

The role of mindfulness in promoting purchase intention

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Abstract

Purpose – This study aims to examine the role of mindfulness in promoting customers' purchase intentions, especially with the mediation effects of perceived ease of use and perceived usefulness toward online ride-hailing services. As such, several recommendations for ride-hailing service providers and researchers are suggested for better implementation in a practical and theoretical context.

Design/methodology/approach – The data collection process is carried out online during the period of February 2022 to March 2022, with a sample of 237 respondents being analyzed by the covariance-based structural equation modeling approach.

Findings – First of all, mindfulness had a direct influence on perceived ease of use and perceived usefulness, as well as an indirect influence on purchase intention through the mediation role of perceived usefulness. Besides, perceived usefulness is found to have a positive influence on the customer's purchase intention, while perceived ease of use positively affects both perceived usefulness and intention.

Research limitations/implications – This study just ends with customers' intentions to adopt ride-hailing services; nevertheless, the actual behavior has not been examined. Further research might consider actual usage as a dependent factor when investigating the topic of ride-hailing services.

Originality/value – This study is notably different from the existing literature by filling the literature gap on the role of mindfulness in promoting customers' purchase intentions toward ride-hailing services.

Keywords Mindfulness, Customer purchase intention, Online ride-hailing service

Paper type Research paper

El papel del mindfulness en la promoción de la intención de compra

Resumen

Objetivo – Este estudio tiene como objetivo examinar el papel del mindfulness en la promoción de las intenciones de compra de los clientes, especialmente con los efectos de mediación de la facilidad de uso percibida y la utilidad percibida hacia los servicios de transporte en línea. De este modo, se sugieren varias recomendaciones para los proveedores de servicios de transporte en coche y los investigadores para una mejor aplicación en un contexto práctico y teórico.



Diseño/metodología/enfoque – El proceso de recopilación de datos se lleva a cabo en línea durante el período de febrero de 2022 a marzo de 2022, con una muestra de 237 encuestados que se analizan mediante el enfoque CB-SEM.

Resultados – En primer lugar, mindfulness tuvo una influencia directa sobre la facilidad de uso percibida y la utilidad percibida, así como una influencia indirecta sobre la intención de compra a través del papel de mediación de la utilidad percibida. Además, se observa que la utilidad percibida influye positivamente en la intención de compra del cliente, mientras que la facilidad de uso percibida afecta positivamente tanto a la utilidad percibida como a la intención.

Limitaciones/Implicaciones de la investigación – Este estudio se limita a analizar la intención de los clientes de adoptar los servicios de transporte rápido; sin embargo, no se ha examinado el comportamiento real. En futuras investigaciones se podría considerar el uso real como un factor dependiente a la hora de investigar el tema de los servicios de transporte rápido.

Originalidad – Este estudio es notablemente diferente de la literatura existente al llenar el vacío bibliográfico sobre el papel de mindfulness en la promoción de las intenciones de compra de los clientes hacia los servicios de ride-hailing.

Palabras clave mindfulness, intención de compra de los clientes, servicios de transporte en línea

Tipo de artículo Trabajo de investigación

正念在促进购买意向中的作用

摘要

内容摘要 – 目的 – 本研究旨在探讨“正念”在促进顾客购买意向方面的作用,尤其是在感知易用性和感知有用性对在线叫车服务的中介效应方面。因此,本研究为叫车服务提供商和研究人员提出了若干建议,以便在实践和理论背景下更好地实施这些建议。

设计 – 数据收集过程于 2022 年 2 月至 2022 年 3 月期间在线进行,采用 CB-SEM 方法对 237 个受访者样本进行分析。

研究结果 – 首先,正念对感知易用性和感知有用性有直接影响,并通过感知有用性的中介作用对购买意向产生间接影响。此外,还发现感知有用性对顾客的购买意向有积极影响,而感知易用性对感知有用性和购买意向都有积极影响。

