reality.

Alvara Strategic Research (2019) found that Go-Jek held a leading position at 70.4% of the market share, whereas Grab secured a 45.7%. This contrasts with the findings of Az-zahra et al. (2022), who demonstrated that Grab initially held the competitive edge. However, Go-Jek subsequently exhibited superior development and emerged triumphant in the competition to gain market share. A survey conducted by APJII (2020) showed that Grab was favored by internet users at 21.3%, surpassing Go-Jek's usage rate of 19.4%. The report also indicated that Go-Jek and Grab users dominated the market share, while Maxim, Anterin, and Bonceng each held 0.3%, and the FastGo user base accounted for 0.2%.

Researchers have conducted numerous studies to assess the competition among ridesharing business platforms. Various investigations have employed game theory for their research (Budiana & Khasanah, 2020; Windasari & Zakiyah, 2019; Yetmi & Yetmi, 2021). Some studies have utilized the paired t-test (Chan et al., 2017), SWOT analysis (Arifin, 2018; Ernawati & Lutfi, 2022), TOPSIS (Gishella et al., 2021), UX curve (Az-

zahra et al., 2022), Naïve Bayes and Support Vector Machine (Alamsyah & Rachmadiansyah, 2018), as well as Service Quality (Fatmasari & Juliani, 2022; Wahani et al., 2021) to analyze the competition among ridesharing platforms.

Several variables have been employed to measure the competition of online ridesharing businesses. In the research conducted by Yetmi and Yetmi (2021) variables such as price/cost, payment methods, number of drivers, promotion, and safety were utilized to assess the competition between Grab and Go-Jek. Their study revealed that safety and payment methods were pivotal strategies to achieve the competitive advantage. Meanwhile, Budiana and Khasanah (2020) introduced an easy-to-use variable into their study, with the outcome indicating that promotion emerged as the most effective strategy to secure a competitive edge. Windasari and Zakiyah (2020) extended their analysis to include comfortability and facility variables. Their findings demonstrated that Grab's emphasis on vouchers and comfortability contributed to winning the competition for market share, while Go-Jek's focus on price reduction and safety was instrumental in securing a competitive position.

The ridesharing business in Surakarta is dominated by the following three ridesharing platforms: Go-Jek, Grab, and Maxim. Researchers have employed various analytical methods and variables to examine the competitive landscape between Go-Jek and Grab. In a previous study, Saripudin (2021) compared Grab and Go-Jek using six criteria including performance, service, price, security, promotion, and branding. However, an assessment of Maxim's competition with Go-Jek and Grab that employs the AHP remains unexplored. The utilization of the AHP to evaluate the competition among the companies has been previously conducted by scholars in sectors such as banking (Astuti & Astika, 2011; Shahwan et al., 2022) and education (Marcarelli & Mancin, 2022). Therefore, this study seeks to investigate the competition among the following three online ridesharing businesses in Surakarta: Grab, Go-Jek, and Maxim. In contrast to most competition studies that rely on game theory, this study adopts the Analytical Hierarchy Process (AHP). The criteria for measuring ridesharing platform competition include service quality, price, and promotion.

2. Model development

In the quest for an enhanced ridesharing platform, it is imperative to investigate the factors that influence customer decision-making, customer satisfaction, and customer loyalty. Enhanced service quality inherently fosters customer satisfaction and loyalty (Alwi et al., 2021). Content and devoted customers, in turn, drive purchase decisions.

The discrepancy in ride-sharing service quality poses a barrier to its development (Standing et al., 2019). As outlined by Parasuraman et al. (1993), service quality is defined by the following five dimensions: tangibility, reliability, responsiveness, assurance, and empathy. Tangibility pertains to appearance, equipment, and staff (Ali & Raza, 2017). Reliability entails accurately providing the promised service (Jiang et al., 2016). Responsiveness is the willingness to assist customers, while assurance involves conveying trust and confidence (Ali & Raza, 2017; Jiang et al., 2016). Meanwhile, empathy represents the attention and care given to the customers (Franceschini & Mastrogiacomo, 2018). Service quality significantly influences the satisfaction of online ridesharing customers (Fariza et al., 2021; Lestariningsih, 2021; Mustari & Said, 2020).

However, Saifudin (2020) revealed that responsiveness within the service quality variable did not influence satisfaction.

