App-celerate Your Ride: Exploring Personal Innovativeness' Dynamic Impact on Continued Usage in Ride-Hailing Apps

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ABSTRACT

As the pervasiveness of sharing platforms upsurges, applications have ubiquitously emerged as a significant facilitator of consumers' convenience. This technological revolution denotes a discernable propensity of openness to embracing innovative products and services. Derived from a sample of 2,101 respondents, the research utilizes confirmatory factor analysis, structural equation modeling, and mediation analysis to analyze latent variables. The findings showed that the personal innovativeness of users positively impacts continuance intention, illustrating that consumers with high personal innovativeness are more likely to be early adopters of ride-hailing apps. Interestingly, the results demonstrated that the impact of personal innovativeness on continuance intention in using ride-hailing apps manifested through the full mediating effect of perceived hedonic and utilitarian value, respectively. Anchored on these findings, sharing economy corporations in different industries may (1) tailor-fit marketing ascendancies to consumer demographics with high levels of personal innovativeness (e.g., Gen Z's and millennials), (2) implement in-app activations to enhance user experience by elevating perceived hedonic and utilitarian values, and (3) reconnoiter in-app options such as unique options, and consumer engagement loyalty programs.

Keywords: Ride-Hailing, Continuance Intention, Perceived Value, Personal Innovativeness.

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1. BACKGROUND OF THE STUDY

The rapid-paced global adoption of the sharing economy led to its emergence as one of the most prominent economic paradigms, introducing disruptive business models in the hospitality, entertainment, and transportation domains. It runs in contrast to traditional private ownership of physical and nonphysical assets, anchoring from the notion of temporary access to the right to use underused resources (Basukie et al., 2020; Jiang and Lau, 2021). Riding in the momentum of the sharing economy, the transportation sector has surfaced as one of its pivotal industry facets as it pushed forth novel mobility models in the market (e.g., ride-hailing, carpooling, and ride-splitting).

Ride-hailing services are defined as "services that use online-enabled platforms (web applications) to connect between passengers and local drivers who are using their personal vehicles for commercial purposes" (Su et al., 2022). Like the sharing economy, there are three main participants in ride-hailing services namely, the rider (consumer), the driver (service provider), and the Transportation Network Company (TNC) which is the party

managing the digital platform and enabling the service (Boateng et al., 2019; Lee and Wong, 2021).

Ridesharing services have experienced a surge in popularity, witnessing a notable uptick in user adoption and industry growth in recent years. This impetus is reflected in prognoses for the future, as the digit of ride-hailing service users is poised to reach around 1 billion by 2027, demonstrating a compounded annual growth rate (CAGR) of 7.04% from 2023 to 2027. Such growth trends would consequently translate into a forecasted market volume of US$202.20 billion by 2027 (Statista Market Insights, 2023a).

Parallel to these global developments, the Philippines has been a wide adopter of ridesharing services even at its nascent adoption stages. A 2018 Boston Consulting Group study revealed that 19% of commuters in Metro Manila use ride-hailing apps for their daily commutes, which is nearly double the 10 percent average in Southeast Asian capitals (Jiao, 2018). The surge in demand for mobility solutions, coupled with insufficient mass transport, particularly in Metro Manila, further led to the formalization of ride-sharing services (Morales, 2015), thereby prompting the Philippines to pioneer nationwide ride-hailing regulations, allowing mobile application-enabled services to operate legally (Toppa, 2015). Looking at the local market growth trends, the Philippine ride-hailing market is expected to generate 5.18% CAGR from 2023 to 2027, with users scaling to 16.29 million and forecasted market volume rising to US$0.82 billion by 2027 (Statista Market Insights, 2023b).

The market ascent of ride-hailing services has attracted significant research interest, with studies delving into consumers' adoption and behavioral intentions (Lu and Wang, 2020; Pandita et al., 2021). While existing literature has extensively explored the acceptance of ride-hailing services, the focal point of most prior research has centered on the pre-adoption behaviors of consumers. That said, there is a dearth of studies examining post-adoption behaviors, particularly on consumer continuance intention (Boateng et al., 2019; Malik and Rao, 2019; Ofori et al., 2021; Weng et al., 2017). From a business sense, having a deeper understanding of continuance intention becomes increasingly paramount as ride-hailing service users often revisit their initial decision at the post-acceptance stage. Subsequently, their original intentions may not align with actual behavior, potentially leading to service discontinuation, as noted by Aw et al. (2019), Fauzi and Sheng (2021), and Weng et al. (2017). Further, competition among Philippine TNCs (e.g., Grab, Joyride, Angkas, Moveit) results in consumers facing minimal barriers to switching ride-hailing apps, as they can effortlessly download alternatives to their smartphones without incurring additional costs (Porter, 1998). Given the absence of significant switching costs, ride-hailing app providers are unable to lock in consumers into using a specific application. Understanding consumers' continuance intention to use ride-hailing services is critical for TNCs to know their needs and try to satisfy these needs.