研究局限与启示 – 本研究仅对顾客采用打车服务的意向进行了分析,但并未对实际行为进行研究。在研究叫车服务时,进一步的研究可能会将实际使用情况作为一个因果因素。

独创性 本研究填补了关于正念在促进顾客乘车服务购买意向方面作用的文献空白,与现有文献有明显不同。

关键词 : 正念、顾客购买意向、在线叫车服务

文章类型 研究型论文

1. Introduction

Customers are currently considered the main object of almost all business activities in various sectors, including the service sector. The role of customer perception and behavior is increasingly being focused on by numerous prestigious companies and prior research in the modern economy (Kazmi and Mehmood, 2016; Aw *et al.*, 2019). Therefore, understanding customer perception and behavior plays an important part in the sustainable development of any organization. This is also the reason for companies to improve product quality with cutting-edge technology to enhance customer perception (Hoang *et al.*, 2021; Tran, 2019). This form of business gains benefits from the impact of the “Industrial Revolution 4.0,” which has brought many drastic changes in customers’ perceptions and behavior (Ackaradejruangsri, 2015).

One of the latest and most modern business models is online ride-hailing, which is a popular model by combining three main aspects: service providers (business organizations), drivers and customers for sharing information and catching transport (Su *et al.*, 2021; Ackaradejruangsri, 2015). This cutting-edge technological service is attracting customer’s

attention and gaining valuable market share compared to previous years, witnessing a sharp development among numerous technology services (Nguyen *et al.*, 2019). One of the fastest-growing ride-hailing marketplaces in Southeast Asia, Vietnam's market might be worth \$4bn by 2025 (Dezan Shira and Associates, 2021). Currently, the ride-hailing service in Vietnam is seeing the competition of numerous international and domestic brands, including Grab, FastGo, VATO, Be and GoJek (ABI Research, 2021). However, due to the nature of technological services, a customer's behavior toward online ride-hailing services is closely related to the individual's present state and perception of a specific technology (Hoang *et al.*, 2021; Su *et al.*, 2021).

Nevertheless, a majority of current research focuses on the impact of service characteristics on customers' intentions such as price, communication, e-service quality, product quality and technological function (Lee and Wong, 2021; Almunawar *et al.*, 2020; Zhang *et al.*, 2019). Furthermore, a number of studies look into customer's characteristics (such as gender, age and income) and customer's intention (Habib and Hamadneh, 2021; Shao *et al.*, 2020; Ikhsan, 2020). However, it still lacks studies about individual moments, in other words, a cognitive state of active attention, when investigating determinants of customer intention in the technology sector. This is an important topic in light of the fact that people often adopt technology in a less mindful manner, solving the above research gap (Victorson *et al.*, 2020).

The research aim is to answer the question, "How is the influence of mindfulness on customer's purchase intention in the context of online ride-hailing service in Vietnam?". Research results will investigate the role of mindfulness, an important factor in an individual's subjective awareness and well-being, on a customer's purchase intention, with mediation effects of perceived ease of use and perceived usefulness. Consequently, the research can make three contributions and fill two main research gaps. First, the result provides significant contributions to reconfirm the significance of personal state and personal perception in consumer behavior management, which has previously been acknowledged as a significant antecedent for selecting a particular technology over its alternatives in a single individual (Dollinger *et al.*, 2021; Flavian *et al.*, 2020). Moreover, this research addresses the first void in our understanding of how the various states and perceptions of consumers influence their intentions to embrace a technology that is optimal for their local contexts. While current mindfulness studies are conducted in Western regions, such as the USA or Spain (Hirsch and Chen, 2022; Flavian *et al.*, 2020), this study concentrates on a potentially developing market such as Vietnam. Finally, the research can address a deficiency in the area of research: mindfulness in ride-hailing services. Despite the fact that there are numerous studies in this field, such as Ali *et al.* (2022), Zhong *et al.* (2022) and Ofori *et al.* (2022), a lack of studies mention mindfulness in ride-hailing services. As a result, the current research scope can substantially contribute to bridging the disparity in customer behavior in the Vietnamese vehicle hailing industry as a consequence of the influence of customer mindfulness and perception.

