

## FACTORS AFFECTING ATTITUDES TOWARDS USING RIDE-SHARING APPS

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### ABSTRACT

*Technology brings impressive changes in information and communication system. Most of the transportation operations have integrated technology to improve customer service. However, convincing customers to adopt new technology-driven businesses, such as ride-sharing apps, has become more challenging than ever. The current state of ride-sharing apps in Bangladesh is far from perfect due to various factors such as a lack of security and privacy, various technological challenges, and inconvenient transaction systems. Therefore, customers get complications in taking the intended service conveniently. Researchers have found the positive impact of perceived ease of use (PEOU) on perceived usefulness (PU). Besides that, they found a positive impact of PEOU on attitude towards using ride-sharing apps and the mediating effect of perceived usefulness (PU) between PEOU and Attitude towards ride-sharing apps. Researchers used a structured questioner to prove the hypothetical relationship and surveyed users from different ride-sharing points of Dhaka city. The probability cluster sampling technique has been used to collect the data from 237 respondents. Exploratory Factor Analysis (EFA) was used to determine the reliability and validity of the instrument. Besides that, Confirmatory Factor Analysis (CFA) was also conducted using the Exploratory Factor Analysis results, followed by a measurement model. Finally, multivariate analysis using structural equations modelling (SEM) in the AMOS program to assess the suggested conceptual model's overall fit and the validity of the hypothesized relationship. Ride-sharing service providers will get ideas to improve their service to convince the customers' attitudes towards using ride-sharing apps. Besides that, this study used the technology acceptance model, which will contribute to the literature on ride-sharing apps. However, the number of variables used in this study to verify users' attitudes towards ride-sharing apps is acceptable and comprehensive and it is advised that a few additional variables be included to examine the usage of sophisticated technologies.*

**Keywords:** Attitude Towards Using, Ride Sharing Apps, Perceived Usefulness, and Perceived Ease of Use.

### INTRODUCTION

Over the last decade, ride-sharing apps have been significant innovation in the transportation business. Providers of these apps, also known as transportation network companies (TNCs), connect available car or taxi drivers and potential passengers in real-time via online, information technology-enabled, and smartphone-based platforms, resulting in reliable, easy, fast, and transparent passenger service procurement (Circella and Alemi, 2018). Numerous new forms of travel have been established because of significant technological advancements. Ride-sharing services such as Uber, Lyft, Grab, Pathao, and Garivara represent a new era of shared mobility for door-to-door transportation (Wadud, 2020). These services have an impact on how people traverse cities because of their benefits. Indeed, users can now track the location of a vehicle, when the driver arrives to pick them up, and the fare they must pay (Gloss et al., 2016).

Bangladesh is a developing country whose economic success depends on developing its transportation and communication systems (Sakib and Mia, 2019). The people of Bangladesh have seen a tremendous shift away from public transportation toward app-based ride-sharing services due to available smartphone technology. By alleviating traffic congestion and decreasing the number of personal cars on the road to a minimum, ride-sharing services contribute significantly to social, cultural, sustainability, and environmental issues (Karim et al., 2020). Daily, the population grows, yet roads and transit infrastructure are constrained. There are traffic and parking issues and financial expenditures associated with vehicle maintenance. Ride-sharing app services address these concerns by delivering real-time ride services. Xu et al. (2020) conducted a systematic review of the components of online ride-sharing companies. They showed that transparency, comfort, coverage, security, protection substance, speed, pricing, and charges all impacted ride-sharing users' satisfaction. Cramer and Krueger (2016) discovered a similar result in the US business of UBER. Oyedele (2018) and Zhu et al. (2017) established essential linkages between customer loyalty, service quality, perceived usefulness, and trust while using online transportation services. However, different studies (Sovacool and Griffiths, (2020) and Kumar et al., (2019) found that customers of ride-sharing companies in Bangladesh are facing a challenge in using the apps for system complexity and lack of the understanding of the usefulness of the services which affect the attitudes of customer towards using ride-sharing apps. Around 74% of those who engage in ride-sharing apps in Bangladesh have difficulties (Islam et al., 2019). Jahan (2019) also found that people in Bangladesh who use ride-sharing apps are not delighted with the services. According to Kumar et al. (2019), 26% of those interviewed said ride-sharing apps were confusing and difficult to use. Based on the problem description and previous research, the following research question (RQ) and, based on those (RQ), research objective (RO) was answered by this study:

