



TRUST TRANSFER IN ONLINE TRANSPORTATION

Ni Made Purnami

Universitas Udayana

Correspondence: madedpurnami@unud.ac.id

Submitted: 21 September 2023, Revised: 5 October 2023, Published: 31 October 2023

Abstract

Building trust in online transportation services is crucial due to the inherent unfamiliarity between customers and drivers. This study specifically aims to explore the dynamics of trust transfer within the realm of online transportation and its subsequent impact on fostering customer loyalty. The population in this study consists of online transportation users in Bali. The number of samples examined is 300 individuals using purposive sampling method. Data collection was executed through an online platform utilizing a Google form. Subsequently, the collected data underwent analysis using Smart PLS. The study's outcomes are noteworthy, indicating that: (1) Trust in the application has a positive effect on building trust in drivers; (2) Trust in the application significantly influences and promotes customer loyalty; (3) Trust in drivers plays a pivotal role in increasing customer loyalty; and (4) Trust in drivers acts as a partial mediator in the relationship between trust in the application and trust in drivers. These findings contribute valuable insights into the intricacies of trust dynamics within the online transportation sector.

Keywords: trust transfer, customer loyalty, online transportation, generation

A. INTRODUCTION

Online transportation are becoming increasingly popular nowadays (Shah & Kubota, 2022), influenced by advances in information technology (Nguyen-Phuoc et al., 2022). Online transportation is a service where users of internet booking tools can request rides from privately owned cars (Su et al., 2021). The online transportation service utilizes the global positioning system (GPS) to enable users to find the nearest vehicle using an application installed on a smartphone (Shah & Kubota, 2022; Shaheen & Cohen, 2019). Drivers who are application members and receive travel orders can immediately pick them up according to the location point provided by the user (Shen et al., 2015). Fees are charged for each trip according to the distance and can be paid in cash or non-cash (Rayle et al., 2016).

Building customer trust in online transportation is very important because transactions on online transportation applications such as Grab and Gojek generally occur with passengers and drivers who do not know each other, or in other words riding with strangers (Mas-Machuca et al., 2021). In addition, most drivers are private car owners without professional training (Shao et al., 2020). In an online environment, trust is changed by platforms/applications by providing a means of communication and building relationships between consumers and drivers (Ou et al., 2014). Online transportation applications reduce customer worries by regulating driver behavior and increasing customer trust (Shao & Yin, 2019). So the application has the role of increasing trust among foreigners (Huurne et al., 2017). Thus, there are two types of trust in the online transportation service: trust in the application and trust in drivers (Mao et al., 2020).

Indonesia is a country with a high number of online transportation service users. This can be seen based on the 2021 *we are social* data which shows that online

transportation users in Indonesia are the highest compared to other countries, namely 65.3%. The high demand for online transportation is due to low prices and ease of use (Guo et al., 2017). Online transportation in Indonesia are Gojek, Grab, Maxim, In Driver, Anterin and others. In each region there is also a local online transportation with similar services.

Despite the global rise in popularity of online transportation services, research examining trust transfer within this domain remains relatively scarce. This study aims to address this gap by focusing specifically on trust transfers in online transportation and their consequential impact on customer loyalty. By delving into this underexplored area, we seek to contribute valuable insights into the dynamics of trust within the online transportation sector and its implications for customer loyalty. The trust variable is very important in online transportation because trust plays a vital role in continuing transactions (Ert et al., 2016; L. Zhang et al., 2018). According to Senić & Marinković (2014), customer loyalty refers to the extent to which a customer intends to use a particular product or service over a long period. Maintaining customer loyalty is a crucial strategic tool for remaining competitive in the market (Forgas et al., 2010). Thus loyalty to online transportation refers to the intention to continue using online transportation and recommending it to other customers (Nguyen-Phuoc et al., 2021).