2. Literature review

2.1 Mindfulness

The mindfulness idea is a generally accepted theory of consciousness based on the concept of the present. In the context of consciousness, mindfulness may be defined as the practice of moment-to-moment awareness or attention to one's present experience (Daniel *et al.*, 2022). Mindfulness is, in a nutshell, paying attention to something in the present moment without developing judgments about it (Stankov *et al.*, 2020). At the individual level, mindfulness is characterized as the ability to continuously produce and apply new perceptual and

environmental interpretation categories (Jang *et al.*, 2020). Mindfulness has important effects on the mind, brain, body and behavior of humans, as well as increasing individual awareness and attention to decrease stress (and vice versa) (Fan *et al.*, 2022; Daniel *et al.*, 2022). Individuals who are attentive are simply aware of their current surroundings and are able to actively focus on what is significant.

Although mindfulness is a concept that originated in philosophy and religion studies, it has been found to have widespread application in psychology (Zheng *et al.*, 2022), the health-care sector (Tellez Infantes *et al.*, 2022), sports (Wang *et al.*, 2023; Goisbault *et al.*, 2022) and event economics (Brunelle and Grossman, 2022; Hirsch and Chen, 2022). As a result, mindfulness is believed to cause a fundamental shift in perspective and subsequent positive outcomes through self-regulation, cognition, emotion and behavioral flexibility. An overall summary of popular research about mindfulness and consumer behavior in both offline and online businesses is presented in Table 1.

Importantly, prior studies mostly focused on the relationship between mindfulness and attitude or behavior, while this study paid special attention to the direct influence of mindfulness on perception as well as the mediating effects of perception between mindfulness and intention toward online ride-hailing services. Moreover, customers' perceptions will be extremely different in the context of the COVID-19 pandemic. As a result, current research can significantly contribute to filling this gap.

2.2 Mindfulness technology adoption

A commonly accepted theory concerning awareness is the theory of mindfulness (Flavian *et al.*, 2020). As both are subjective and involve human cognition, mindfulness is considered to have many parallels with the behavioral control variable in the theory of planned behaviour model. Joseph *et al.* (2022) investigated the importance of mindfulness in customer behavior and found that mindfulness positively impacted consumer engagement, consumer satisfaction, consumer trust and consumer loyalty. As a result, mindfulness is a potent tool for demonstrating how attention or awareness plays a crucial role in compelling customers to make choices.

In addition, previous studies suggest that mindfulness might improve customers' awareness of the technology goods and services they use (Brunelle and Grossman, 2022; Stankov *et al.*, 2020). Sun *et al.* (2016) proposed that mindfulness helps improve technology adoption by lowering uncertainty and boosting the perceived utility of technology. Additionally, several scholars use mindfulness as a predictor of technology adoption in the context of customer behavior, especially on online sites (Brunelle and Grossman, 2022; Rodrigo *et al.*, 2022; Stankov *et al.*, 2020).

The mindfulness and technology adoption idea may be termed multifaceted since it is founded on Langer's four degrees of mindfulness (Langer, 2000). Nobly, Sun *et al.* (2016) proposed "mindfulness on technology adoption" (MTA), a novel concept based on classic mindfulness theory, to investigate the link between mindfulness and the application of technology to consumer behavior. MTA includes four multifaceted dimensions, namely:

- (1) engagement with technology;
- (2) technological novelty seeking;
- (3) awareness of local context; and
- (4) awareness of alternative technologies, to better explain how the mechanism of mindfulness affects technology adoption.