Wahani et al. (2021) conducted a comparison of the quality of services provided by Grab and Go-Jek utilizing the five dimensions of service quality. Their study verified that there is no significant difference in empathy between Grab and Go-Jek. However, the other service quality variables including tangibility, reliability, responsiveness, and assurance exhibit significant differences between Grab and Go-Jek. This outcome highlights a high level of competition with respect to the empathy criterion between the two platforms. Moreover, their findings diverge from those of Fatmasari and Juliani (2022), who demonstrated no significant difference in the five variables within the service quality dimension between Grab and Go-Jek. The conclusion implies intense competition across all service quality dimensions between Grab and Go-Jek.

Price represents a significant variable within the marketing mix that impacts the choice to utilize online ridesharing services (Darmawan et al., 2020). The research conducted by Islam et al. (2019) demonstrates that ride-sharing prices contribute to people's hesitancy to adopt such services. Lower prices influence purchase decisions, although certain studies reveal that they can also negatively influence the decision (Jang & Moutinho, 2019). In some cases, customers perceive a low price as indicating low quality. Employing discounts as a mechanism to reduce prices is a promotional strategy aimed at attracting consumers. Notani (1997) contended that greater affordability corresponds to a heightened intent to purchase.

Service quality and price influence customer satisfaction (Boimau & Bessie, 2021), thereby impacting loyalty toward online ridesharing services (Aeni et al., 2019; Alwi et al., 2021; Hendrayati et al., 2020; Rahayu & Riana, 2020). This study supports the works of Pasharibu et al. (2018) and Putri et al. (2018) who incorporated service quality, price and trust as the determinants to assess their contribution to customer satisfaction.

Furthermore, promotion and price play a role in shaping the choice to utilize online ridesharing services (Adriany, 2018; Khairunissa et al., 2017). Pradana and Saraswati (2018) revealed that 78.3% of Grab's promotional efforts have an impact on the customer's decision. Prasetya and Wijaksana (2021) reported that price, coupled with promotion and service quality, determines customer satisfaction for Maxim, which subsequently influences the decision to use their services. Their research indicated that price exerts the most significant contribution to customer satisfaction.

Advertising is extensively employed to promote products and services. For example, it has been established that exposure to advertisements influences customers' decisions to utilize ridesharing platforms (Amali, 2019; Kevin et al., 2019). Additionally, online promotions like digital influencers and price reductions play a role in shaping purchase decisions (Pradana & Saraswati, 2018). A voucher serves as a form of price promotion through offering a discount.

This study employs the following three criteria for the selection of ridesharing platforms: service quality, price, and promotion. The service quality criterion includes the following five sub-criteria: tangibility, reliability, responsiveness, assurance, and empathy as proposed by Parasuraman et al. (1993). Price is assessed through considering

affordability and the pricing of competitors (Rezki et al., 2018). Consequently, platforms offering lower prices are more likely to attract customers. Discounting is a strategy aimed at reducing prices. Therfore, this study includes affordability, low price, and discounts as sub-criteria of price. The promotion criterion consists of the following three sub-criteria: advertisement, vouchers, and digital influencers. All of these criteria and sub-criteria are implemented to select the best choice from among three ridesharing platforms: Grab, Go-Jek, and Maxim. The model is illustrated in Figure 1.