RQ1. What is the impact of perceived ease of use (PEOU) on attitude towards using (ATU) ride-sharing apps in Bangladesh? RQ2. What is the impact of perceived ease of use (PEOU) on the perceived usefulness (PU) of ride-sharing apps in Bangladesh? RQ3. What is the impact of perceived usefulness (PU) on attitude towards using (ATU) ride-sharing apps in Bangladesh? RQ4. Does perceived usefulness (PU) mediate the relation of perceived ease of use (PEOU) and attitude towards using (ATU) ride-sharing apps? Based on the above research questions, this study's general objective is to investigate the impact of perceived ease of use

and perceived usefulness on attitude towards using ride-sharing apps in Bangladesh. However, the specific objectives of this study are RO1. To identify the influence of perceived ease of use (PEOU) on attitude towards using (ATU) ride-sharing apps, RO2. To identify the influence of perceived ease of use (PEOU) on perceived usefulness (PU), RO3. To identify the influence of perceived usefulness (PU) on attitude towards using (ATU) ride-sharing apps and RO4. To measure the mediating effects of perceived usefulness (PU) between perceived ease of use (PEOU) and attitude towards using (ATU) ride-sharing apps.

## **LITERATURE REVIEW**

Ridesharing firms, alternatively referred to as transportation network companies, ride-hailing services, or app-taxis, connect passengers with drivers of privately hired vehicles that, unlike taxicabs, cannot be legitimately mobilized from the street (Nurhidayah and Alkarim, 2017; Shaheen et al., 2020). They run web and mobile applications that connect passengers with customized vehicles (Shaheen and Chan, 2016). The issue has received worldwide recognition and sparked strong reactions from the traditional taxi industry (Akimova et al., 2020).

## **TECHNOLOGY ACCEPTANCE MODEL**

"The Technology Acceptance Model" (TAM) has been widely used as a theoretical framework for analysing customer behaviour (Granic and Marangunic, 2019). According to the concept, an individual's purpose to act can be driven by their perceived usefulness and convenience of use (Davis, 1989, Zhong et al., 2021). Numerous researchers have examined TAM in ride-sharing apps. They have shown that perceived usefulness and perceived ease of use are essential and clear predictors of the intention to conduct an individual's performance of action (Mensah, 2020). For instance, Mateen et al. (2017) demonstrated that perceived usefulness and ease of use increase customers' purchase intention via their attitudes toward usages. According to TAM, perceived usefulness affects users' intentions to use apps services (Liebana et al., 2020). Numerous studies have analysed users' intent to suggest ride-sharing services by applying TAM (Giang et al., 2017; Wan et al., 2016; Haldar & Goel, 2019; Amirkiaee & Evangelopoulos 2018). By utilising TAM, they showed that perceived usefulness and perceived ease of use could influence users' attitudes.

## **PERCEIVED EASE OF USE**

The term "ease of use" refers to customers' perceptions of how simple it is to use a particular technology (Tahar et al., 2020; Filieri, 2020 and Davis, 1989). Tandon et al. (2021) proposed that perceived ease of use comprises four components: ease of control, simplicity of comprehension, user-friendliness, and access. Numerous researchers' studies (Wang et al. 2020; Giang et al., 2017; Wang et al., 2019) have discovered that perceived ease of use is critical in the ride-sharing scenario. The behavioural intent to use technology is beneficial and significant, and it is influenced by perceived ease of use (Moslehpour et al., 2018). Rattanaburi and Vongurai (2021) discovered that perceived ease of use significantly predicts attitudes towards using ride-sharing apps. Similarly, Karim et al. (2020) discovered that perceived ease of use influences perceived usefulness. On the other hand, Akbari et al. (2020) discovered that perceived ease of use is strongly linked with attitudes of ride-sharing apps users. Therefore, the following hypotheses are proposed based on the literature as mentioned above:

H1: Perceived ease of use (PEOU) positively impacts attitude towards using ride-sharing apps.

