

Reuse Intentions in Motorcycle Ride-Hailing among Millennials: Perceived Usefulness, Social influence, and Moderating Effect of Price Consciousness and Gender

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ABSTRACT

As motorcycle ride-hailing disrupts urban transportation in the Philippines, researchers delve into user behavior to understand why people choose these services despite traffic woes. The researchers surveyed 385 millennials from Metro Manila, Philippines. Descriptive Statistics and Multiple Regression revealed that Perceived Usefulness, Social Influence, and Perceived Risk all significantly predict Reuse Intention, with Perceived Usefulness being the strongest predictor. Moderated Regression and Hierarchical Regression uncover that Price Consciousness solely moderates the relationship between Perceived Risk and Reuse Intention, while Gender moderates the relationship between Perceived Usefulness and Social Influence on Reuse Intention. Therefore, it is recommended to (a) increase vigilance in sharing personal information, (b) implement stricter driver qualifications, (c) conduct quarterly training seminars for the drivers, and (d) include motorcycle classification accommodating various passenger weights.

Keywords: Motorcycle ride-hailing services; reuse intention; moderated regression, perceived usefulness.

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1. BACKGROUND OF THE STUDY

Global mobility has an estimated annual value worth \$5 trillion, wherein 60% of the miles traveled came from urban transportation (Brail, 2022). In line with this, the proliferation of ride-hailing services became a disruptive mobility option for urban transit as it serves as an

alternative to commuters' traditional commute practices and substitutes for individuals having their vehicles (Acheampong et al., 2020). It has been widely used in urban ground transportation since it opened several opportunities for increasing mobility, especially by expanding services to underserved areas. Hence, the global market for ride-hailing services is anticipated to grow by \$47 billion between 2020 and 2024, while global earnings from the sharing economy generated by different companies are predicted to reach \$335 billion in 2025 (Elnadi & Gheith, 2022).

Moreover, the transportation sector is in high demand, which is evident in the Philippines due to the importance of mobility in society, especially as traffic congestion has been one of the most imminent hindrances to an efficient trip around Metro Manila (Mutiarin et al., 2019; Yuana et al., 2019). According to De Jesus et al. (2018), the City of Manila came third among the cities in Asia in terms of time spent daily by commuters in traffic. Additionally, while "habal-habal" or "motorcycle taxis" have been one of the known traditions and practices in the Philippines in line with modes of transportation used in rural areas, highlighting the use as well of a shared two-wheeled single motorcycle by up to five or six passengers but is considered to be illegal, the emergence of the shared use of motorcycles is identified to become attractive, especially for the growing middle class in the urban area. The accessibility to the masses of technological advancement and applications contributed to the widespread intention of Filipinos to book a ride-sharing vehicle. As a result, ride-hailing services gained popularity in the market due to more flexible transportation options enabling the co-use of vehicles for travel, cost-sharing with the owner or other users, and offering commuters an alternative to dealing with traffic congestion, particularly Angkas, JoyRide, and Move It (L. Limpin, 2019). With this, the current researchers aim to work on the research gap and further investigate the factors that impact the reuse intention of consumers, especially with the millennials of Metro Manila on their perceived usefulness, social influence, and perceived risk to motorcycle ride-hailing services with price consciousness and gender as moderating variables.

In this study, reuse intention refers to the users' decision to continue using motorcycle ride-hailing services in the future (Elnadi & Gheith, 2022). Having said that, this study aims to investigate whether perceived, usefulness, social influence, and perceived risk play a role in the reuse intention of consumers while being moderated by price consciousness and gender. Perceived usefulness is defined as the extent to which technology can be used by an individual conveniently (Ashrafi et al., 2020). Secondly, according to Inan et al. (2022), social influence is a factor that influences an individual's behavior caused by interactions with their environment. Moreover, Perceived Risk refers to the negative perception of a user regarding technology (Elnadi & Gheith, 2022). These three independent variables will be used in the study to determine whether these factors affect the reuse intention of millennials in Metro Manila. Moreover, price consciousness is defined as the degree to which a consumer focuses on affordable and low prices, which may vary in intensity depending on the individual (C. K. H. Lee & Wong, 202). Meanwhile, in the study by Qiao et al. (2023), the gender of an individual was found to have differences in travel demands. These two (2) moderating variables will be used in determining the strength of the relationship between the dependent and independent variables. Statistical analysis was conducted in order to determine the predictability and impact of the variables in this study. While examining the statistical output, generalization can be made and correlated with the findings of previous researchers and add to the wealth of knowledge. This also helps address some of the research gaps that have been identified during the literature review.

The beneficiaries of this study are ride-hailing companies in the Philippines. Moreover, the researchers also seek to provide information to key stakeholders such as ride-hailing users, government, academe, and future researchers concerning the factors that affect the reuse intention. Furthermore, the findings of the study will help stakeholders gain valuable insights and knowledge that can aid them in investigating the ride-hailing industry in the Philippines.