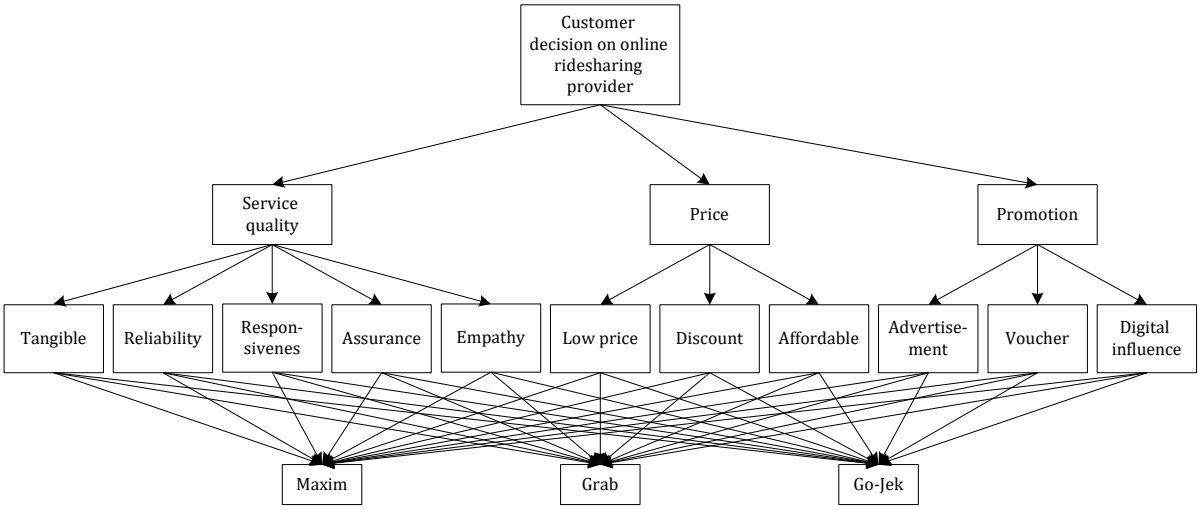

Figure 1 Hierarchy of the customer decision on online ridesharing business platform

3. Method

This study surveyed customers who have utilized the following three ridesharing platforms: Grab, Go-Jek and Maxim. These platforms were selected because they are all available in Surakarta, Indonesia. Additionally, this study required respondents to possess knowledge about the ridesharing providers. This requirement was designed to prevent biased data from the respondents. These three ridesharing providers constitute the most recognized services in Surakarta. Therefore, the chosen respondents must have had firsthand experience using these platforms. The study's sample size consisted of 111 respondents, with 104 respondents ultimately being included after data cleaning. According to Lemeshow et al. (1997), with a 95% of confidence interval and a 10% sampling error, the minimum sample size required for this study is 96 respondents. Consequently, the inclusion of 104 respondents in the sample exceeds this minimum requirement.

This study employed the Analytic Hierarchy Process (AHP) to assess the competitiveness of ridesharing platforms. This analysis has been applied in numerous multicriteria decision-making studies. The simplicity of this method accounts for its widespread adoption across various areas (Mu, 2023). The AHP functions as a decision tool employing a hierarchical structure to establish priorities among decision alternatives

based on intangible criteria (Basak, 1993). The hierarchy employed in this study is illustrated in Figure 1.

The advantage of the AHP lies in its utilization of pairwise comparisons to establish priorities for the criteria, sub-criteria, and alternatives. All pairwise comparison judgments within the AHP are reciprocal (Vargas, 1987). The Saaty scale is used to compare the criteria, sub-criteria, and alternatives (Saaty, 1993). This scale spans from 1 to 9, with the corresponding descriptions provided in Table 1.

Table 1
Saaty's Fundamental Scale

Scale	Description
1	T_i and T_j are **equally** important
3	T_i is **moderately** more important than T_j
5	T_i is **strongly** more important than T_j
7	T_i is **very strongly** more important than T_j
9	T_i is **extremely** more important than T_j
2, 4, 6, 8	T*i* is an intermediate value between two scales

Figure 1 shows three pairwise comparisons of the criteria, ten for service quality, three for price, three for promotion, and three for the 11 sub-criteria. Consequently, each respondent made a total of 52 pairwise comparisons.

The steps employed to calculate the competitiveness of ridesharing using the AHP in this study are outlined as follows:

Step 1: Clean the data. Respondents who provided incomplete pairwise comparisons were excluded from the calculations.

Step 2: Calculate the pairwise comparisons of each respondent. This involves a 3-dimension pairwise comparison of criteria, two 3-dimensional pairwise comparisons and one 5-dimensional pairwise comparison for the sub-criteria. Additionally, there are eleven 3-dimensional pairwise comparisons for the alternatives. The matrix of pairwise comparisons is presented in Table 2.

Table 2
Pairwise comparison matrix

Criteria	A_1		…	A_m
A_1	1	a_{12}	…	a_{1m}
A_2	a_{21}	1	…	a_{2m}
…	…	…	…	…
Am	a_{2m}	a_{2m}	…	1

where *A* is the criteria of 1, …, *m*. *m* is the number of criteria

Step 3: Calculate the maximum of eigenvalue λ_{max} and the priority weight (*w*) of matrix A following the methodology outlined by Han et al. (2020).

$$Aw = \lambda_{max} w \quad (1)$$

$$w = (w_1, w_2, \dots, w_m)^T \quad (2)$$

Step 4: Calculate the Consistency Index using the following equation:

$$Consistency\ Index\ (CI) = \frac{\lambda_{max} - n}{n - 1} \quad (3)$$

$$Consistency\ Ratio\ (CR) = \frac{CI}{Mean\ Random\ Index} \quad (4)$$

In this study, we have a 3-matrix and a 5-matrix pairwise comparison of the sub-criteria. Next, apply the Mean Random Index (MRI) generated by Wharton (Rao Tummala & Wan, 1994; Wedley, 1993), which is provided in Table 3.