## **PERCEIVED USEFULNESS**

Perceived usefulness is the degree to which an individual believes that utilizing an information system will increase task performance (Zhang et al., 2019; Davis, 1989). Goel and Haldar's (2020) prior study found a positive and significant correlation between perceived usefulness and customers' tendency to use ride-sharing apps, indicating that perceived usefulness would assist customers in deciding whether to approach or avoid app-based transportation. According to the literature on perceived usefulness, users are willing to adopt ride-sharing apps since they simplify their life (Storme et al. 2020). In a prior study of innovative online apps, Al-Marroof et al. (2020) showed that perceived usefulness directly affects the intention to use information systems. Malik et al. (2019) also noted that perceived usefulness and perceived ease of use influence the ongoing usage of ride-sharing apps. Wang et al. (2020) conducted a study on the utility of various technologies and discovered that perceived usefulness positively influences attitude towards using app-based ride-sharing services. On the other hand, Ventre and Kolbe (2020) examined users' attitudes in online purchase intention and discovered that the perceived usefulness of technology fosters customers to repurchase. So, the following hypothesis is formed considering the preceding discussion:

H2: Perceived ease of use (PEOU) positively impacts the perceived usefulness of ride-sharing apps.

## **ATTITUDE TOWARDS USING**

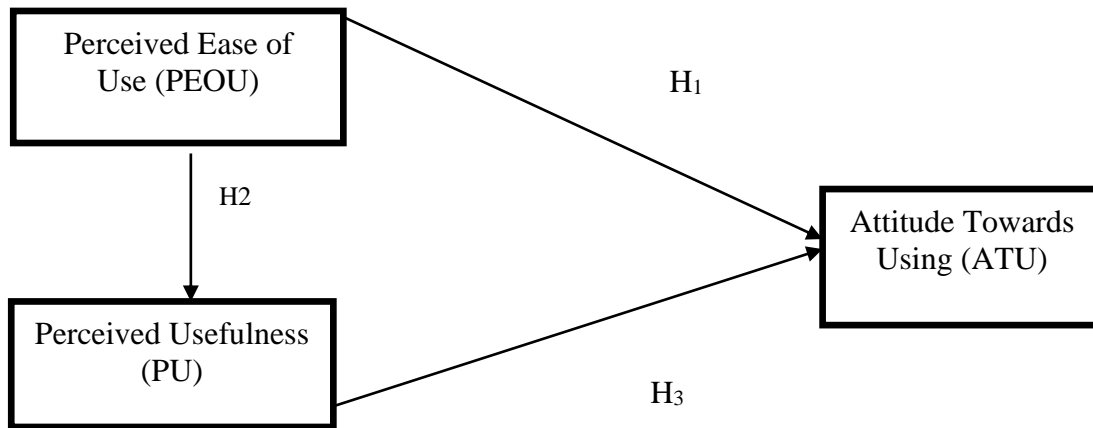
Attitude towards using (ATU) is defined as the degree to which an individual's mindset is favourable or unfavourable toward using a specific service or system (Teo and Huang, 2019). In this study, attitude towards using is defined as the degree to which an individual's mindset is positive or detrimental toward using ride-sharing apps (Alonso et al., 2020). Attitude has long been recognized as a factor in the formation of intention. The ride-sharing app features can be considered a straightforward increase of transportation services, with substantial changes in terms of speed and network connectivity (Nikitas et al., 2017). Today, most customers have undoubtedly been exposed to ride-sharing apps and developed an attitude toward them that ranges from highly favourable to extremely unpleasant. Prior empirical research has established the existence of such widespread attitudes and their influence on how new technology is evaluated in comparable settings. Giang et al. (2017) examined factors influencing intention to use ride-sharing applications in Vietnam and found perceived usefulness positively influences attitudes towards ride-sharing