This enquiry explores personal innovativeness (PI) as an antecedent of continuance intention of using ride-hailing apps. The concomitant ascent of technological advancement and consumer insistence on swift and efficient service access has impelled the prologue of novel products and services. As such, consumers' innovativeness constitutes a potential growth catalyst for industry innovation (Cueto et al., 2021). While prior research on CI has less emphasized user characteristics, specifically users' PI (Lu, 2014), recent studies have increasingly recognized the pivotal role of personal innovativeness as a significant antecedent for adoption across various domains. For instance, personal innovativeness has been identified as crucial for the adoption of mobile-based Internet services (Lu et al., 2005), mobile payment (Kim et al., 2010; Thakur and Srivastava, 2014), online fashion

products (Nirmala and Dewi, 2011), and ride-hailing services (Wang et al., 2020). Thus, this research centers on two main questions:

(1) Is the personal innovativeness of ride-hailing service users a significant antecedent of continuance intention in utilizing ride-hailing applications?
(2) Does perceived value, specifically perceived utilitarian value, and perceived hedonic value, mediate the relationship between personal innovativeness and continuance intention utilizing ride-hailing applications?

2. LITERATURE REVIEW, THEORETICAL FRAMEWORK, AND HYPOTHESIS DEVELOPMENT

2.1 Ride-sharing services and the sharing economy paradigm

This research examines personal innovativeness (PI) as an antecedent of continuance intention. The transportation sector stands as one of the most profoundly impacted domains in the era of the sharing economy revolution (Soares et al., 2020; Kauffman and Naldi, 2020). Fueled by rapid advancements in information and communication technology (ICT), recent years have witnessed the introduction of various app-based shared mobility models such as ride-hailing, ridesharing, carpooling, and ride-splitting (Chen et al., 2021; Tang et al. 2020).

Ridesharing, defined as a collaborative mode of transportation where individuals share a vehicle for a trip, brings about advantages for participants, society, and the environment. This includes cost and time savings for participants, alleviating traffic congestion, fuel conservation, and reducing air pollution (Furuhata et al., 2013). By maximizing vehicle occupancy and reducing the number of vehicles on the road, ridesharing plays a role in enhancing transportation efficiency (Agatz, 2012). Ridesharing companies, facilitated by advances in ICT, enable nonprofessional drivers to offer safe, reliable, and affordable point-to-point rides, accessible with a simple tap on a smartphone.

The global proliferation of ride-hailing services is led by Transportation Network Companies (TNCs) such as Uber, Lyft, Didi Kuaidi, Ola, Yandex, Grab, Line taxi, GO-JEK, and Careem (Fauzi and Sheng, 2021; Lee et al., 2019; Najjar and Dahabiyeh, 2021). In the Philippines, epitomes of TNCs are Grab, Angkas, Moveit, and Joyride (Dela Cruz, 2022). TNCs operate as intermediaries, connecting drivers and passengers through their platforms and charging fees for each ride, without employing drivers or owning operational vehicles (Agatz, 2012; Goletz and Bahamonde-Birke, 2021).

2.2 Nexus between continuance intention and personal innovativeness

Continuance intention (CI) mirrors an individual's positive cognitive impulse to persist with current behaviors related to product or service consumption. CI has been intricately explained by the expectation-disconfirmation theory (EDT) proposed by Oliver (1980) (Lu, 2014). However, Bhattacherjee (2001) criticized EDT and proposed a post-acceptance model of the information system (IS) continuance, thus extending EDT. This model integrates critical antecedents of IS CI based on the technology acceptance model (TAM). That said, by investigating consumers' actual post-adoption experiences, the model aims for greater realism and impartiality than EDT.

Recognizing the pivotal role of comprehending factors driving continuance intention for TNCs to sustain competitive advantage and business viability, consumer behavior research on information technology-based products has shifted from adoption to CI

(Bhattacherjee et al., 2008). However, the continuance model developed by Bhattacherjee et al. (2008) falls short of capturing elements relevant to intensifying business competition. With companies striving to create diverse values to retain customers, the study acknowledges utilitarian and hedonic values as integral to technology-based products (Kim and Hwang, 2012). Yet, these values remain underexplored as drivers of CI in the ride-hailing service context. While PI for consumers has been validated as a significant driver for CI in technology-based products, its exploration in this context has been limited (Lu, 2014). Notably, PI has been extensively associated with adoption issues in various technology-based products, including mobile-based Internet services, mobile payment, online fashion products, and ride-hailing services (Thakur and Srivastava, 2014; Wang et al., 2020). Addressing this research gap, this paper extends the Bhattacherjee et al. (2008) continuance model by incorporating PI, perceived utilitarian, and hedonic values as significant drivers of CI in the Philippine ride-hailing service market.