The motivation for conducting this study is to provide a better understanding of consumer loyalty in online transportation. This research considers trust transfer as an antecedent of loyalty which consists of trust in application and trust in driver. Previous studies investigating trust transfer in respective online transportation were limited. This research makes a theoretical contribution to the transportation literature by revealing trust transfers in online transportation, thus adding insight into the importance of trust in online transportation and its impact on customer loyalty. Practically, the study results provide input to online transportation companies to further increase trust in both applications and drivers in retaining customers.

B. LITERATURE REVIEW

1. Trust Transfer In Online Transportation

In online transportation, three parties are involved in each transaction: the application provider company (in this case, acting as an intermediary), service users/passengers and drivers who are members of the application (Weber, 2014). Online transportation have differences from offline taxi services because drivers in online transportation are private car owners who have not received professional training (Shao et al., 2020). Mittendorf (2017) found that increasing trust in applications affects consumer trust in providers. Trust in online transportation applications increases driver trust (Chen et al., 2022; Mas-Machuca et al., 2021; Shao & Yin, 2019; Zhang, 2018). Customers who already trust online transportation applications such as Gojek, Grab or Maxim will tend to have more confidence in the drivers attached to the application. Based on theoretical studies and empirical research on the relationship between trust in platform and trust in provider, the hypothesis is proposed:

H₁ : Trust in application increases trust in drivers in online transportation

2. The Effect Of Trust On Customer Loyalty

Previous research showed that trust positively impacts loyalty (Ahn et al., 2021; Amoako et al., 2021; Jain et al., 2018; Zheng et al., 2017). In online transportation, there are two constructs of trust: trust in the platform/application and trust in the driver

(Hawlitcheek et al., 2016). The study's results (Shao & Yin, 2019) found that trust in online transportation applications can increase the desire to continue to use the application while traveling. Customers rely on trusted applications in choosing the online transportation service they use. Park & Tussyadiah (2020) conducted a study on Airbnb (home sharing) found that trust in the Airbnb application is positively correlated with behavioral intentions. Research conducted by (Chen et al., 2022) found that in sharing economy services (in this case ride-hailing) trust in the application has a positive and significant effect on customer loyalty. The study (Mittendorf, 2017) also found that trust in drivers impacts future consumer behavior towards the online transportation service used. Thus, the hypothesis proposed in this study is:

H_{2a} : Trust in application increases customer loyalty in online transportation

H_{2b} : Trust in driver increases customer loyalty in online transportation

3. The Mediating Role Of Trust In Driver On The Effect Of Trust In Application On Customer Loyalty

Previous studies conducted by Shao & Yin (2019) m found that trust in drivers partially mediates the effect of trust in the application on continuance intention User trust in the platform can increase user trust in the drivers incorporated in the application and this in turn has an impact on the desire to continue using the same service in the future. Previous research (Wang et al., 2021) on brand communities shows that brand trust mediates the influence of trust in social media on word of mouth. In other words, it can be explained that Trust in social media brand community can increase trust in the brand. Then trust in the brand encourages consumers to do word of mouth through social media. Thus, the hypothesis proposed in this study is:

H3: Trust in driver mediates the effect of trust in application on customer loyalty

C. METHOD

This research is a type of quantitative research that investigates trust transfers in online transportation and their impact on customer loyalty. The population in this study consists of Generation Y and Z users of online transportation in Bali. Generation Y and Z were chosen because this generation is a digital native and familiar with online transportation. Data is collected on 300 online transportation service users. The data collection method used was purposive sampling, and data collection was carried out online using a Google form. Furthermore, the data that has been collected is analyzed using Smart PLS for further examination and interpretation.

D. RESULT AND DISCUSSION

Respondents in this study amounted to 300 people consisting of 127 generations of Y and 173 generations of Z. These results show that online transportation are used more by generation Z than generation Y. The most frequent frequency of use is once a week with a duration of using the service for more than one year. Jobs are dominated by customers who work as students, followed by private and government employees jobs.