applications. Ahmed et al. (2020) and Shah et al. (2020) also found a positive impact of perceived usefulness in attitude towards using ride-sharing apps. On the other hand, Akbari et al. (2020), Sonneberg et al. (2019), and Zhu et al. (2017) conducted their research in ride-sharing apps and found perceived usefulness mediates the connections between perceived ease of use and attitude towards using the services. Haldar and Goel (2021) proved that PU positively impacts attitude towards using ride-sharing apps. Additionally, Suhud et al. (2019) investigated the evidence in Sweden, and their research examined the use of ride-sharing apps. They discovered that perceived ease of use influences perceived usefulness and attitude towards using. Besides that, perceived usefulness work as a mediator between attitude towards using and perceived ease of use. Based on the discussion, the following hypotheses are developed:

H3: PU has positive impacts on attitude towards using ride-sharing apps.

H4: PU mediates the connections between PEOU and attitude towards using ride-sharing apps.

Figure 1: Conceptual Framework



RESEARCH METHOD

There were 300 survey questions distributed throughout Dhaka City's twenty randomly selected pick-up and drop-off locations of ride-sharing services. There was a total of 263 survey questions returned. Sharply 237 of the 263 questionnaires collected were valid for further investigation. As a result, the remaining 26 appeared to be incomplete, yielding a response rate of 79.00 percent. According to Rayle et al. (2016) and Lokhandwala and Cai (2018), any research having a response rate of 70% or more is acceptable. Pallant (2020) recommended that the overall sample size be at least 150. Barrett (2007), on the other hand, suggested that the sample size for the SEM analysis be more significant than 200 respondents (n> 200).

All measurement elements are adapted from previous research and modified to ensure their accuracy and suitability for the current study. The instrument was adapted from Wang et al. (2020), Barry and Jan (2018), and Suhud et al. (2019) include four sections that consider attitude towards using, perceived ease of use, and perceived usefulness. The survey included 15 items in addition to demographic information about the respondents.

Cronbach's Alpha is used to conduct an additional reliability test which should be 0.70 or more (Taber, 2018). Cronbach's alpha values of 0.872 for perceived usefulness (PU), 0.735 for perceived ease of use, and 0.733 for attitude toward using (See Table 1) indicate that all items on the scale used to measure the variables are reliable. Additionally, the overall Cronbach's Alpha value is 0.781.

Table 1: Reliability Index of all the Items

Variable	Cronbach's Alpha	Number of Items
Perceived Ease of use (PEOU)	0.735	3
Perceived Usefulness (PU)	0.872	6
Attitudes towards using (PSE)	0.733	3
Overall Cronbach's Alpha 0.781		

The study's 237 respondents revealed a diverse demographic profile. They were 65.8 percent male and 34.2 percent female, with most respondents (53.6 percent) between the ages of 26 to 36 years and 21.1 percentage below 25 years, 16.0 percent were between the ages of 36 and 45 years, 8.0 percent were between the ages of 46 and 55 years, and 1.3 percent were over the age of 55 years. Regarding educational attainment, 30.4 percent reported having a Secondary School Certificate (SSC), while 26.2 percent reported having a Higher Secondary School Certificate (HSC) or Diploma. 28.7% hold a bachelor's degree. On the other hand, 14.8% were discovered to possess a postgraduate degree. Finally, respondents were asked about their monthly income; the first scale is for those earning less than BDT 15,000 per month, representing 3.0 percent of all responses. The second class includes those with an

income of between BDT 15000 to 25000 and a 10.5 percent percentage rate. monthly earnings of between BDT 25001 and 35000 at a rate of 23.2 percent followed. the next group earns between BDT 35001 and 45000 and has a percent rate of 25.7 percent, between BDT 45001 and 55000 has an 8.4 percent rate, and the remainder BDT 55001 and above has a 5.1 percent rate. The seventh category, with a percentage of 24.5 percent, includes respondents who have no monthly income (does not apply). This respondent group is primarily composed of students and homemakers.