Moreover, this study aims to answer the following question:

1. *What is the impact of perceived usefulness, social influence, and perceived risk on the reuse intention of millennials of Metro Manila, Philippines in using motorcycle ride-hailing services?*
2. *What are the moderating roles of gender and perceived usefulness to the relationship of perceived usefulness, social influence, and perceived risk to the reuse intention of millennials of Metro Manila, Philippines in using motorcycle ride-hailing services?*

2. REVIEW OF RELATED LITERATURE

2.1 Perceived Usefulness

Perceived usefulness is the extent to which an individual can simply and conveniently use technology (Ashrafi et al., 2020). According to Elnadi and Gheith (2022), people's decisions to keep using new technology in different circumstances are dependent on their perception of its usefulness. In the study of Ashrafi et al. (2020), Personal Innovativeness and Perceived Ease of Use were defined as factors of perceived usefulness. Personal Innovativeness refers to the desire of a person to use novel information technologies (Fauzi & Sheng, 2020). On the other hand, Perceived Ease of Use is a construct that is considered a key factor in understanding consumer use of innovative technology (Raza et al., 2021).

2.2 Social Influence

Social influence is defined as a factor that affects an individual's behavior from their interactions with their surroundings (Inan et al., 2022). These interactions can be categorized into three mechanisms such as identification, internalization, and compliance. Wherein, identification is used to describe a behavioral change of adopting ride-hailing services as a result of a commuter's way of conforming to the widely used practice in their environment. On the other hand, internalization is a mechanism that assesses the change in a commuter's behavior primarily caused by psychological pressure from their surroundings (Hariramani et al., 2024). Compliance is explained as a social influence mechanism leading to individuals complying or adopting mainly due to pressure from what the majority in the community does. Moreover, as stated by Elnadi and Gheith (2022), these social influences were associated with terms including social factors and subjective norms. Wherein social influence is described as changes in the individual's attitude or behavior as caused by the pressure from relevant individuals in their surroundings, including peers, family, and friends. With that being said, social influence refers to the impact of the opinions and suggestions received by an individual from relevant people to make decisions to use readily available ride-hailing services in mobile apps. Social Influence is associated with the information gathered from other referent individuals, which is not necessarily limited because of face-to-face interactions but also through social media (Akar et al., 2015). Additionally, De Jesus et al. (2018) mentioned that social influence raises the interest of a commuter in using motorcycle ride-hailing services brought by others' opinions. The study by Beyari & Abareshi (2016) identified Word of Mouth and Culture as antecedents of Social Influence. Word of Mouth is defined as exchanging

information made possible through face-to-face conversation or social sites. On the other hand, Culture emphasizes collectivism despite diversity influencing an individual's personal decisions.

2.3 Perceived Risk

Perceived risk refers to a user's negative perception, including the uncertainty of outcome brought by re-availing motorcycle ride-hailing services (Elnadi & Gheith, 2022). It is supported by the study conducted by Wang et al. (2019) which associated perceived risk with potential losses or negative consequences that come with reusing motorcycle ride-hailing services. In the same study, it revealed that Privacy Risk, Performance Risk, Conflict Risk, and Security Risk are the factors comprising the perceived risk of a user. Privacy Risk is defined as the threat of sharing personal information, while Performance Risk is a concept of dissatisfaction stemming from the unfulfilled claim of benefits. On the other hand, Security Risk is related to the injuries that may be incurred by an individual, and Conflict Risk is the threat brought by a possible lack of compensation and conflict resolution in the event of an accident.

2.4 Price Consciousness

Price consciousness is the extent to which a consumer focuses on affordable and low prices (Lee & Wong, 2021). Individuals who have lower incomes are more sensitive to travel costs and are more likely to compare prices from different modes of transportation. The chosen mode of transportation is significantly influenced by income level. The antecedent of price consciousness is Price. According to De Jesus et al. (2018), price is one of the essential factors that individuals consider when it comes to using ride-hailing services. Higher price points of other modes of transportation increase the likelihood of consumers using ride-hailing services due to them being more affordable than other modes of transit.

2.5 Gender

Gender is a complex and multi-dimensional concept encompassing physical characteristics, identity, and legal aspects (Lindqvist et al., 2021). This necessitates studying these dimensions separately, as simply asking about "gender" limits understanding and obscures research objectives.

Lindqvist et al. (2021), mentioned that gender is often categorized as male and female, even though it is not a binary variable. Consequently, determining gender is essential and intricate; therefore, looking into the different facets of gender, such as bodily aspects, gender identity, legal gender, etc. Lindqvist et al. (2021), looked at the bodily aspect of gender and how the terms sex and gender are often conflated. Moreover, the researchers describe how both terms differ from each other. The bodily aspect or the genitalia or physical attributes an individual is born with is what sex is. On the other hand, social factors, culture, and behavior relate to an individual's gender. Additionally, Lindqvist et al. (2021) mentioned that simply asking if a respondent is male or female creates an unclear goal. Given this, the study needs to look at how individuals identify themselves through their gender aside from categorizing it as male and female. In this study, the researchers will utilize gender as a moderating variable to see how it can strengthen the relationship between variables.

2.6 Reuse Intention

Reuse intention is defined as an individual's decision whether they would repurchase from the same company while also taking into consideration their current condition and future situations (Thuy Quynh Loan & Quang Hung, 2018) This indicates that an individual's current and future circumstances will most likely dictate whether they would reuse a service. Moreover, reuse intention refers to the intent of an individual to purchase products or services repeatedly after buying them once (Ladkoom & Thanasoopon, 2020). In the context of ride-hailing, Elnadi & Geith (2022), defined reuse intention as the user's choice to continue using ride-hailing services in the future. The study by Wang and Ngamkroekjoti (2018) identified perceived quality and perceived benevolence as variables affecting reuse intention. Perceived quality arises from comparing customer expectations with the actual performance of the product or service. (T. Wang & Ngamkroekjoti, 2018). Perceived benevolence is a form of social consciousness and a desire to put the needs of others ahead of oneself concerning personal gain (Nguyen, 2016).