1. Measurement model analysis

Testing for convergent reliability and validity is carried out first in analyzing the measurement model. Reliability testing refers to the internal consistency of items, while testing convergent validity explains convergent validity explaining the extent to which the relationship between items corresponds to the construct as predicted by theory (Hair et al., 2017). The test results are presented in Table 1. The results show that the factor

loading values for all items have exceeded 0.7. Cronbach's alpha value and composite reliability for all constructs above 0.7 and the AVE root value above 0.5. The test results in this study have provided adequate support in establishing convergent reliability and validity.

Table 1. Analysis of Reliability and Convergent Validity

Konstruk	Items	Loadings	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Trust in Application (TA)	TA1	0.884	0.855	0.857	0.912	0.775
	TA2	0.892				
	TA3	0.864				
Trust in Driver (TD)	TD1	0.857	0.923	0.924	0.942	0.765
	TD2	0.887				
	TD3	0.884				
	TD4	0.878				
	TD5	0.867				
Customer Loyalty (CL)	CL1	0.906	0.891	0.897	0.932	0.820
	CL2	0.908				
	CL3	0.903				

Source: Primary data (2023)

Discriminant validity testing aims to assess whether a construct differs from other constructs. Discriminant validity is checked by looking at the square root of the AVE for each construct that is greater than the correlation of the construct with other constructs (Hair et al., 2017). As shown in table 2, the square root value of AVE has exceeded the construct correlation with other variables, showing good test results on discriminant validity.

Table 2. Discriminant Validity

	CL	TA	TD
CL	0.906		
TA	0.512	0.880	
TD	0.567	0.753	0.875

Source: Primary data (2023)

2. Structural Model Analysis

Structural model analysis was built by examining the relationship between trust in the application, trust in drivers and customer loyalty. The structural model's predictive accuracy (R²) value shows an explanatory power of 33.8% for customer loyalty and 56.8% for trust in driver. In addition, the Q² value is 0.406 for trust in drivers and 0.255 for customer loyalty. Both are higher than 0, indicating predictive relevance (Hair et al., 2017).

3. Hypothesis Test

The results of the structural model testing are presented in Fig. 1. Findings indicate All pathways are statistically significant. Table 3 provides a summary of the hypotheses and conclusions.

Table 3. Structural Path Results

Hypothesis	Structural path	Path coefficient	P values	Hypothesis results
H1	TA → TD	0.753	0.000	Accepted
H2a	TA → CL	0.195	0.023	Accepted
H2b	TD → CL	0.420	0.000	Accepted
H3	TA → TD → CL	0.316	0.000	Accepted