**EXPLORATORY FACTOR ANALYSIS (EFA)**

Exploratory factor analysis is primarily used to reduce data (Baglin, 2014). It begins with a large set of variables and attempts to summarize the data using a smaller group of factors or components. The Kaiser-Meyer-Olkin (KMO) test is frequently used in research to determine the sample adequacy of data. This analysis aims to determine the degree to which the scales in the data collected are unidimensional. For measuring sampling adequacy, a Kaiser-Meyer-Olkin (KMO) value should be above 0.7 (Shrestha, 2021). Factor analysis was performed on 15 items from the three variables. Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were used to validate the data sufficiently for factor analysis, and the results are summarized in Table 2.

**Table 2: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.792
Bartlett's Test of Sphericity	Approx. Chi-Square	1172.709
	df	66
	Sig.	.000

Three-factor solutions with a KMO statistic of 0.792 suggest an adequate sample size. At the same time, Bartlett's test of sphericity was significant at .000, and a chi-square statistic of 1172.709 with 66 degrees of freedom indicated that the sample size was sufficient. On the other hand, it is anticipated that the communality value for each variable will be at least 0.50 (Ashill and Jobber, 2014). This means that the factor should explain 50% of the variance in the variable. However, this study's communalities values were more significant than 0.50.

Three factors were obtained from the analysis using the principal component analysis extraction method based on more than one eigenvalue as proposed by (Song et al., 2010). In addition, each item had a loading greater than 0.50, which consider necessary (Hair et al., 2020)

**Table 3: Rotated Component Matrix**

Rotated Component Matrix <sup>a</sup>			
	Component		
	1	2	3
PU2	.912		
PU1	.790		
PU6	.784		
PU5	.777		
PU3	.731		
PU4	.624		
PEOU3		.841	
PEOU4		.792	
PEOU1		.749	
ATU1			.823
ATU4			.817
ATU3			.756
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations. Author's Computation, 2022			

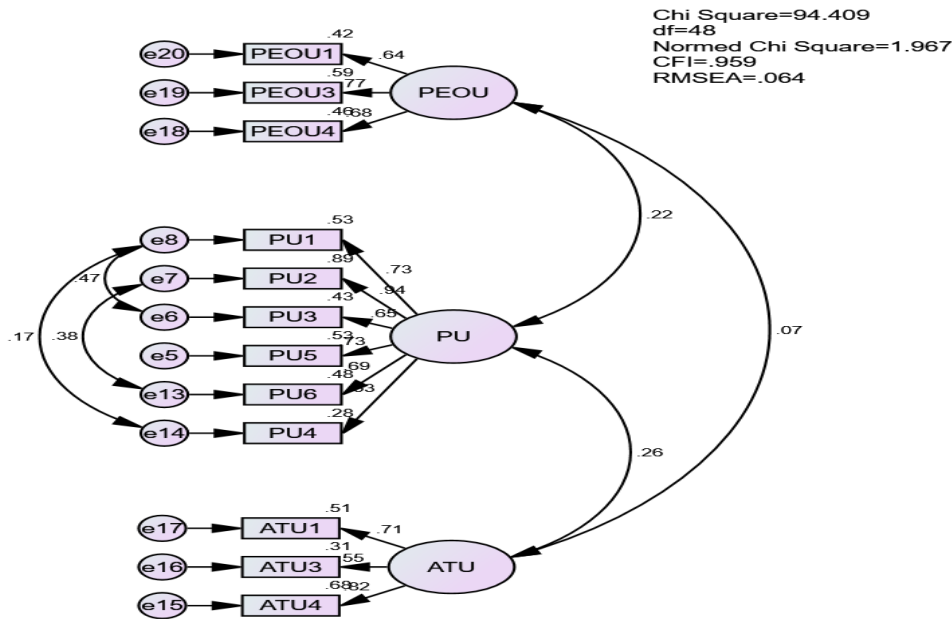
As indicated in Table 3, the factor perceived usefulness was loaded with six factors. Item PU2 (I can save my time by using the ride-sharing app) had the highest factor loading of 0.912, while item PU4 (I find that ride-sharing apps improve my travel) had the lowest factor loading of 0.624. In addition, three items were loaded for the study's independent variable, perceived ease of use. Among them, PEOU3 (It does not take much effort to learn how to use a ride-sharing app) has the most significant factor loading of 0.841, while PEOU1 (I think there is no trouble in using ride-sharing apps) has the lowest factor loading of 0.749. Finally, the

factor attitude toward using is loaded together by three elements, with ATU1 (I think using ride-sharing apps is a wise choice) having the highest loading of 0.823 and ATU3 (I will use ride-sharing apps frequently) having the lowest loading of 0.756.