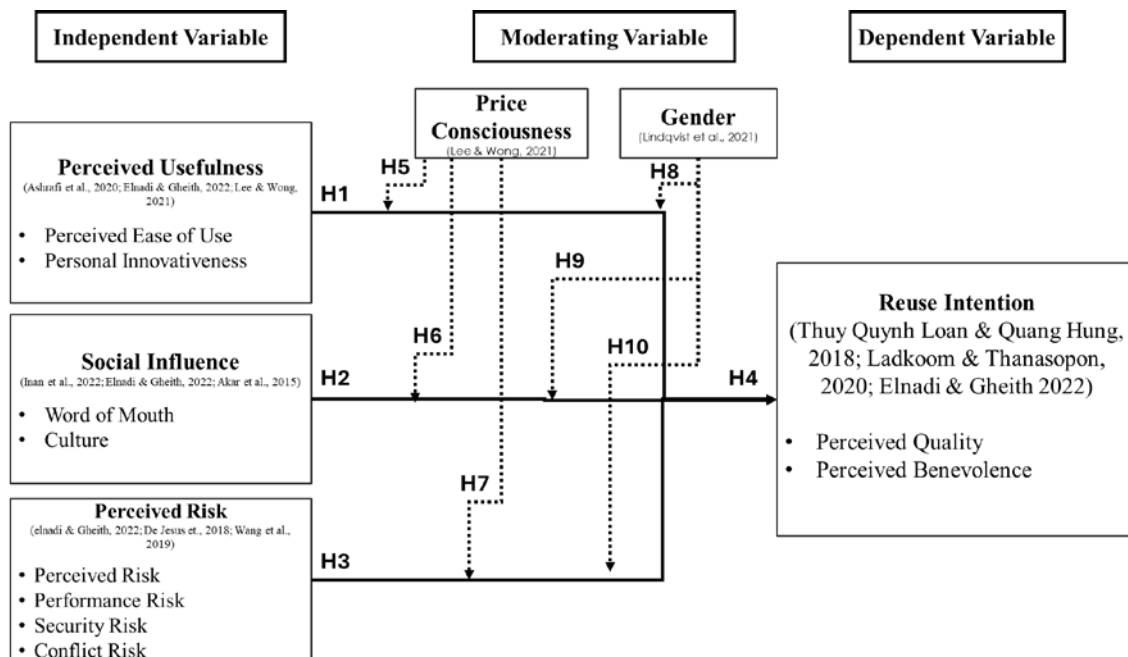
2.7 Research Gap

The researchers identified several theoretical gaps in prior literature concerning ride-hailing services in the Philippines, particularly the influence of perceived usefulness, social influence, and perceived risk on reuse intention moderated by price consciousness and gender (Teresa Lim, 2024). Limpin (2019) noted a gap in the understanding of factors affecting attitudes towards sharing transportation services, particularly two-wheeled or shared-motorcycle vehicles. Additionally, the researchers found limited studies examining price consciousness as a moderating variable in the choice of transportation services (Ha et al., 2020). Moreover, the researchers observed the need for a more focused framework as past studies used varied data collection methods and broad respondent criteria (De Jesus et al., 2018; Santos de Sá & Pitombo, 2021). For instance, De Jesus et al. (2018) used mixed methods and broad criteria, while Santos de Sá & Pitombo (2021) employed non-probability sampling, limiting the generalizability of findings. Therefore, the current study aims to address these gaps by using a stratified sampling method, offering a more targeted approach to data collection and enabling a more accurate representation of the sample. In sum, the research seeks to develop a comprehensive framework to examine the reuse intention of commuters toward ride-hailing services by integrating perceived usefulness, social influence, and perceived risk as independent variables moderated by price consciousness and gender. This will contribute to a better understanding of the factors influencing ride-hailing service choices and help fill the existing literature gap.

3. OPERATIONAL FRAMEWORK

The researchers derived the concepts from the Technology Acceptance Model and Theory of Planned Behavior while adopting several frameworks from previous studies to develop an operational framework. The framework created from the study of Wang and Ngamkroekjoti (2018) indicates variables that influence reuse intention, including perceived quality and perceived benevolence. Additionally, Ashrafi et al. (2020) identified personal innovativeness and perceived ease of use to impact perceived usefulness, while the study by Beyari and Abareshi (2016) is adopted to examine social influence on a consumer through word of mouth and culture. The study by Wang et al. (2019) concerning the roles of perceived risk was also adopted through privacy, performance, security, and conflict risk. Lastly, an individual's level of price consciousness concerning the value of saving money has been adopted based on the study by Lee and Wong (2021). Figure 1 presents the operational framework developed with the abovementioned theories and models adopted from various past studies.