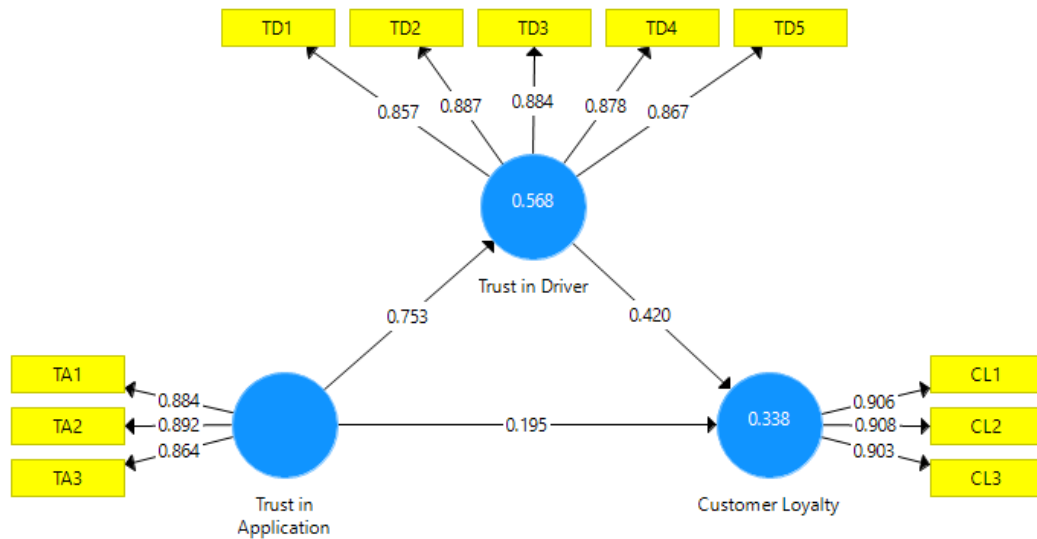


Figure 1. Outer Model Result

As hypothesized in H1, trust in application can increase trust in drivers in online transportation ($\beta = 0.753$, $P < 0.05$), indicating customer trust in online transportation applications which are currently favorites able to increase trust in drivers who are members of online transportation applications. Thus, the results of this study accept H1. The results of this study support a previous study conducted by Mittendorf (2017) which stated that increased trust in applications affects increased consumer trust in providers. The research findings also support research (Chen et al., 2022; Shao & Yin, 2019; J. Zhang, 2018) (Mas-Machuca et al., 2021) that Trust in online transportation applications increases trust in drivers.

Testing H2a, namely trust in application, positively impacts customer loyalty ($\beta = 0.195$, $P < 0.05$). The test results support H2a that customer trust in online transportation applications can increase customer loyalty. This study's findings align with previous research conducted (Shao & Yin, 2019) that trust in online transportation applications can increase the desire to continue using these applications while traveling. This study also supports research Park & Tussyadiah, 2020) on home-sharing applications (Airbnb), which states that trust in the app positively correlates with behavioral intention. Furthermore, the results of the study support that trust in an application can increase customer loyalty.

The H2b test, namely trust in driver, positively impacts customer loyalty ($\beta = 0.420$, $P < 0.05$). the test results support H2b that trust in online transportation drivers can increase customer loyalty. The findings of this study support a study conducted by (Mittendorf, 2017) which found trust in drivers had an impact on future consumer behavior towards the online transportation service used. Furthermore, in testing the trust in driver loyalty mediating variable ($\beta = 0.316$, $P < 0.05$) the results show support for H3. This study's results align with previous studies, namely Shao & Yin (2019) and Wang et al., (2021). Nilai VAF dihitung untuk menentukan jenis mediasi dari trust in driver. The VAF value is calculated to determine the type of mediation from the trust in driver. The VAF value is obtained from the indirect effect/total effect formulation. The VAF value in this study was 21%, indicating a partial mediating role (Nitzl et al., 2016).

4. Implications

The study results show that trust in online transportation applications can increase driver trust, increasing customer loyalty. The results of the study indicate that there is a trust transfer mechanism between trust in online transportation applications and trust in drivers. Theoretically, this research enriches insights regarding trust transfers in online transportation. The study results also illustrate that trust transfers between trust in applications and trust in drivers impact customer loyalty. Practically the study results can guide application service providers in the province of Bali to build customer trust in applications. The existence of trust transfers in online transportation enable service providers to select and provide regulations and training to drivers to improve customer service and trust.

E. CONCLUSION

This research investigates the phenomenon of trust transfer within the context of online transportation services and its consequential impact on customer loyalty. The findings of the study reveal several key insights: (1) Trust in the application positively influences trust in drivers; (2) Trust in the application serves as a significant factor in fostering customer loyalty; (3) Trust in the driver is a critical determinant of customer loyalty; and (4) Trust in the driver partially mediates the relationship between trust in the application and trust in the driver. These results underscore the intricate dynamics of trust within the online transportation domain and emphasize the interconnectedness between trust elements in shaping customer loyalty.