**ANALYSES OF CONFIRMATION FACTORS (CFA)**

CFA was used to determine the formation of a factor composed of three constructs. Table 3 illustrates that the loading of each item has a value of 0.7 or above. Hair et al. (2017) denoted that any loading value less than 0.50 will be insignificant. As shown in Figure 2, complete fitness was obtained [Incremental fit (CFI) = 0.959, Parsimonious fit (CMINDF) = 1.967, and Absolute fit (RMSEA) = 0.064]. As a result, the measurement model for this study was assumed to be fit.

**Figure 2: Measurement Model**



From The measurement model (Figure 2) shows the correlation value between PEOU and PU 0.220, PU and ATU 0.26, and PEOU and ATU 0.070. However, none of the correlation coefficients among all constructs exit the upper limit of 0.85 proposed by Kline (2015) and Rodriguez (2003). As a result of this finding, the study concludes that the assessment model utilized to measure the study construct is discriminant valid.

Additionally, composite reliability (CR) was assessed to determine convergent validity. A minimum accepted value of 0.60 was suggested to achieve high composite reliability, as advised by Purwanto and Sudargini (2021). Moreover, Hair et al. (2020) recommend that the average variance extracted (AVE) value be at least 0.50 or above. According to Ho et al. (2020) AVE value of more than 0.40 is acceptable if the composite reliability CR value is adequate. Lam (2012), however, indicated that if the AVE is less than 0.5 and the CR is larger than the acceptable limit of 0.60, the study should be continued.

$$CR = \frac{(\sum \lambda)^2}{[(\sum \lambda)^2 + \sum \alpha]}$$

Here,  $\alpha$  represents Measurement Error (ME);  $\lambda$  is standardized factor loading

While (ME),  $\alpha = (1 - \sum \lambda^2)$

$$AVE = \frac{\sum \lambda^2}{n}$$

Here,  $\lambda$  represents standardized factor loading and  $n$  is the number of items.

Formula for AVE and CR (Huang, 2020).

AVE was computed by multiplying each item's standardized loadings (Figure 2) by its square, then adding each construct item together and dividing it by the number of indicators. The result displays (Table 4) the AVE values for PEOU, PU, and ATU are 0.503, 0.522, and 0.506, respectively. Furthermore, the CR value remains between 0.74 to 0.86. Therefore, the CR value seemed to be greater than the optimal threshold value of 0.60. Thus, the test result of the current study concluded as good reliability of all the items of the constructs.

**Table 4: Factor Loading, AVE and CR computation for the Constructs**

Item		Construct	Estimate	AVE	CR
PEOU4	<---	Perceived Ease of Use	0.681	0.503054	0.743753
PEOU3	<---	Perceived Ease of Use	0.77		
PEOU1	<---	Perceived Ease of Use	0.65		
PU5	<---	Perceived Usefulness	0.728	0.52201	0.864084
PU3	<---	Perceived Usefulness	0.653		
PU2	<---	Perceived Usefulness	0.943		
PU6	<---	Perceived Usefulness	0.691		
PU4	<---	Perceived Usefulness	0.524		
PU1	<---	Perceived Usefulness	0.731		
ATU4	<---	Attitudes Towards Using	0.823		
ATU3	<---	Attitudes Towards Using	0.554		
ATU1	<---	Attitudes Towards Using	0.711		