Figure 1. Operational Framework measuring the impact of Perceive Usefulness, Social Influence, and Perceived Risk to the Reuse Intention with the moderating variables Price Consciousness and Gender



3.1 Hypotheses of the Study

The following are the hypotheses that have been developed, and are subject to be tested through this study:

Ho1: Perceived usefulness (PU) has no significant and positive impact on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho2: Social influence (SI) has no significant and positive impact on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho3: Perceived risk (PR) has no significant and positive impact on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho4: Perceived usefulness (PU), social influence (SI), and perceived risk (PR) have no significant and positive impact on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho5: Price Consciousness (PC) does not moderate the relationship of perceived usefulness (PU) on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho6: Price Consciousness (PC) does not moderate the relationship of social influence (SI) on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho7: Price Consciousness (PC) does not moderate the relationship of perceived risk (PR) on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho8: Gender (G) does not moderate the relationship of perceived usefulness (PU) on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho9: Gender (G) does not moderate the relationship of social influence (SI) on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

Ho10: Gender (G) does not moderate the relationship of perceived risk (PR) on the reuse intention (RUI) of millennials in Metro Manila, Philippines.

4. RESEARCH METHODOLOGY

The study followed descriptive, correlational, and causal-explanatory elements. A stratified sample of 385 millennials in Metro Manila, Philippines was selected using Slovin's formula and ratio-proportion methods based on the municipalities of Metro Manila. Quantitative data was collected via a 37-item online survey adapted from previous studies, utilizing a 5-point Likert scale. Moreover, to help strengthen the study, the respondents have used and availed of the services of motorcycle ride-hailing applications such as Angkas, JoyRide, or Move It. Considering the study's dependent variable, the respondents have availed and used the services of the motorcycle ride-hailing application at least twice before data gathering. The primary data gathering through a questionnaire underwent reliability testing to acquire relevant data and measure consistency. Additionally, the participants must have internet connectivity to access the online survey questionnaire.

The questionnaire's first section contained descriptive questions that gathered basic respondent information, such as their gender, age, and degree program, along with the number of times they have used motorcycle ride-hailing services, and their preferred and frequently used services. The second section contained eight (8) questions that gauged a user's perceived usefulness (PU) on motorcycle ride-hailing services, while the third section consisted of eight (8) questions that gauged how social influence (SI) affected the user's decision to use motorcycle ride-hailing services. The fourth section contained a total of 12 questions that measure how perceived risk (PR) affects a user's views on how motorcycle ride-hailing provides its services to passengers, and the fifth section consisted of three (3) questions that gauge user inclination to choose motorcycle ride-hailing services in the presence of price consciousness (PC). Lastly, the sixth section contained six (6) questions that measure a user's reuse intention (RUI) on motorcycle ride-hailing services.

To analyze the data and examine the relationship between the variables, Confirmatory Factor Analysis, Descriptive Statistics, Pearson Correlation, and Regression Analysis were used.

4.1 Ethical Consideration

Ethical considerations are paramount in this quantitative study to ensure the safety of participants' rights, confidentiality, and well-being. Informed consent was obtained from all participants before their involvement in the study, outlining the purpose, processes, and potential risks and benefits of participation. Confidentiality measures were applied to protect contributors' anonymity, with data stored securely and most effectively accessible to authorized researchers. Participants are confident in their right to withdraw from the study at any time without consequence. Additionally, the researchers have adhered to moral recommendations regarding the handling and dissemination of data, ensuring that findings are provided accurately and respectfully.

5. RESULTS OF THE STUDY

Data collection for the study ran from January 2024 to February 2024. The survey questionnaire was distributed through a Google Forms link. A total of 385 respondents was

collected, which consists of millennials in Metro Manila, Philippines. Descriptive statistics, correlation analysis, and structural equation modeling were performed through Microsoft Excel, Jamovi, and SPSS ver. 26.

5.1 Descriptive Statistics

The current study used descriptive, correlational, and causal-explanatory research designs. In analyzing the descriptive data, the majority, or 59.7%, of the survey respondents are female, equating to a number 229 out of 385; meanwhile, 40%, or 154, are male, and 0.3%, or one (1) transgender male answered the distributed questionnaire. In addition, 58.4% of the respondents are aged 21, followed by 20.3% and 14.6% aged 22 and 20, respectively. Proceeding with the frequency of use by the respondents, 35% have used motorcycle ride-hailing services 1-2 times, followed by 33% who have availed of such a transit option more than six times.

Table 1. Summary of Descriptive Statistics

Sub-Variable	Mean	Interpretation
Perceived Ease of Use (PEU)	4.37	Very High
Personal Innovativeness (PI)	3.41	Relatively High
Word-of-Mouth (WOM)	3.78	Relatively High
Culture (C)	3.96	Relatively High
Privacy Risk (PVR)	3.47	Relatively High
Performance Risk (PFR)	2.78	Low
Security Risk (SR)	3.11	Average
Conflict Risk (CR)	3.60	Relatively High
Price Consciousness (PC)	4.20	Very High
Perceived Quality (PQ)	3.99	Relatively High
Perceived Benevolence (PB)	4.07	Relatively High

Using Jamovi Software, mean scores were generated. For Perceived Ease of Use, with five questions, the mean score was 4.37, indicating high ease of use for motorcycle ride-hailing services. Personal Innovativeness, with three questions, had a mean score of 3.41, suggesting users are informed but hesitant about new apps. Social Influence, measured by Word of Mouth (mean score: 3.78) and Culture (mean score: 3.96), showed a relatively high impact on reuse intentions, driven by trusted individuals and social media. Perceived Risk, with sub-variables like Privacy, Performance, Security, and Conflict Risks, showed varying levels, with Security Risk being relatively high. Price Consciousness, as a moderating variable, had a very high mean score, highlighting the importance of cost savings. Lastly, Reuse Intention, influenced by Perceived Quality and Perceived Benevolence, had relatively high mean scores, indicating a reliable and safe experience for users. The researchers also conducted a Confirmatory Factor Analysis, which revealed a Comparative Fit Index of 0.902, interpreted to be satisfactory, as

well as a Root Mean Square Error of Approximation, indicating a good fit with a value of 0.0575, while the Tucker-Lewis Index to be a poor fit with a value of 0.887.