REFERENCES

- Ahn, J., Shamim, A., & Park, J. (2021). Impacts of cruise industry corporate social responsibility reputation on customers' loyalty: Mediating role of trust and identification. *International Journal of Hospitality Management*, *92*, 102706.
- Amoako, G. K., Dzogbenuku, R. K., & Kumi, D. K. (2021). Service recovery and loyalty of Uber sharing economy: The mediating effect of trust. *Research in Transportation Business & Management*, *41*, 100647.
- Chen, Y., Prentice, C., Weaven, S., & Hisao, A. (2022). The influence of customer trust and artificial intelligence on customer engagement and loyalty – The case of the home-sharing industry. *Frontiers in Psychology*, *13*(August), 1–15. <https://doi.org/10.3389/fpsyg.2022.912339>
- Ert, E., Fleischer, A., & Magen, N. (2016). Trust and reputation in the sharing economy: The role of personal photos in Airbnb. *Tourism Management*, *55*, 62–73. <https://doi.org/10.1016/j.tourman.2016.01.013>
- Forgas, S., Moliner, M. A., Sánchez, J., & Palau, R. (2010). Antecedents of airline passenger loyalty: Low-cost versus traditional airlines. *Journal of Air Transport Management*, *16*(4), 229–233.
- Guo, S., Liu, Y., Xu, K., & Chiu, D. M. (2017). Understanding passenger reaction to dynamic prices in ride-on-demand service. *2017 IEEE International Conference on Pervasive Computing and Communications Workshops, PerCom Workshops 2017*, 42–45. <https://doi.org/10.1109/PERCOMW.2017.7917517>
- Hair, J., Hult, G. T., Ringle, C., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* - Joseph F. Hair, Jr., G. Tomas

- M. Hult, Christian Ringle, Marko Sarstedt. In *Sage*.
- Hawllitschek, F., Teubner, T., Adam, M. T. P., Borchers, N. S., Moehlmann, M., & Weinhardt, C. (2016). Trust in the sharing economy: An experimental framework. *The Thirty-Seventh International Conference on Information Systems (ICIS)*.
- Jain, N. K., Kamboj, S., Kumar, V., & Rahman, Z. (2018). Examining consumer-brand relationships on social media platforms. *Marketing Intelligence & Planning*, 36(1), 63–78.
- Mao, Z. (Eddie), Jones, M. F., Li, M., Wei, W., & Lyu, J. (2020). Sleeping in a stranger's home: A trust formation model for Airbnb. *Journal of Hospitality and Tourism Management*, 42, 67–76. <https://doi.org/10.1016/j.jhtm.2019.11.012>
- Mas-Machuca, M., Marimon, F., & Jaca, C. (2021). The unexplored potential of trust to boost customer loyalty for transport platforms. *Research in Transportation Business & Management*, 41, 100618.
- Mittendorf, C. (2017). The Implications of Trust in the Sharing Economy: An Empirical Analysis of Uber. *Proceedings of the 50th Hawaii International Conference on System Sciences (2017)*, 50, 5837–5846. <https://doi.org/10.24251/hicss.2017.703>
- Nguyen-Phuoc, Duy Q., Tran, P. T. K., Su, D. N., Oviedo-Trespalacios, O., & Johnson, L. W. (2021). The formation of passenger loyalty: Differences between online transportation and traditional taxi services. *Travel Behaviour and Society*, 24(March), 218–230. <https://doi.org/10.1016/j.tbs.2021.04.006>
- Nguyen-Phuoc, Duy Quy, Su, D. N., Nguyen, M. H., Vo, N. S., & Oviedo-Trespalacios, O. (2022). Factors influencing intention to use on-demand shared online online transportation in Vietnam: risk, cost or sustainability? *Journal of Transport Geography*, 99(August 2021), 103302. <https://doi.org/10.1016/j.jtrangeo.2022.103302>
- Nitzl, C., Roldan, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modelling, Helping researchers discuss more sophisticated models. *Industrial Management and Data Systems*, 116(9), 1849–1864. <https://doi.org/10.1108/IMDS-07-2015-0302>
- Ou, C. X., Pavlou, P. A., & Davison, R. M. (2014). Swift guanxi in online marketplaces: The role of computer-mediated communication technologies. *MIS Quarterly: Management Information Systems*, 38(1), 209–230. <https://doi.org/10.25300/MISQ/2014/38.1.10>
- Park, S., & Tussyadiah, I. P. (2020). How guests develop trust in hosts: an investigation of trust formation in P2P accommodation. *Journal of Travel Research*, 59(8), 1402–1412.
- Rayle, L., Dai, D., Chan, N., Cervero, R., & Shaheen, S. (2016). Just a better taxi? A survey-based comparison of taxis, transit, and ridesourcing services in San Francisco. *Transport Policy*, 45, 168–178.
- Senić, V., & Marinković, V. (2014). Examining the effect of different components of customer value on attitudinal loyalty and behavioral intentions. *International Journal of Quality and Service Sciences*.
- Shah, S. A. H., & Kubota, H. (2022). Passenger's satisfaction with service quality of app-based ride hailing services in developing countries: Case of Lahore, Pakistan. *Asian Transport Studies*, 8, 1–9. <https://doi.org/10.1016/j.eastsj.2022.100076>
- Shaheen, S., & Cohen, A. (2019). Shared ride services in North America: definitions, impacts, and the future of pooling. *Transport Reviews*, 39(4), 427–442.
- Shao, Z., Guo, Y., Li, X., & Barnes, S. (2020). Sources of influences on customers'