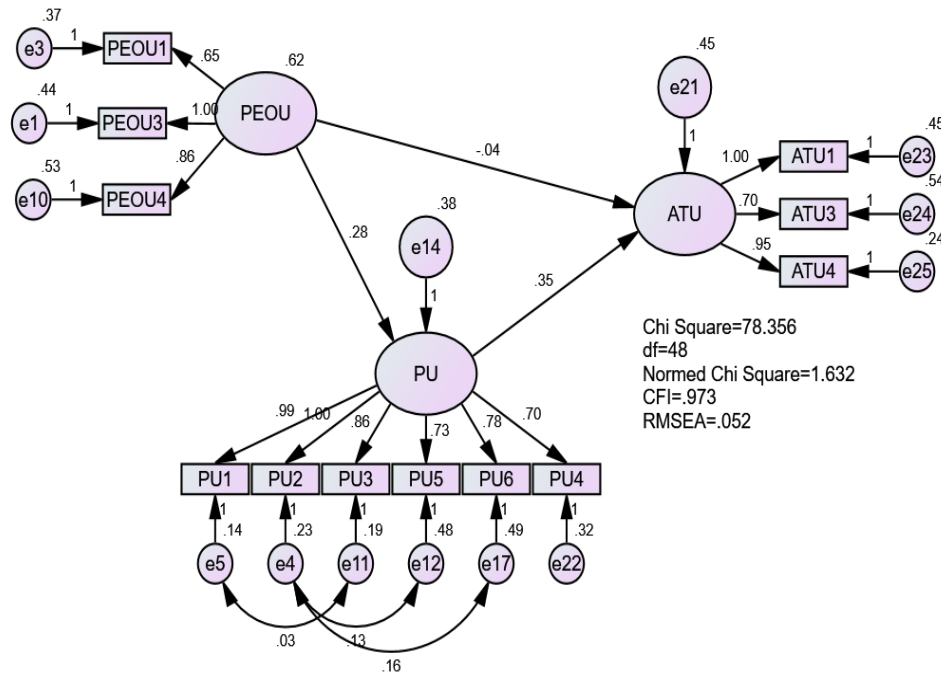
Author's Computation, 2022

Researchers need to develop the structural model after satisfying all reliability, validity, and one-dimensionality requirements (Hair et al., 2017; Berbar et al., 2021). It is crucial for constructing the structural model because it enables researchers to test hypotheses by identifying and connecting the relationships between constructs (Hair et al., 2020; Kline, 2015).

### STRUCTURAL EQUATIONS MODELING

Researchers constructed the whole structural model after finding all the factors that influenced each linked construct. As previously stated, CFI, RMSEA, and Normed Chi-square were used as fit indicators (values of CFI > 0.9, RMSEA < 0.008, and Normed Chi-square < 3) (Hair et al., 2017; Sideridis and Jaffari, 2021). It is also worth that in the structural model, constructs with the intended measurement structure, i.e., links to individual variables, have been investigated in the CFA. The suggested pathways between the construct are related to single-headed arrows.

Figure 3: Structural Model



According to Figure 3, the fitness indices for structural Equation Modeling (SEM) are as follows: [Absolute fit (RMSEA = 0.052), incremental fit (CFI = 0.973, and Parsimonious fit (CMINDF) =1.632].

Table 4: Path Estimation

Hypothesis				S.R.W.*	S.E.	C.R.	P	Result
H1	Perceived Usefulness	<--	Perceived Ease of Use	0.339	.070	4.014	***	Supported
H2	Attitudes Towards Using	<--	Perceived Ease of Use	-0.043	.081	-.481	.630	Not Supported
H3	Attitude Towards Using	<--	Perceived Usefulness	0.327	.097	3.654	***	Supported

\*Standardized Regression Weights (Author’s Computation, 2022)

**HYPOTHESIS TESTING**

The critical ratio, or CR, of 1.96 serves as a reference point for evaluating the hypothesis (Chan et al., 2007; Sfenrianto et al., 2018). A more excellent value is believed to foster a strong correlation. Additionally, the standard regression weight (SRW), the standard error, and the P-value for the respective construct must be acknowledged while determining and testing the proposed hypothesis (Sunthonwutinun and Chooprayoon, 2017). Additionally, hypothetical relation also depends on the Goodness of Fit (GOF) values for the model (Jahmani et al. (2020).