5.2 Inferential Statistics

5.2.1 Pearson's Correlation

Table 2 Summary of Pearson's Correlation Results

Variable	r	p	Interpretation
PU – RUI	0.571	<.001	Moderate Positive
SI – RUI	0.505	<.001	Moderate Positive
PR - RUI	-0.015	0.787	Very Low Negative

The conducted test revealed that both Perceived Usefulness and Social Influence have a moderate positive relationship to Reuse Intention with a Correlation Coefficient (rp) of 0.571 and 0.505, respectively. Additionally, Perceived Usefulness and Social Influence have a statistically significant relationship with Reuse Intention, based on their p-value of <.001. Meanwhile, Perceived Risk and Reuse Intention variables are not statistically significant, with a p-value of 0.787; at the same time, the Correlation Coefficient (rp) of -0.015.

5.2.2 Linear Regression

Table 3 Summary of Simple Linear Regression Results

Variable	Estimate	p	R ²
PU	0.587	<.001	0.326
SI	0.391	<.001	0.255
PR	-0.0122	0.787	0.000234

A Simple Linear Regression was conducted to examine the relationship and effect of every independent variable on the study's dependent variable. Among the three independent variables, perceived usefulness has the most significant impact on Reuse Intention, with 32.6% of the variability explained, while the least is Perceived Risk, which explains 0.0234% of the data. In conducting the simple linear regression between the independent and dependent variables, Tables 3 show the Model Coefficient or Estimate. Table 3 reveals that for every unit increase in perceived usefulness, there is a significant p-value and 0.587 increase in the reuse intention of motorcycle ride-hailing users. Meanwhile, there is a significant p-value and 0.391 increase in the reuse intention for every unit increase of social influence while a 0.012 decrease in reuse intention for every unit increase in perceived risk.

5.2.3 Multiple Linear Regression

Table 4 presents the model fit measures in the conducted multiple linear regression. The R-value determined the correlation between the three predictor variables, such as Perceived Usefulness, Social Influence, and Perceived Risk, while Reuse Intention is the response variable. In using the Jamovi Software, the correlation coefficient is 0.617, implying a high positive correlation or relationship. Additionally, the R² and Adjusted R² values are 38% and 37.4%, respectively. With that being stated, a variance of 38% and 37.4% in Reuse Intention is explained by Perceived Usefulness, Social Influence, and Perceived Risk. This indicates

that the three predictor variables only explain less than half of the variance in Reuse Intention. Meanwhile, the Adjusted R^2 is 37.4%, which is lower than the computed R^2 . Furthermore, the p-value is $<.001$, implying that the three independent variables are statistically significant influences on the Reuse Intention as a whole as the value is lower than the 0.05 confidence interval.

Table 4. Model Fit Measures for PU, SI, PR, and RI

Model	R	R^2	Adjusted R^2	Overall Model Test			
				F	df1	df2	p
1	0.617	0.380	0.374	63.6	3	311	$<.001$

Table 5. Model Coefficients for PU, SI, PR, and RI

Variable	Estimate	SE	Lower	Upper	<i>t</i>	<i>p</i>
Intercept	1.6999	0.2110			8.06	$<.001$
PU	0.4397	0.0563	0.320	0.53511	7.82	$<.001$
SI	0.2070	0.0423	0.160	0.37477	4.90	$<.001$
PR	-0.0712	0.0358	-0.178	-0.00101	-1.99	0.047

Table 5 shows the model coefficient for perceived usefulness, Social Risk, and Perceived Risk as independent variables and Reuse Intention as the current study's dependent variable. Based on the table, shows that all the independent variables have a significant effect on the Reuse Intention as the p-value of the variables is less than 0.05. With that being stated, the table also presents that in every unit increase in Perceive Usefulness, there is a 0.4397 increase in Reuse Intention. Meanwhile, in every unit increase in Social Influence, there is an increase of 0.2070 in the Reuse Intention. On the other hand, in every unit increase of Perceived Risk, there is a decrease of 0.0712 in the Reuse Intention. The result and effect of the Perceived Risk are opposite from the other two independent variables as Perceived Risk is a negative factor in contrast with the positive aspect being studied through Perceived Usefulness and Social Influence. Additionally, the results show that among the three independent variables, Perceived Usefulness is the strongest predictor variable for Reuse Intention.