Personal innovativeness (PI), as conceptualized by Agarwal and Prasa (1998), goes beyond a mere willingness to use emerging information technologies—it signifies an individual's propensity to embrace and adopt innovations, particularly in the information technology realm. Those with higher levels of PI are anticipated to be early adopters, leading the way in integrating new technologies into their lives at an earlier stage than their counterparts (Hong et al., 2017). Generally associated with the adoption phase, where individuals decide to incorporate new technology into their lives, PI has been a key determinant in understanding the initial acceptance of information technology (Lu et al., 2014; Kim et al., 2012; Wang et al., 2020). Chen and Lai's (2022) research underscores the critical roles of resource commitment and strategic business goals in technology adoption. This highlights the necessity for ride-hailing app operators to prioritize enhancing user experience to align with their broader strategic objectives.

However, recognizing the dynamic nature of technology usage, the exploration of PI doesn't end with adoption. In the post-adoption stage, understanding the role of PI in shaping individuals' decisions to continue using a particular technology offers a deeper understanding of the user experience. Lu (2014) emphasizes the significance of examining the effect of PI in the post-adoption context, suggesting that individuals with a high level of innovativeness are not only likely to adopt new technologies early but are also crucial in influencing sustained usage.

Higher PI of consumers are more likely to sense novel situations or discrepancies and subsequently participate in adaptive system use (ASU) (Lu, 2014). This is primarily attributed to the findings of Kim et al. (2012) that innovative people tend to be communicative, curious, dynamic, venturesome, and stimulation-seeking. Jasperson et al., (2005) asserted that scholars who study information systems believe that users of technological devices can continue discovering and adopting new features after adopting the system because IT providers regularly enhance their apps by adding new features and capabilities in later versions to improve consumers' experience (Bhattacherjee et al., 2008).

Ride-hailing apps are categorized as an agile information system that periodically generates innovations and upgrades several features to enhance their capacity or maximize the value of the apps to customers. In fierce business competition, innovating and upgrading features in the ride-hailing app are essential to maintain competitive advantages so that consumers will remain loyal to the app because alternative attractiveness from competitors always creates a threat, affecting the switching behavior of ride-hailing service users (Cheng et al., 2017). The innovation will simultaneously stimulate consumers' PI to continue using the app because innovation is an integral part of consumers with a

high-level sense of innovativeness. Empirically, Hong et al. (2011) found that PI significantly influences the individual to continue using agile information system devices that frequently upgrade with a few new features released periodically. In short, ride-hailing app users with a higher level of PI are likely to have higher CI because of their stronger risk tolerance and confidence in their capabilities to handle frequent changes (Lu, 2014). Consequently, it is often assumed by the researchers that mobile app-based products or services, such as ride-hailing apps that regularly generate innovations, provide a significant impulse of PI. Having said this, this paper posed the following hypothesis:

H_1: The personal innovativeness of Filipino consumers positively impacts the continuance intention of app-based ride-hailing service users.

2.4 The mediating role of perceived value

From a marketing lens, perceived value is intricately defined as the balance between consumers' total benefits and the corresponding sacrifices experienced (Patterson and Spreng, 1997). Kotler et al. (2017) assert that companies, in pursuing successful marketing activities, must effectively create value to attract and retain consumers. This brings forth the notion that the value associated with particular products or services becomes a pivotal reference point for consumers in shaping their buying behaviors. Referring to the consumption value theory, Sheth et al. (1991) expound on the idea that consumers exhibit varying behaviors towards a product due to their perception of five possible values—functional, conditional, social, emotional, and epistemic. Further, Voss et al. (2003) delineate hedonic and utilitarian values as distinct dimensions influencing consumer attitudes toward buying intention.

Perceived utilitarian value is tethered to consumers' comprehensive evaluation of the functional benefits and costs linked to achieving specific purposes when utilizing certain products or services (Overby and Lee, 2006). Utilitarian value is perceived when products or services contribute to problem-solving or goal-directed activities necessitating careful judgment (Hartman et al., 2006). On the flip side, perceived hedonic value is delineated as the overall evaluation of consumers regarding experiential benefits and costs during the consumption of products or services (Holbrook and Hirschman, 1982). Hedonic value outcomes are based on primary processes, subjective experiences, and phenomenological factors. Consumers perceiving hedonic value towards a product or service feel emotions such as fun, excitement, playfulness, arousal, spontaneity, and increased involvement during the consumption period (Hirschman, 1983). Ramos and Catalan's (2023) study illuminates the considerable impact of hedonic motivations on customers' intentions and readiness to embrace new procedures and features, particularly within the realm of online food delivery services (OFDS) in the Philippines.