The Path Estimation (Table 4) shows the loading between PEOU and PU 0.339, the critical ratio (CR) 4.014, and the P-value 0.0. As a result, perceived ease of use and perceived usefulness has a considerable positive correlation. Previous researchers also discovered this positive effect between PEOU and PU in ride-sharing apps (Haldar and Goel, 2021; Akbari et al., 2020; Liu and Wayne, 2019). However, the loading between PEOU and ATU -0.043, the CR value -0.481, and the P-Value 0.630 (insignificant). As a result, this investigation statistically rejected the hypothesis. Even though previous researchers (i.e., Lu et al., 2019; Amin et al., 2014; Liu et al., 2019) discovered a significant positive relationship between perceived ease of use and attitude towards using in an app-based transportation network. Nevertheless, earlier published research on ride-sharing apps (Wang et al., 2020; Haldar and Goel, 2019) also revealed the insignificant association between perceived ease of use and attitude toward using ride-sharing apps. Finally, the standardized regression weight between PU and ATU is 0.327, the standard error 0.097, the CR 3.654, and the P-Value 0.0 (significant). As a result, the hypothesis is accepted. So, there is a significant correlation between perceived usefulness

and attitude toward using ride-sharing apps. Additionally, previous studies discovered this positive relationship between PU and ATU in ride-sharing apps (Sonneberg et al., 2019; Kim et al., 2019; Standing et al., 2019).

According to Hair et al. (2017) and Addison (2021), mediation establishes when the multiplication of the indirect pathways loading is more significant than 0.08. To determine the mediating effect of PU between PEOU and ATU in the current experiment, the coefficient of indirect routes (0.339 and 0.327). Therefore,  $(0.339 \times 0.327 = 0.111)$ , which is greater than 0.08. It is proved that perceived usefulness affects perceived ease of use and attitude towards using ride-sharing apps. On the other hand, the direct path relationship between these two variables was not statistically substantial in this research. Hair et al. (2020) and Pieters (2017) proposed dividing the multiplication of standard indirect effect by the sum of the standard overall effect in this scenario. Complete mediation occurs if the outcome is more significant than 50%.

The present study found a standardized indirect effect of 0.111 between perceived ease of use and attitude toward using and a standardized total effect of 0.132 between these two constructs. As a result,  $0.111 / 0.154 = 0.721$ ; now multiply by 100 to obtain the percentage;  $0.721 \times 100 = 72.07$  percent. Therefore, perceived usefulness is a full moderator between perceived ease of use and attitude toward using.

## CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This study's findings statistically prove that perceived ease of use positively influences perceived usefulness, while the direct influence of PEOU on attitudes towards using ride-hailing apps is insignificant. On the other hand, perceived usefulness statistically influences attitudes towards using ride-sharing apps. Additionally, it is proven that perceived usefulness acts as a full mediator between perceived ease of use and attitudes towards using ride-sharing apps. Besides that, the TAM model supports the study by presenting evidence from previous studies proving the relationship between perceived ease of use, perceived usefulness, and attitudes toward using ride-hailing apps.

The number of variables used in this study to verify users' attitudes towards ride-sharing apps is acceptable and comprehensive; however, customers evaluate security aspects once it comes to technology use since it requires the sharing of personal data. Therefore, future research on security and privacy would be conducted to establish users' attitudes.

Outstandingly, the current study discovered that perceived ease of use is significant in influencing perceived usefulness but is not directly related to attitude toward using, even though perceived usefulness influences attitude toward using. In the long run, customers believed that just because ride-sharing apps are simple to use does not mean they must be used. Therefore, the extent to which a person employs attitudes is determined by their perceived usefulness. In a nutshell, attitudes regarding ride-sharing apps are determined by their perceived usefulness. On the other hand, perceived ease of use is also crucial to influence perceived usefulness. Hence, the team responsible for operating and administering ride-sharing apps should choose the most promising and sophisticated technology to standardize users' attitudes.

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