Table 3
Mean Random Index (MRI) for consistency ratio

	Size of matrix (*n*)							
	3	4	5	6	7	8	9	10
MRI	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49

Step 5: Compute the score matrix of the alternatives. Next, compare each alternative and generate an *n* x *n* alternative matrix denoted as $B^{(j)}$ where *j* = 1, …, *m*. Determine the maximum eigenvalue and its corresponding eigenvector s for matrix $B^{(j)}$, the weight vectors $s^{(j)}$ are then compiled into the score matrix S:

$$S = \left[s^{(1)}, \dots, s^{(m)}\ \right] \quad (5)$$

The global alternative score is obtained by multiplying the score matrix S and weight vector *W*:

$$V = S \cdot W \quad (6)$$

v_i of *V* is the priority of the *i*th alternative.

Step 6: Calculate the average of each weight, global alternative score and, consistency index using Equation 7.

$$\bar{\mu}_{v_k} = \frac{\sum_{i=1}^{n} v_{kn}}{n} \quad (7)$$

Where, $\bar{\mu}$ is the average weight, global alternative score or consistency index.

4. Results and discussion

4.1 Results

The demography characteristics of the respondents are presented in Table 4. The study participant composition was dominantly female, with nearly twice as many female respondents as male respondents. The respondents' average age was 21.5 years, and the mode age was 21 years. The youngest participant was 17 years old, while the oldest was 24 years old.

The majority of the respondents were either secondary students or university students, with approximately 74.78% having graduated from senior high school. The majority of respondents in this study were young individuals.

Table 4
Respondent demography

Variable	**%**
Gender	
Female	63.25%
Male	36.54
Age	
Less than 19	1.92%
19	10.58%
20	15.38%
21	29.81%
22	27.88%
23	11.54%
24	2.88%
Occupation	
Secondary student/university student	90.38%
Entrepreneur	6.73%
Employee	1.92%
Unemployed	0.96%
Education	
Senior high school	75.96%
Diploma	2.88%
Undergraduate	20.19%
Master's	0.96%

All of the criteria, sub-criteria, and alternatives were compared pairwise. The averages of all these pairwise comparisons are depicted in Tables 5, 6 and 7. However, these matrices do not serve as inputs for calculating the priority weights of the criteria, sub-criteria, and alternatives, nor for establishing the global weight of the alternatives. Instead, these matrices provide an overall perspective on each pairwise comparison value.

Table 5
Average of pairwise comparison among criteria

	Service quality	Price	Promotion
Service quality	1	1.899	2.515
Price	0.526	1	2.622
Promotion	0.398	0.381	1

Table 6
Average of pairwise comparison among sub-criteria

(a) Service quality

	Tangibility	Reliability	Responsiveness	Assurance	Empathy
Tangibility	1	0.494	0.491	0.506	0.824
Reliability	2.023	1	1.483	1.076	1.919
Responsiveness	2.037	0.674	1	1.107	1.818
Assurance	1.978	0.929	0.904	1	2.269
Empathy	1.214	0.521	0.550	0.441	1

(b) Price

	Low price	Discount	Affordable
Low price	1	1.673	1.186
Discount	0.598	1	1.295
Affordable	0.843	0.772	1

(c) Promotion

	Advertise-ment	Voucher	Digital influencer
Advertisement	1	0.531	1.4644
Voucher	1.883	1	2.899
Digital influencer	0.683	0.345	1