5.2.4 Moderating Effects of Price Consciousness

Table 6. Summary of Moderation Estimates

Variable	Estimate	SE	Lower	Upper	Z	<i>p</i>
PU * PC	-0.0112	0.0482	-0.106	0.0832	-0.233	0.816
SI * PC	0.0366	0.0362	-0.0343	0.108	1.01	0.311
PR * PC	0.200	0.0531	0.0962	0.3042	3.77	$<.001$

Table 6 presents moderation estimates for perceived usefulness, social influence, and perceived risk as independent variables, and reuse intention as the dependent variable, with price consciousness as the moderating variable. The results indicate that the moderating effect of price consciousness on the relationship between perceived usefulness and reuse intention

is not statistically significant ($p > 0.05$, estimate = -0.0112, SE = 0.048). Similarly, the moderation effect of price consciousness on the relationship between social influence and reuse intention is also not significant ($p = 0.311$, estimate = 0.0366, SE = 0.0362). However, the moderating effect of price consciousness on the relationship between perceived risk and reuse intention is statistically significant ($p < 0.05$, estimate = 0.200, SE = 0.0531), indicating its importance in influencing reuse intention.

5.2.5 Moderated Hierarchical Regression

Table 7. Summary of Moderated Hierarchical Regression

Model	Unstandardized	Standard Error	Standardized	t	p
Gender * PU	-0.190	0.094	-0.723	-2.014	0.045
Gender * SI	-0.188	0.075	-0.717	-2.498	0.013
Gender * PR	0.081	0.090	0.275	0.899	0.369

Table 7 provides a concise summary of a moderated hierarchical regression examining the impact of perceived usefulness, social influence, and perceived risk on reuse intention, with gender as the moderating variable. The results indicate that the interaction between gender and perceived usefulness (Gender * PU) negatively predicts reuse intention ($p = 0.045$). Similarly, the interaction between gender and social influence (Gender * SI) also negatively moderates reuse intention ($p = 0.013$), while the interaction between gender and perceived risk (Gender * PR) does not predict or moderate reuse intention ($p = 0.369$).

5.3 Hypothesis Testing

Figure 2 displays the revised operational framework based on the statistical analysis done in the previous chapters. The first three hypotheses, particularly H1, H2, and H3 aim to determine if the three independent variables, Perceived Usefulness (PU), Social Influence (SI), and Perceived Risk (PR) have a significant and positive effect on the dependent variable, Reuse Intention (REU). Moreover, the p-values of H1, H2, and H3 are all $< .001$, this suggests that each independent variable has a significant and positive relationship with the dependent variable. On the other hand, H4 focuses on the collective impact of the three independent variables on Reuse Intention.

Hypotheses five to seven are concerned with the effect of Price Consciousness (PC) on moderating the relationship between the three independent variables PU, SI, and PR to the dependent variable, REU. H5, H6, and H7 utilized moderation analysis with results being found in Table 6. According to the p-value of the moderation analysis, PR and PC have a significant relationship, while the relationship of PU and SI to PC is found to be insignificant. Lastly, Gender is concerned with hypotheses eight to ten, wherein moderated hierarchical regression was conducted to explore its moderating effect on the relation of the independent and dependent variables. The values for, H9, and H10 originate from Table 7 the moderating hierarchical regression are 0.045 and 0.013 respectively, which indicates that the interaction of Gender to PU and SI is significant. On the other hand, the p-value for Table 7 is 0.369, suggesting that the interaction of Gender and PR does not moderate Reuse Intention.