- trust in ride-sharing: why use experience matters? *Industrial Management and Data Systems*, 120(8), 1459–1482. <https://doi.org/10.1108/IMDS-12-2019-0651>
- Shao, Z., & Yin, H. (2019). Building customers' trust in the ridesharing platform with institutional mechanisms: An empirical study in China. *Internet Research*, 29(5), 1040–1063. <https://doi.org/10.1108/INTR-02-2018-0086>
- Shen, J., Qiu, F., Li, W., & Feng, P. (2015). Exploring the effect of the telephone/online booking system on taxi service: Case study of Suzhou City in China. In *CICTP 2015* (pp. 1201–1212).
- Su, D. N., Nguyen-Phuoc, D. Q., & Johnson, L. W. (2021). Effects of perceived safety, involvement and perceived service quality on loyalty intention among ride-sourcing passengers. *Transportation*, 48(1), 369–393. <https://doi.org/10.1007/s11116-019-10058-y>
- Huurne, M., Ronteltap, A., Corten, R., & Buskens, V. (2017). Antecedents of trust in the sharing economy: A systematic review. *Journal of Consumer Behaviour*, 16(6), 485–498. <https://doi.org/10.1002/cb.1667>
- Wang, X., Wang, Y., Lin, X., & Abdullat, A. (2021). The dual concept of consumer value in social media brand community: A trust transfer perspective. *International Journal of Information Management*, 59(February 2020), 102319. <https://doi.org/10.1016/j.ijinfomgt.2021.102319>
- Weber, T. A. (2014). Intermediation in a sharing economy: insurance, moral hazard, and rent extraction. *Journal of Management Information Systems*, 31(3), 35–71.
- Zhang, J. (2018). *Trust Transfer in the Sharing Economy - A Survey-Based Approach*. 3(2), 1–32.
- Zhang, L., Yan, Q., & Zhang, L. (2018). A computational framework for understanding antecedents of guests' perceived trust towards hosts on Airbnb. *Decision Support Systems*, 115, 105–116. <https://doi.org/10.1016/j.dss.2018.10.002>
- Zheng, X., Lee, M., & Cheung, C. M. K. (2017). Examining e-loyalty towards online shopping platforms: The role of coupon proneness and value consciousness. *Internet Research*, 27(3), 709–726.