To understand the mechanism in which perceived value mediates the relationship between CI and PI, this paper builds on the information technology continuance theory (Bhattacherjee et al., 2008) and consumption value theory (Sheth et al., 1991). According to information technology continuance theory, the only value considered in the model influencing CI in IT-based products is post-usage usefulness. It is recommended to investigate other values perceived by consumers that may potentially drive CI behavior. In the context of the mobile environment, utilitarian and hedonic values, crucial for ride-hailing apps, come to the forefront (Kim and Hwang, 2012). As per the consumption value theory, product values play a central role in users' consumption behavior considerations, leading to an assumption that consumers' perceived utilitarian and hedonic

value towards ride-hailing apps will mediate the effect of consumers' PI on the CI to use ride-hailing apps. Furthermore, consumers' PI also evaluates whether continuous innovations in ride-hailing apps offer hedonic value. Perceived hedonic value is realized when consumers feel that the apps provide experiential benefits toward the cost incurred—offering an enjoyable transportation service through peer-to-peer connection facilitated by the online platform. Furthermore, consumers' PI generates a cognitive belief in hedonic value that encourages CI to utilize ride-hailing apps. Thus, this study raised the next two hypotheses:

H_2: The impact of personal innovativeness on the continuance intention of app-based ride-hailing services operates through the mediation of perceived utilitarian value.

H_3: The impact of personal innovativeness on the continuance intention of app-based ride-hailing services operates through the mediation of perceived hedonic value.

3. METHODOLOGY

Utilizing a causal quantitative research design, this study examined the cause-and-effect relationships among personal innovativeness (PI), continuance intention (CI), and perceived value among app-based ride-hailing service users aged 18 to 44 in the Philippines. Employing a homogeneous purposive sampling method, the sample explicitly targeted individuals who were both conversant with and had utilized a ride-hailing application within the last year. The data collection process involved an online survey conducted through Google Forms, which garnered a total of 2101 valid responses.

The research instruments are detailed in Table 1. The validity of the measurement scales was assessed using Cronbach's Alpha, and generated values between 0.818 and 0.832, entailing that the scales have good reliability and internal consistency.

The research hypotheses underwent empirical investigation through structural equation modeling (SEM), a two-step process involving (1) assessing the reliability and validity of the measurement model through confirmatory factor analysis (CFA) and (2) testing the structural models via path analysis, as outlined by Fan (2016). Structural equation models integrate factor analysis with path analysis and other path modeling techniques, employing a set of linear equations to delineate the hypothesized relationships between latent variables and their multiple indicators, as discussed by Knoke (2005).

Table 1. Item Measurement Scales per Latent Construct

Latent Construct	Item Measurement Scales	Reference
Personal Innovativeness (PI)	PI1: I know more than others about new technologies. PI2: Among my peers, I am usually the first to try out new technologies. PI3: I like to use new technologies before other people do.	Thakur and Srivastava (2014), Lu (2014), Hong et al. (2017), Agarwal and Prasa (1998), Noh et al. (2014)
Perceived Utilitarian Value (PUV)	PUV1: Using ride-hailing apps lets me order transportation services effortlessly. PUV2: By using ride-hailing apps, I can efficiently order online transportation. PUV3: By using ride-hailing apps, I can save time in waiting for online transportation. PUV4: By using ride-hailing apps, I can improve my mobility from one place to another. PUV5: By using ride-hailing apps, I can save time and cost to get online transportation.	Wu et al. (2018), Lin and Lu (2015), Hong et al. (2017)
Perceived Hedonic Value (PHV)	PHV1: I enjoy using ride-hailing apps. PHV2: Using ride-hailing apps gives me much enjoyment.	

	PHV3: Ride-hailing apps not only help me with ordering transportation, but also entertaine me.	
Continuance Intention (CI)	CI1: As a user, I would keep on using ride-hailing apps in the future.	Lu (2014), Lin and Lu (2011), Hong et al. (2017)
	CI2: I will frequently use ride-hailing apps in the future.	
	CI3: I will strongly recommend others to use ride-hailing apps.	

Statistical analyses were conducted using the Lavaan package in RStudio. Further, the model evaluation relied on fit indices, namely the Tucker Lewis Index (TLI), Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA). For an acceptable model fit, thresholds were set at values above 0.90 for TLI and CFI (Hu & Bentler, 1999) and 0.08 or less for SRMR and RMSEA (Hu & Bentler, 1999; Fabrigar et al., 1999).