Table 7
Average of pairwise comparison among alternatives

(a) Tangible

	Grab	Go-Jek	Maxim
Grab	1	2.055	2.2970
Go-Jek	0.486	1	2.792
Maxim	0.337	0.358	1

(b) Reliability

	Grab	Go-Jek	Maxim
Grab	1	2.027	2.899
Go-Jek	0.493	1	2.593
Maxim	0.345	0.386	1

(c) Responsiveness

	Grab	Go-Jek	Maxim
Grab	1	1.632	2.512
Go-Jek	0.613	1	2.411
Maxim	0.398	0.415	1

(d) Assurance

	Grab	Go-Jek	Maxim
Grab	1	1.475	2.202
Go-Jek	0.677	1	2.337
Maxim	0.454	0.428	1

(e) Empathy

	Grab	Go-Jek	Maxim
Grab	1	1.790	2.558
Go-Jek	0.559	1	2.352
Maxim	0.391	0.425	1

(f) Low price

	Grab	Go-Jek	Maxim
Grab	1	2.189	2.038
Go-Jek	0.457	1	1.857
Maxim	0.491	0.539	1

(g) Discount

	Grab	Go-Jek	Maxim
Grab	1	1.874	2.654
Go-Jek	0.534	1	2.533
Maxim	0.377	0.395	1

(h) Affordable

	Grab	Go-Jek	Maxim
Grab	1	1.792	1.947
Go-Jek	0.558	1	1.757
Maxim	0.514	0.567	1

(e) Advertisement

	Grab	Go-Jek	Maxim
Grab	1	1.281	2.426
Go-Jek	0.780	1	2.745
Maxim	0.412	0.364	1

(f) Voucher

	Grab	Go-Jek	Maxim
Grab	1	1.999	2.635
Go-Jek	0.500	1	2.325
Maxim	0.380	0.430	1

(e) Digital influencer

	Grab	Go-Jek	Maxim
Grab	1	1.178	2.395
Go-Jek	0.849	1	2.853
Maxim	0.417	0.350	1

Table 8 provides the average weighted priorities of the criteria, sub-criteria, and alternatives, derived from individual pairwise comparisons. The table illustrates that, on average, respondents assigned a higher priority to the service quality of ridesharing platforms (0.438) compared to the price (0.373) and promotion (0.245). Price holds the second-highest priority, whereas promotion is regarded as the lowest priority. However, the difference in weight between service quality and price is not significantly different. Additionally, Table 8 indicates that the lowest weight of service quality is 0.054, while the highest priority is 0.767. This suggests that respondents might perceive ridesharing

service quality as either the lowest or highest priority compared to other criteria, even though, on average, it maintains the highest priority.

Table 8
Average weight priority of the criteria, sub-criteria, and global alternative score

	Priority		
	Min	Max	Average
Criteria			
Service quality	0.054	0.767	0.382
Price	0.059	0.735	0.373
Promotion	0.059	0.735	0.245
Sub-criteria: Service Quality			
Tangibility	0.025	0.402	0.103
Reliability	0.084	0.414	0.214
Responsiveness	0.092	0.417	0.227
Assurance	0.081	0.444	0.279
Empathy	0.056	0.360	0.163
Sub-criteria Price			
Low price	0.054	0.798	0.265
Discount	0.065	0.723	0.321
Affordable	0.068	0.735	0.414
Sub-criteria promotion			
Advertisement	0.052	0.739	0.206
Voucher	0.101	0.775	0.533
Digital influencer	0.064	0.637	0.261
Alternative: Tangibility			
Grab	0.059	0.798	0.405
Go-Jek	0.074	0.751	0.398
Maxim	0.062	0.671	0.196
Alternative: Responsiveness			
Grab	0.093	0.808	0.426
Go-Jek	0.074	0.703	0.381
Maxim	0.066	0.685	0.193
Alternative: Reliability			
Grab	0.052	0.790	0.409
Go-Jek	0.102	0.755	0.382
Maxim	0.065	0.608	0.209
Alternative: Assurance			
Grab	0.104	0.655	0.402
Go-Jek	0.142	0.739	0.388
Maxim	0.082	0.665	0.210
Alternative: Empathy			
Grab	0.085	0.808	0.423
Go-Jek	0.118	0.677	0.374
Maxim	0.074	0.671	0.203
Alternative: Low price			
Grab	0.111	0.790	0.378
Go-Jek	0.054	0.737	0.309
Maxim	0.072	0.080	0.313
Alternative: Discount			
Grab	0.124	0.808	0.422
Go-Jek	0.069	0.765	0.377