Figure 2. Operational Framework with statistical results

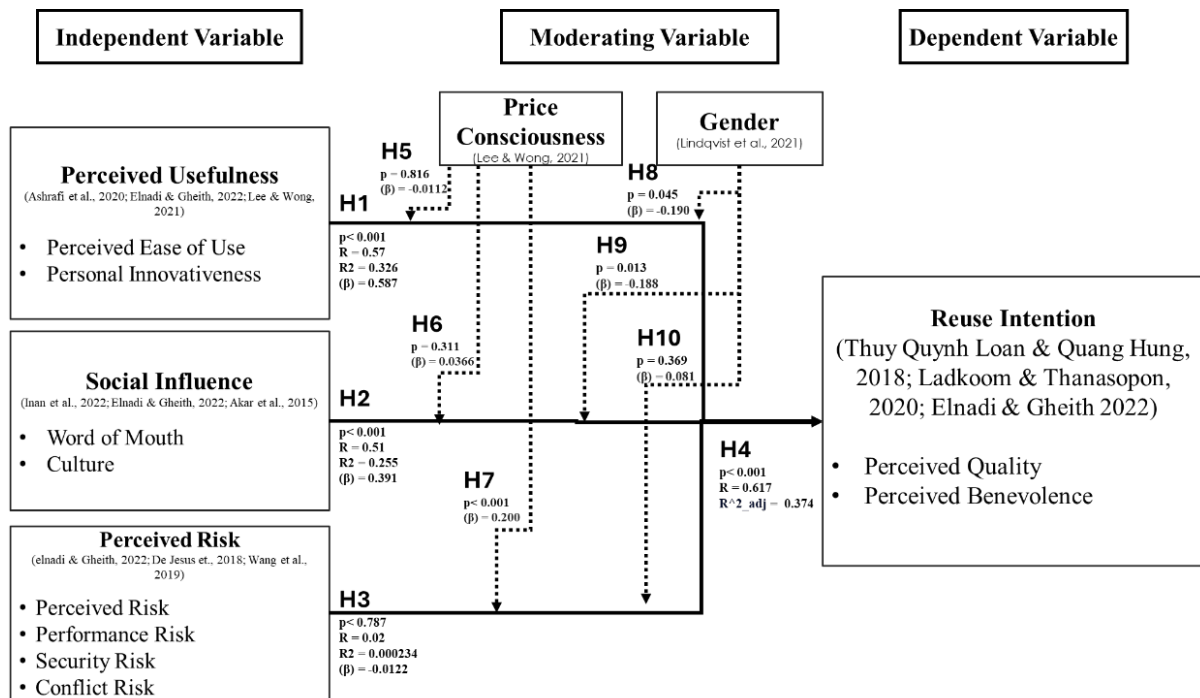


Table 8. Summary of Hypothesis Testing Results

Hypotheses	Statistical Data	Results
H01: Perceived usefulness (PU) has no significant and positive impact on the reuse intention (RUI) of millennials of Metro Manila, Philippines	$p < .001$ $R = 0.571$ $R^2 = 0.326$ Beta Estimate = 0.587	Reject Null Hypothesis
H02: Social influence (SI) has no significant and positive impact on the reuse intention (RUI) of millennials of Metro Manila, Philippines	$p < .001$ $R = 0.505$ $R^2 = 0.255$ Beta Estimate = 0.391	Reject Null Hypothesis
H03: Perceived risk (PR) has no significant and positive impact on the reuse intention (RUI) of millennials of Metro Manila, Philippines	$p = 0.787$ $R = 0.0153$ $R^2 = 0.000234$ Beta Estimate = -0.0122	Do not Reject Null Hypothesis
H04: Perceived usefulness (PU), social influence (SI), and perceived risk (PR) have no significant and positive impact on the reuse intention (RUI) of millennials of Metro Manila, Philippines	$p < .001$ $R = 0.617$ Adjusted $R^2 = 0.374$ Beta Estimate (PU) = 0.4397 Beta Estimate (SI) = 0.2070 Beta Estimate (PR) = -0.0712	Reject Null Hypothesis
H05: Price Consciousness (PC) does not moderate the relationship of perceived usefulness (PU) on the reuse intention (RUI) of millennials of Metro Manila, Philippines	PU * PC $P = 0.816$ Beta Estimate = -0.0112	Do not Reject Null Hypothesis
H06: Price Consciousness (PC) does not moderate the relationship of social influence	SI * PC $P = 0.311$	Do not Reject Null Hypothesis

(SI) on the reuse intention (RUI) of millennials of Metro Manila, Philippines Beta Estimate = 0.0366

H07: Price Consciousness (PC) does not moderate the relationship of perceived risk (PR) on the reuse intention (RUI) of millennials of Metro Manila, Philippines PR * PC P < 0.001 Beta Estimate = 0.200 Reject Null Hypothesis

H08: Gender (G) does not moderate the relationship of perceived usefulness (PU) on the reuse intention (RUI) of millennials of Metro Manila, Philippines p = 0.045 R² = 0.336 Adjusted R² = 0.329 Beta Estimate = -0.190 Reject Null Hypothesis

H09: Gender (G) does not moderate the relationship of social influence (SI) on the reuse intention (RUI) of millennials of Metro Manila, Philippines p = 0.013 R² = 0.269 Adjusted R² = 0.262 Beta Estimate = -0.188 Reject Null Hypothesis

H010: Gender (G) does not moderate the relationship of perceived risk (PR) on the reuse intention (RUI) of millennials of Metro Manila, Philippines p = 0.369 R² = 0.003 Adjusted R² = -0.006 Beta Estimate = 0.081 Do not Reject Null Hypothesis

6. CONCLUSION

Due to ongoing problems with traffic congestion, the ease of COVID restrictions, and the rapid increase of technology use in the Philippines, daily commuters seek to find other transportation alternatives available to get to their destinations. Companies leverage the available opportunities in using motorcycles and thus have increased the popularity and availability of ride-hailing services that can cater to the increase in demand for other transportation modes. With the aid of Jamovi software, a correlation of 0.617 is attained between Perceived Usefulness, Social Influence, and Perceived Risk on the Reuse Intention which indicates that there is a high positive correlation. Additionally, in the multiple regression analysis conducted, Perceived Usefulness, Social Influence, and Perceived Risk attained p-values of <.001, <.001, and 0.047 respectively, which is significantly lower than the confidence level of 0.05. This indicates that all independent variables have significant effects on the Reuse Intention of motorcycle ride-hailing services of the respondent. The findings also prove to support the fourth alternative hypothesis of the study, wherein the aforementioned variables have significant impacts on the dependent variable. With this, it can be said that the following results are in line with the study of Elnadi and Gheith (2022), wherein Perceived Usefulness, Social Influence, and Perceived Risk are significant to Reuse Intention due to the following reasons: the usefulness of technology increases intention to use, peer influence increases likelihood of motorcycle ride-hailing usage, and perceived safety and risks alters an individual's acceptance, respectively.