4. RESULTS AND DISCUSSION

4.1. Normality and Common Method Bias

Mardia's test and the Anderson-Darling test were instrumental in assessing multivariate and univariate normality, respectively, revealing a non-normal distribution within the survey data. Consequently, to address this non-normality and mitigate the impact of outliers, this paper employed the maximum likelihood robust (MLR) estimator as suggested by Rosseel (2012). Additionally, Harman's single-factor test was conducted, unveiling that the factor loadings were above the recommended 0.30 minimum threshold, confirming that item measurement scales do not suffer from common method bias issues.

4.2. Measurement Model

Confirmatory factor analysis was then applied to verify the factor structure of the main research model. Generally, factor loadings of 0.7 or higher are considered strong and indicate a strong relationship between the observed variable and the latent construct, However, to prevent data loss, factor loadings below 0.6 will be removed in the structural model. Notwithstanding, factor loadings in the range of 0.4 to 0.6 are considered moderate. They suggest that the observed variable is reasonably associated with the latent construct but may not be as strong of an indicator as those with higher loadings. Observably in Table 2, the initial CFA includes model fit indices that were in the acceptable range except for

RMSEA. After removing the item measurement scales with factor loadings below 0.6, all model fit indices observably improved and were within the acceptable range.

Table 2. Comparison of Fit Indices

Model Fit Indices	Acceptable Range	Initial CFA	Final CFA
Tucker Lewis Index (TLI)	Above 0.90 (Weston & Gore, 2006)	0.910	0.939
Comparative Fit Index (CFI)	Above 0.90 (Hu & Bentler, 1999)	0.929	0.961
Standardized Root Mean Square Residual (SRMR)	Less than 0.08 (Hu & Bentler, 1999)	0.055	0.033
Root Mean Square Error of Approximation (RMSEA)	Less than 0.08 (Fabrigar et al., 1999)	0.083	0.077

4.3. Structural Model

The examination of the structural model revealed statistical significance in all five paths (Table 3). Further, all of the model fit indices demonstrated satisfactory results (CFI = 0.933; TLI = 0.957; RMSEA= 0.033; SRMR = 0.077), indicating an adequate fit of the structural model.

Table 3. SEM results

Paths	Estimates	SE	p-value	Result
PI → PUV	0.124	0.015	< 0.001	Supported
PI → PHV	0.181	0.018	< 0.001	Supported
PI → CI	0.109	0.015	< 0.001	Supported
PUV → CI	0.257	0.020	< 0.001	Supported
PHV → CI	0.356	0.021	< 0.001	Supported

PI: Personal Innovativeness; CI: Continuance Intention; PUV: Perceived Utilitarian Value; PHV: Perceived Hedonic Value

The findings from the structural model revealed that individuals characterized by a higher degree of personal innovativeness exhibit a heightened intention to continue using ride-hailing apps. This implied that individuals with higher personal innovativeness tend to adopt novel technologies early on, showcasing a progressive mindset (Lu, 2014; Thakur

and Srivastava, 2014; Wang et al., 2020). This openness translates into their quick exploration and integration of ride-hailing services as a dimension of their transportation requirement. Having said this, the study confirms its first hypothesis about the positive statistical link between PI and CI of ride-hailing apps.

Fleshing out some findings of the structural model, PI exhibited a significant positive influence on both utilitarian and hedonic faces of perceived value. The positive relationship between PI and perceived utilitarian value suggested that more innovative individuals find practical benefits and utility in using ride-hailing apps. They recognize the convenience, efficiency, and cost-effectiveness offered by these services, contributing to a heightened perception of utilitarian value. This aligns with their forward-thinking approach, as they leverage technology to fulfill their transportation needs more efficiently.

At the same time, the positive association between PI and perceived hedonic value indicated that individuals with a greater propensity for innovation derive emotional satisfaction and enjoyment from using ride-hailing apps. Their openness to adopting new technologies makes the overall experience more pleasurable, possibly due to the ease of use and the novel aspects of these platforms (Hong et al., 2011). This positive emotional connection enhances the perceived hedonic value, reflecting a holistic appreciation for the experiential benefits embedded in ride-hailing services.

The structural model also showed a statistically significant link between perceived value and CI. Users who perceive higher utilitarian value, emphasizing the practical benefits of these platforms, exhibit a greater intention to continue using them. Concurrently, the positive association between perceived hedonic value and continuance intention underscores the significance of emotional satisfaction and experiential benefits in fostering users' commitment to ride-hailing apps. Individuals who find joy, excitement, and overall enjoyment in using these services are more inclined to sustain their engagement over time.