Maxim	0.067	0.800	0.201
Alternative: Affordable			
Grab	0.072	0.790	0.371
Go-Jek	0.067	0.719	0.339
Maxim	0.081	0.689	0.290
Alternative: Advertisement			
Grab	0.102	0.751	0.363
Go-Jek	0.104	0.740	0.433
Maxim	0.066	0.723	0.205
Alternative: Voucher			
Grab	0.128	0.790	0.440
Go-Jek	0.085	0.688	0.352
Maxim	0.070	0.671	0.208
Alternative: Digital influencer			
Grab	0.120	0.739	0.366
Go-Jek	0.120	0.765	0.446
Maxim	0.061	0.608	0.188
Global priority			
Grab	0.176	0.600	0.4402
Go-Jek	0.126	0.582	0.367
Maxim	0.112	0.594	0.226

In terms of the sub-criteria for service quality, assurance received the highest average rating (0.279). Meanwhile, responsiveness and reliability garnered nearly identical percentages, at 0.227 and 0.214, respectively. The tangibility sub-criterion received the lowest rating (0.103). Affordability emerged as the highest-rated aspect (0.414) within the sub-criteria of the price category, while discount secured the second position (0.321). Finally, within the sub-criteria of promotion, voucher garnered the highest rating (0.533). This ranking significantly surpassed the ratings for digital influencer (0.261) and advertisement (0.206).

Table 8 also shows the weights of the alternatives for each sub-criterion. This study reveals that Grab emerged as the top choice for the tangibility, reliability, assurance, empathy, low price, discount, affordability, and vouchers sub-criteria. On the other hand, respondents chose Go-Jek as the preferred option for advertisement and digital influencers. This investigation underscores that Grab has the highest priority across most of the sub-criteria.

From Table 8, the global priority indicates that respondents ranked Grab as their primary choice (0.402), with Go-Jek as the second preference (0.367), and Maxim as the least favored option (0.226). This outcome confirms the notion of intense competition between Grab and Go-Jek. However, individual respondents may offer different ratings. For example, Table 8 demonstrates that respondents might assign the lowest rank to Grab at 0.176 and the highest rank at 0.6. Conversely, for Go-Jek, the highest rank is 0.582 and the lowest rank is 0.126. In contrast, Maxim's highest rank is 0.594, surpassing even Go-Jek's highest rank. However, the lowest rank for Maxim is the lowest among the three ridesharing platforms. A more detailed depiction of this data is available in the histogram presented in Figure 2.

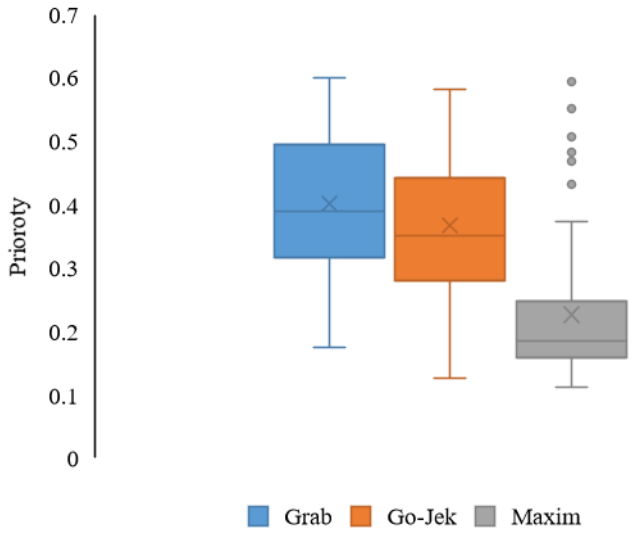

Figure 2 Range of rank from each respondent

Table 9 displays the average consistency ratio (CR) of the criteria, sub-criteria, and alternatives. The CR values indicate that all of the comparisons are consistent as they are all below 0.1. Additionally, the maximum CR resulting from the pairwise comparisons conducted by each respondent is also less than 0.1. Consequently, it is evident that all of the pairwise comparisons demonstrate consistency.

Table 9
Consistency ratio (CR) of the criteria, sub-criteria, and alternatives

	Min	Max	Std-deviation	Average
Criteria	-	0.0948	0.0220	0.0546
Sub-criteria				
Service quality	-	0.0993	0.0286	0.0667
Price	-	0.0960	0.0221	0.0533
Promotion	-	0.0955	0.0238	0.0547
Alternatives				
Tangibility	-	0.0955	0.0216	0..0549
Reliability	-	0.0946	0.0192	0. 0519
Responsiveness	-	0.0946	0.0180	0.0487
Assurance	-	0.0942	0.0204	0.0473
Empathy	-	0.0957	0.0185	0.0489
Low price	-	0.0944	0.0203	0.0517
Discount	-	0.0942	0.0231	0. 0537
Affordability	-	0.0942	0.0203	0.0521
Advertisement	-	0.0946	0.0220	0.0491
Voucher	-	0.0946	0.0226	0.0532
Digital influencer	-	0.0942	0.0223	0.0468