Concerning the moderating variables used in the study, Ha et al. (2020) have observed that limited studies explore the effect of price consciousness on commuter decisions on transit mode. In the study of Nguyen-Phuoc et al. (2022), it was mentioned that price informs a consumer on their decisions regarding what transportation mode they will use. Additionally, De Jesus et al. (2018) state that the cheap fares of motorcycle ride-hailing services also contribute to participant reuse intention on the said services. Such studies have shown the relevance of price consciousness and its effects on the decisions of commuters in using

different transportation methods, however, not necessarily used as moderating variables, but as other factors to consider. With this, a moderated regression analysis was conducted to examine the effects of the moderating variables of the independent variables and the dependent variable. The results from the conducted moderated regression show that price consciousness as a moderating variable does not have a significant impact on the relationship between perceived usefulness and reuse intention, and social influence and reuse intention, with p-values of 0.816 and 0.311 respectively. Such results imply that fare prices do not significantly impact the perceived usefulness or social influence when it comes to reuse intention on motorcycle ride-hailing applications, and thus, users still avail of services from Angkas or JoyRide to meet their transportation needs. However, both moderated regression result shows that the direct effects of perceived usefulness, social influence, and price consciousness on reuse intention are significant. This would mean that the presence of price consciousness cannot deter individuals from reusing motorcycle ride-hailing services, as the usefulness of the service, as well as influence from family and peers, is more influential. However, if considering only the price of the ride-hailing services, the reuse intention of commuters is likely to be influenced, depending on if they perceive the fare to be pricey or cheap at the time of their booking. Such findings are supported by the results attained from the mean scores wherein the respondents use motorcycle ride-hailing services mainly because it is cheaper compared to other transportation alternatives, is relatively straightforward to use, and is convenient. Additionally, peer suggestions on service usage are also evident, particularly when the respondent's destination is near. Consequently, if fares are cheaper compared to other transportation methods, respondents avail of motorcycle ride-hailing services. Otherwise, they would check through other ride-hailing applications to avail themselves of cheaper fares or use other modes of transportation instead.

Price consciousness significantly moderates the relationship between perceived risk and reuse intention ($p < .001$). Users are less likely to reuse motorcycle ride-hailing services if prices are high, as they may not see the cost as justified given the safety risks. However, lower fares may encourage usage despite potential risks, as the benefits of cost and convenience outweigh the dangers. Gender, used as a demographic factor, does not predict reuse intention on its own ($p = 0.722$). However, gender significantly moderates the relationship between perceived usefulness ($p = 0.045$) and social influence ($p = 0.013$) with reuse intention. This suggests that gender influences reuse intention in the presence of service usefulness and social influence. Conversely, gender does not moderate the relationship between perceived risk and reuse intention ($p = 0.369$). Regardless of gender, users are willing to reuse motorcycle ride-hailing services despite risks like accidents or harassment, as the benefits may outweigh the potential dangers.

To conclude, the independent variables of the study impact the Reuse Intention of millennials of Metro Manila, Philippines in different ways as moderated by Price Consciousness and Gender. For instance, Perceived Usefulness influences Reuse Intention whether it be as an individual variable, or as moderated by Price Consciousness or Gender. This would indicate that users evaluate perceived usefulness and consider this as a prerequisite before they reuse any motorcycle ride-hailing service and in consideration of their gender. However, Price Consciousness itself does not significantly moderate Perceived Usefulness and Reuse Intention, implying that fare prices, no matter how high or low, do not change the perception of the usefulness of the said service. On the other hand, Social Influence has incurred similar results as it positively impacts Reuse Intention. As moderated by Price Consciousness, however, the relationship of Social Influence and Reuse Intention are not moderated which indicates that fare prices are not enough to alter one's intention to use the said services when

convinced by peers or social media posts. Lastly, Perceived Risk is the only predictor variable that is not significant to Reuse Intention individually, nor is it when moderated by Price Consciousness or Gender. Such a finding would imply that despite the presence of danger before, during, or after transit in ride-hailing services, potentially high booking prices, and regardless of one's gender, said users are still willing to reuse motorcycle ride-hailing services, as the benefits this provides may outweigh the risks.

With the analysis conducted and relating the findings of the research with previous research, it was able to address the gaps it was able to identify. Due to the findings we are now able to understand the factors that affects the attitude towards shared transportation services, especially two-wheeled or shared-motorcycle vehicles. Based on the findings as well, the study can be used as a stepping stone for further research on the area of Perceived Usefulness, Social Influence, Perceived Risk and Reuse Intention in the area of Motorcycle Ride-hailing Services. Furthermore, this study provides empirical evidence that expands on existing models of technology acceptance and reuse intention, particularly within the unique sociocultural and economic context of Metro Manila. It also underscores the need for future research to consider the role of moderating variables, such as price consciousness and gender, in shaping consumer decisions in similar contexts. By integrating these findings with existing literature, the study offers a more nuanced understanding of the factors driving the adoption and reuse of emerging transportation technologies, thereby contributing to both theoretical and practical advancements in the field.

7. RECOMMENDATION

The following are recommendations provided to the stakeholders: First, **ride-hailing users** are to increase vigilance in sharing personal information, as well as gather feedback from other users and share their experiences online to raise awareness of ride-hailing service quality. As for **ride-hailing companies**, stricter qualifications for drivers are recommended to improve quality service and include motorcycle classification to accommodate various passenger weights to ensure safety. Third, the **academe** may develop new frameworks to provide a more in-depth understanding of factors affecting the attitude of the masses. They can also conduct collaborative cross-disciplinary studies to understand the dynamics of disruptive technology better. Furthermore, to aid the **government**, it is recommended to pass laws that regulate motorcycle ride-hailing companies to set service standards. Additionally, conducting quarterly training programs can be done to improve overall driver performance. Lastly, **future researchers** should explore other variable combinations, including price consciousness and gender. Exploring Gender as a variable through qualitative data may also be done to attain additional information. Moreover, research on ride-hailing in different scopes, as well as on the feasibility of female drivers catering to female passengers, may be done to open a new aspect of ride-hailing to focus on.

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