4.4 Mediation Analysis

Table 4 displays the findings of the structural model integrated with mediation analysis. The statistical insignificance of the direct effects demonstrated that the impact of personal innovativeness on continuance intention in using ride-hailing apps manifested through the full mediating effect of perceived hedonic and utilitarian value, respectively. In other words, the findings entailed that individuals with a higher level of personal innovativeness do not exhibit a direct inclination to persist in using ride-hailing apps. Instead, their continued usage is contingent upon the perceived emotional satisfaction (hedonic value) and practical benefits (utilitarian value) derived from these services.

Moreover, circling to the consumption value theory, this research positioned product values as central to users' consumption behavior considerations. It confirmed that consumers' perceived utilitarian and hedonic value towards ride-hailing apps mediate the effect of personal innovativeness on continuance intention (Bhattacherjee et al., 2008; Sheth et al., 1991). Consumers' personal innovativeness serves as an evaluator of the continuous innovations in ride-hailing apps, particularly in gauging their hedonic value (Kim and Hwang, 2012). The perception of hedonic value occurs when consumers find the apps offer experiential benefits, providing an enjoyable transportation service through a peer-to-peer connection. Thus, consumers' personal innovativeness not only influences their assessment of hedonic value but also generates a cognitive belief that encourages continuance intention in utilizing ride-hailing apps.

Table 4. SEM results with mediation analysis

Paths	Indirect Effect	SE	LLCI	ULCI	Result
PI → PUV → CI	0.140***	0.020	0.101	0.179	Supported
PI → PHV → CI	0.163***	0.019	0.126	0.200	Supported
Path	**Direct Effect**	**SE**	**LLCI**	**ULCI**	**Result**
PI → CI (PUV as mediator)	0.017	0.021	-0.023	0.058	Not supported
PI → CI (PHV as mediator)	-0.009	0.017	-0.043	0.025	Not supported

PI: Personal Innovativeness; CI: Continuance Intention; PUV: Perceived Utilitarian Value; PHV: Perceived Hedonic Value

Note. *** denotes significance at the 1% level; ** denotes significance at the 5% level

5. CONCLUSION AND RECOMMENDATION

This research investigated how personal innovativeness (PI) influences the intention to continue using app-based ride-hailing services, with a focus on the mediating role of perceived utilitarian and hedonic value. The outcomes implied that higher levels of PI were allied with a greater likelihood of continued usage of ride-hailing apps. Likewise, the observed patterns bared that their sustained usage hinged on the perceived emotional satisfaction (hedonic value) and practical benefits (utilitarian value) descended from these services. This nuanced relationship underscored that personal innovativeness indirectly shapes continuance intention by influencing users' perceptions of both hedonic and utilitarian values.

This exploration offers novel insights and operable allusions that surpass the confines of the local landscape and industry. Firstly, it underscores that marketing strategies should be coxswained to resonate with demographics characterized by high levels of personal innovativeness. Gen Z and Millennials, renowned for their receptivity to technological advancements, can be the focal point of campaigns that accentuate the pioneering features and tangible advantages of the firm's offerings. Second, companies can implement in-app activations to elevate the perception of both utilitarian and hedonic values and enhance the overall user experience. This may comprise features that not only streamline the utilitarian aspects, such as cost-effectiveness, and efficiency but also augment the hedonic experience, making the app more enjoyable and compelling. This becomes particularly vital from user experience and interface (UI/UX) aspects, where intuitive interfaces effectively communicate the latest updates about the platform's newest features.

Auxiliary, service providers can explore new in-app options in rejoinder to the observed full mediation effect of perceived utilitarian and hedonic values. Familiarizing exclusive features within the app can cater to users' varying needs and preferences. Loyalty programs that reward users for continued engagement can foster a positive relationship

between users and product or service, inducing their intention to continue using the app. By aligning with the preferences of consumers characterized by high personal innovativeness, companies may navigate the competitive sharing economy landscape and nurture a progressive relationship with their user base, warranting business sustainability.

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REFERENCES

[1] Agarwal, R., & Prasad, J. (1998). A conceptual and operational definition of personal innovativeness in the domain of information technology. Information systems research, 9(2), 204-215.

[2] Agatz, N., Erera, A., Savelsbergh, M., & Wang, X. (2012). Optimization for dynamic ride-sharing: A review. European Journal of Operational Research, 223(2), 295-303.

[3] Basukie, J., Wang, Y., & Li, S. (2020). Big data governance and algorithmic management in sharing economy platforms: A case of ridesharing in emerging markets. Technological Forecasting and Social Change, 161, 120310. https://doi.org/10.1016/j.techfore.2020.120310

[4] Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. MIS quarterly, 351-370.

[5] Bhattacherjee, A., Perols, J., & Sanford, C. (2008). Information technology continuance: A theoretic extension and empirical test. Journal of Computer Information Systems, 49(1), 17-26.