4.2 Discussion

This study demonstrates that service quality holds the highest priority in the selection of a ridesharing platform based on the customers' perspectives. Price is ranked as the second priority. Numerous studies have identified that service quality, price, and promotion play a pivotal role in shaping customer satisfaction with ridesharing platforms. Generally, individuals tend to be more sensitive to financial considerations (Zhen & Mansori, 2012). Furthermore, previous research has shown that the impact of price on customer satisfaction is greater than that of service quality (Boimau & Bessie, 2021; Prasetya & Wijaksana, 2021). Despite this, the present study reveals that service quality surpasses price in importance within the ridesharing industry.

Five dimensions of service quality are applied in this study. Among the various sub-criteria of service quality, assurance takes precedence. Assurance, in this context, refers to establishing trust (Jiang et al., 2016). Research shows that trust significantly impacts customer satisfaction in the realm of online ridesharing (Komala & Selvi, 2021; Pasharibu et al., 2018; Putri et al., 2018). Standing et al. (2019) argued that trust plays a pivotal role in fostering the growth of ridesharing. Amirkiaee and Evangelopoulos (2018) discovered that trust serves as a catalyst for engagement in ridesharing. Since ridesharing functions as a form of public transport, trust in the driver plays a vital role in satisfaction, which aligns with findings from numerous studies on public transportation. Notably, ridesharing could also serve as a viable alternative to conventional public transport.

Responsiveness and reliability were selected as the second and third priorities in the process of selecting a ridesharing platform. Enhancing responsiveness is essential in the transportation domain, as passengers often require greater assistance throughout their journey. Similarly, reliability assumes a critical role as transportation services are expected to deliver optimal experiences to passengers. Passengers who find their experience convenient are more inclined to opt for ridesharing. This sentiment aligns with findings from Islam et al. (2019) who demonstrated that convenience serves as a key determinant of purchase decisions.

Darmawan et al. (2020) demonstrated that physical evidence and price wield significant influence in the decision to utilize online ridesharing services. Physical evidence is tangible and it is in the sub-criteria of tangibility, while tangibility is within service quality criteria. Ernawati and Lutfi (2022) revealed that factors such as driver cleanliness and fare structure contribute to customers' acceptance. Cleanliness also intersects with the service quality consideration. Nevertheless, the current study identified that customers perceive this sub-criterion to be less important than the other dimensions of service quality. As a result, customer's ranked tangibility as the least critical among the service quality dimensions. While tangibility indeed plays a notable role in the decision-making process for usage or purchase, its influence is relatively less when compared to other factors within the service quality dimension.

In the context of the price criteria, affordability garnered a higher rating than both discount and low prices. Affordability is related to the capacity to purchase products or services, often denoting a reasonable or even cost-effective price. On occasion, affordability can be associated with being economical. In contrast, low price doesn't necessarily guarantee affordability in terms of purchasing capability. This distinction helps explain why affordability has a higher priority than low price. Discounts, on the

other hand, have the potential to lower the overall cost, making the criterion hold a higher priority than a low price. The perception of low price is sometimes correlated with lower quality, whereas a discount is more commonly associated with a reduced price for high-quality products or services.

Among the various sub-criteria, voucher holds the highest priority, surpassing advertisement and digital influencer. A voucher serves as a promotional tool that effectively reduces the price through a discount. In contrast to advertisement and digital influencer, vouchers are directly linked to pricing considerations. Given that price significantly shapes a purchase decision, the prominence of vouchers as a sub-criterion within the promotion category is notably higher than that of other promotional sub-criteria.

The average global priority indicates that Grab is the customer's primary choice, followed by Go-Jek and then Maxim. However, individual respondent calculations revealed variations in the ranking of each alternative.

Figure 3 depicts a summary of the global priorities collected from each respondent. The priority trend for each alternative is evident: all weights for Grab are arranged from lowest to highest, followed by Go-Jek and Maxim, mirroring the order of priority established for Grab. Finally, the line represents the convergence of the linear trend line derived from the global weights of Grab, Go-Jek, and Maxim, as calculated from the respondents.