[6] Boateng, H., Kosiba, J. P. B., & Okoe, A. F. (2019). Determinants of consumers' participation in the sharing economy: A social exchange perspective within an emerging economy context. International Journal of Contemporary Hospitality Management, 31(2), 718-733. https://doi.org/10.1108/IJCHM-11-2017-0731

[7] Chen, C. L., & Lai, W. H. (2022). Influencing Factors of Information Technology Adoption in Taiwan's SMEs under the Trend of Digital Transformation. *Review of Integrative Business and Economics Research*, *11*, 115-128.

[8] Chen, Y., Li, M., Zheng, S., Lal, C., & Conti, M. (2021). Where to meet a driver privately: recommending pick-up locations for ride-hailing services. In Security and Trust Management: 17th International Workshop, STM 2021, Darmstadt, Germany, October 8, 2021, Proceedings 17 (pp. 43-61). Springer International Publishing.

[9] Cheng, X., Fu, S., & Yin, G. (2016). Does subsidy work? An investigation of post-adoption switching on car-hailing apps. Journal of Electronic Commerce Research, Forthcoming.

[10] Cueto, L. J., Frisnedi, A. F. D., Collera, R. B., Batac, K. I. T., & Agaton, C. B. (2022). Digital innovations in MSMEs during economic disruptions: experiences and challenges of young entrepreneurs. Administrative Sciences, 12(1), 8. https://doi.org/10.3390/admsci12010008

[11] Dela Cruz, R. (2022). Transport competition: Get to know more other TNVS players. Philippine News Agency. Retrieved December 16, 2022 from https://www.pna.gov.ph/articles/1173495

[12] Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. Psychological Methods, 4(3), 272. https://doi.org/10.1037/1082-989X.4.3.272

[13] Fan, Y., Chen, J., Shirkey, G., John, R., Wu, S., Park, H., & Shao, C. (2016). Applications of structural equation modeling (SEM) in ecological studies: an updated review. Ecological Processes 5(19). https://doi.org/10.1186/s13717-016-0063-3

[14] Fauzi, A. A., & Sheng, M. L. (2021). Ride-hailing apps' continuance intention among different consumer groups in Indonesia: the role of personal innovativeness and perceived utilitarian and hedonic value. Asia Pacific Journal of Marketing and Logistics, 33(5), 1195-1219.

[15] Furuhata, M., Dessouky, M., Ordóñez, F., Brunet, M. E., Wang, X., & Koenig, S. (2013). Ridesharing: The state-of-the-art and future directions. Transportation Research Part B: Methodological, 57, 28-46.

[16] Jiang, Y., & Lau, A. K. (2021). Roles of consumer trust and risks on continuance intention in the sharing economy: An empirical investigation. Electronic Commerce Research and Applications, 47, 101050. https://doi.org/10.1016/j.elerap.2021.101050

[17] Jiao, C. (2018). Ride-Hailing Firms Are Piling Into Philippine Gridlock. Bloomberg News. Retrieved December 16, 2023 from https://www.bloomberg.com/news/articles/2018-05-07/grab-rivals-rush-into-philippine-gridlock-after-deal-with-uber

[18] Hartman, J. B., Shim, S., Barber, B., & O'Brien, M. (2006). Adolescents' utilitarian and hedonic Web consumption behavior: Hierarchical influence of personal values and innovativeness. Psychology & Marketing, 23(10), 813-839.

[19] Hirschman, E. C. (1983). Predictors of self-projection, fantasy fulfillment, and escapism. The Journal of Social Psychology, 120(1), 63-76.

[20] Hong, J. C., Lin, P. H., & Hsieh, P. C. (2017). The effect of consumer innovativeness on perceived value and continuance intention to use smartwatch. Computers in Human Behavior, 67, 264-272.

[21] Hong, W., Thong, J. Y., Chasalow, L. C., & Dhillon, G. (2011). User acceptance of agile information systems: A model and empirical test. Journal of management information systems, 28(1), 235-272.

[22] Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. Journal of consumer research, 9(2), 132-140.

[23] Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling, 6, 1–55. https://doi.org/10.1080/10705519909540118

[24] Kauffman, R. J., & Naldi, M. (2020). Research directions for sharing economy issues. Electronic commerce research and applications, 43, 100973.

[25] Kim, D. J., & Hwang, Y. (2012). A study of mobile internet user's service quality perceptions from a user's utilitarian and hedonic value tendency perspectives. Information Systems Frontiers, 14, 409-421.

[26] Knoke, D. (2005). Structural Equation Models. Encyclopedia of Social Measurement, 689–695. https://doi.org/10.1016/b0-12-369398-5/00392-3

[27] Kotler, P. (2017). Philip Kotler: some of my adventures in marketing. Journal of Historical Research in Marketing, 9(2), 203-208.

[28] Lee, C. K. H., & Wong, A. O. M. (2021). Antecedents of consumer loyalty in ride-hailing. Transportation Research Part F: Traffic Psychology and Behaviour, 80, 14-33. https://doi.org/10.1016/j.trf.2021.03.016

[29] Lee, K., Jin, Q., Animesh, A., & Ramaprasad, J. (2019). Impact of ride-hailing

services on transportation mode choices: evidence from traffic and transit ridership. Forthcoming at MIS Quarterly.

[30] Lin, K. Y., & Lu, H. P. (2011). Why people use social networking sites: An empirical study integrating network externalities and motivation theory. Computers in human behavior, 27(3), 1152-1161.

[31] Lu, J. (2014). Are personal innovativeness and social influence critical to continue with mobile commerce?. Internet research, 24(2), 134-159.

[32] Morales, N. J. 2015. "Philippines Issues Rules on Ride-Sharing Services, as Taxis Threaten Court. Reuters. Retrieved December 16, 2023 from http://www.reuters.com/article/us-philippines-uberidUSKBN0NY15Y20150513

[33] Najjar, M. S., & Dahabiyeh, L. (2021). Trust in the ride hailing service of the sharing economy: The roles of legitimacy and process transparency. Journal of Organizational and End User Computing (JOEUC), 33(6), 1-24.

[34] Noh, M., Runyan, R., & Mosier, J. (2014). Young consumers' innovativeness and hedonic/utilitarian cool attitudes. International Journal of Retail & Distribution Management, 42(4), 267-280.

[35] Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. Journal of marketing research, 17(4), 460-469.

[36] Overby, J. W., & Lee, E. J. (2006). The effects of utilitarian and hedonic online shopping value on consumer preference and intentions. Journal of Business research, 59(10-11), 1160-1166.

[37] Patterson, P. G., & Spreng, R. A. (1997). Modelling the relationship between perceived value, satisfaction and repurchase intentions in a business-to-business, services context: an empirical examination. International Journal of service Industry management, 8(5), 414-434.

[38] Ramos, W. J., & Catalan, C. M. V. (2023). Antecedents and consequence of satisfaction towards online food delivery applications: A modified UTAUT model perspective. *Review of Integrative Business and Economics Research*, 12(3), 182-199.

[39] Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. Journal of Statistical Software, 48, 1-36. https://doi.org/10.18637/jss.v048.i02

[40] Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. Journal of business research, 22(2), 159-170.

[41] Statista Market Insights (2023a). Ride-hailing - Worldwide. Retrieved from December 16, 2023 from https://www-statista-com.dlsu.idm.oclc.org:9443/outlook/mmo/shared-mobility/shared-rides/ride-hailing/worldwide#sales-channels

[42] Statista Market Insights (2023b). Revenue of the ride-hailing & taxi market in the Philippines from 2018 to 2027. Retrieved from December 16, 2023 from https://www-statista-com.dlsu.idm.oclc.org:9443/forecasts/1274400/philippines-revenue-ride-hailing-taxi

[43] Su, D. N., Nguyen-Phuoc, D. Q., Nguyen, M. H., Vo, N. S., & Oviedo-Trespalacios, O. (2022). Factors influencing intention to use on-demand shared ride-hailing services in Vietnam: risk, cost or sustainability?. Journal of Transport Geography, 99, 103302. https://doi.org/10.1016/j.jtrangeo.2022.103302

[44] Tang, B. J., Li, X. Y., Yu, B., & Wei, Y. M. (2020). How app-based ride-hailing services influence travel behavior: An empirical study from China. International Journal of Sustainable Transportation, 14(7), 554-568.

[45] Thakur, R., & Srivastava, M. (2014). Adoption readiness, personal innovativeness, perceived risk and usage intention across customer groups for mobile payment

services in India. Internet Research, 24(3), 369-392.

[46] Toppa, S. (2015). Uber Is Now Legal Everywhere in the Philippines. Time. Retrieved December 16, 2023 from http://time.com/3854958/uber-legal-philippines-ride-hailing/

[47] Voss, Kevin E., Eric R. Spangenberg, and Bianca Grohmann. "Measuring the hedonic and utilitarian dimensions of consumer attitude." Journal of marketing research 40.3 (2003): 310-320.

[48] Wang, Y., Wang, S., Wang, J., Wei, J., & Wang, C. (2020). An empirical study of consumers' intention to use ride-sharing services: using an extended technology acceptance model. Transportation, 47, 397-415.

[49] Wu, W., Huang, V., Chen, X., Davison, R. M., & Hua, Z. (2018). Social value and online social shopping intention: the moderating role of experience. Information Technology & People, 31(3), 688-711.