The picture illustrates varying levels of priority for different aspects of Grab, ranging from the highest at the top to the lowest on the opposite side. Based on the data summarized in Table 10, five respondents perceived Grab as having the lowest priority, while four considered Go-Jek as the top priority, and Maxim as the second priority. In total, 41 respondents ranked Go-Jek as their primary choice. However, a majority of respondents (56 respondents) assigned Grab the highest priority, each with distinct weight. On the other hand, Maxim generally emerged as the least prioritized option.

The graph also indicates the potential for Maxim to surpass Grab. This study provides evidence suggesting that the priority of Maxim could be higher than Grab, although Maxim is unlikely to surpass Go-Jek.

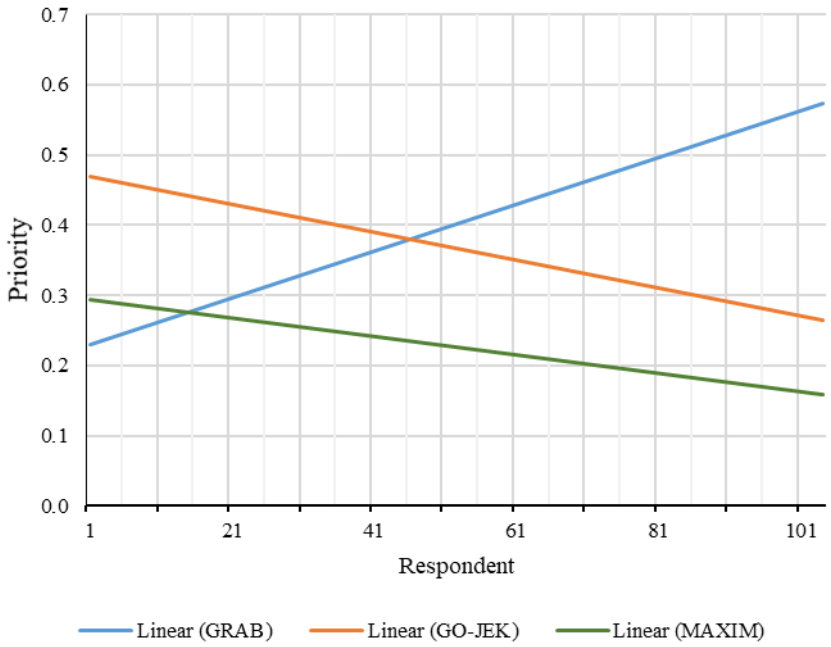

Figure 3 Sensitivity analysis of ridesharing platform using original data

Table 10
Summary of the rank of each ridesharing platform

Rank	Grab	Go-Jek	Maxim
1	56	41	11
2	43	49	10
3	5	14	84

5. Conclusion

This study reveals that Grab wins in tangibility, reliability, responsiveness, assurance, empathy, all price sub-criteria, and the voucher category. Meanwhile, Go-Jek ranks highest in the advertisement and digital influencer categories. Service quality and price stand as the two pivotal criteria for selecting ridesharing platforms which means that ridesharing service providers should prioritize delivering a satisfactory and high-quality service, coupled with equitable pricing, to gain a competitive edge. Assurance, as a critical sub-criterion within the realm of service quality, also plays a paramount role in fostering customer trust.

This study found that Go-Jek and Maxim should enhance their performance across several aspects, including reliability, responsiveness, assurance, empathy, price, discount, affordability, and voucher, in order to secure a competitive edge. Nevertheless, while this study demonstrated that Maxim has the potential to surpass Grab, overtaking Go-Jek might present a more formidable challenge. From the respondent's perspective, Maxim ranks as the least preferred alternative. When analyzing the priority values, it becomes evident that Maxim requires significant improvements to surpass its rivals, Go-Jek and

Grab, as its priority value significantly lags behind these ridesharing platforms. Additionally, the competitiveness of Grab and Go-Jek appears to be notably strong.

The AHP is commonly utilized to assess multicriteria decisions and alternatives, either by individuals or a group of experts. This study demonstrates that the AHP can be effectively employed to evaluate customer's choices in selecting products or services. Additionally, the AHP can measure the positioning of products and services, enabling the prediction of their competitiveness. Furthermore, the AHP provides industries with the capability to appraise their offerings through comparison with others.

This study does have some limitations. It was carried out within a restricted geographical scope, featuring a limited array of decision alternatives. This presents an opportunity for future researchers to undertake more comprehensive studies, by expanding the criteria considered.

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