Author (year)	Research context and methodology	Research findings
Brunelle and Grossman (2022)	<ul style="list-style-type: none"> – Online compulsive buying – Quantitative analysis: online questionnaire survey ($N = 534$ respondents) – Hierarchical multiple regression analysis 	Higher impulsivity, higher anxiety sensitivity and lower nonreactivity and awareness mindfulness scores predicted online compulsive buying. These findings suggest that mindfulness interventions may be useful in the context of reducing online compulsive buying
Fan <i>et al.</i> (2022)	<ul style="list-style-type: none"> – Customer mistreatment and workplace deviance – Quantitative analysis: Online questionnaire survey ($N = 245$ respondents) – Confirmatory factor analysis and regression analysis by the Process macro 	Employees with a high trait of mindfulness are less vulnerable to self-regulatory depletion and thus, less likely to exhibit displaced workplace deviance
Hirsch and Chen (2022)	<ul style="list-style-type: none"> – Mobile screen time tracking – Quantitative analysis: Online questionnaire survey ($N = 405$ respondents) – Structural equation modeling by using IBM SPSS AMOS 28 	Mindfulness is a negative predictor of usefulness, indicating that those who are already more mindful find this feature less useful
Shi and Wang (2022)	<ul style="list-style-type: none"> – Workplace mindfulness and customer mistreatment in hotel industry – Quantitative analysis: Online questionnaire survey ($N = 98$ respondents) – Multilevel modeling (MLM) 	Frontline service employees' poor sleep quality influences their emotional exhaustion after work. Moreover, employees with a higher level of workplace mindfulness are less likely to be influenced by the negative effects at home
Jang <i>et al.</i> (2020)	<ul style="list-style-type: none"> – Customer incivility and service performance – Quantitative analysis: A self-administrated survey ($N = 348$ respondents) – A confirmatory factor analysis (CFA) 	Workplace mindfulness buffers the relationship between customer incivility and work engagement
Flavian <i>et al.</i> (2020)	<ul style="list-style-type: none"> – Mobile payments adoption – Quantitative analysis: Online survey ($N = 414$ users in the USA and 380 in Spain) – Structural equation modeling (SEM) 	Mindfulness, perceived ease of use, perceived usefulness, subjective norms and attitude have a significant influence on mobile payment intention
Stankov <i>et al.</i> (2020)	<ul style="list-style-type: none"> – E-mindfulness and tourists' connections – Qualitative analysis: Basing on a general review of academic literature, news reports and online resources 	Mindfulness meditation is becoming increasingly mainstream, which is reflected in the rapidly growing number of related technology applications. The e-mindfulness trend creates opportunities for the tourism industry but also implies changed consumer perspectives on tourist experiences
Hwang and Lee (2019)	<ul style="list-style-type: none"> – Green restaurant consumption behavior – Quantitative analysis: Questionnaire survey ($N = 341$ respondents) – Partial least square method by SPSS 22.0 and smart PLS 2.0 	The findings indicated a positive association between pride and awareness, as well as between mindfulness and awareness in the case of green restaurant consumption
Nguyen <i>et al.</i> (2019)	<ul style="list-style-type: none"> – Service encounter – Quantitative analysis: Questionnaire survey ($N = 382$ respondents) – Structural equation model by SPSS Macro PROCESS 	The effect of organizational-oriented citizenship behavior on customer-oriented citizenship behavior and on employee performance is stronger for high levels of empathy and mindfulness compared to low levels

Table 1.
Summary of popular research studies about mindfulness and consumer behavior

(continued)

Table 1.

Author (year)	Research context and methodology	Research findings
Oyedele <i>et al.</i> (2018)	<ul style="list-style-type: none"> – Mobile smart wristbands – Quantitative analysis: Questionnaire survey ($N = 201$ respondents) – AMOS structural equation model 	The findings reveal that mindfulness was significant in explicating the perceived convenience value of consumer satisfaction and repurchase intentions for mobile smart wristbands
Sun <i>et al.</i> (2016)	<ul style="list-style-type: none"> – Technology adoption and continuance – Quantitative analysis: Questionnaire survey – Partial least square (PLS) and bootstrapping method 	A mindful adopter is more likely to perceive a technology as useful and to choose a technology that turns out to fit his or her tasks. Hence, mindful adopters are likely to have high disconfirmation, perceived usefulness and satisfaction at the postadoption stage

The influence of MTA on user adoption and continued use of technology is developed by incorporating the mindfulness-fit framework into the cognition change model (Sun *et al.*, 2016). According to the theory from Sun *et al.* (2016), at the adoption stage, mindfulness impacts perceived usefulness and one's perceived usefulness of a technology determines his or her intention to use it.

2.3 Technology acceptance model

Another widely-used hypothesis is the technology acceptance model (TAM), one of the most common models for understanding information system adoption. After 30 years of TAM, this model still plays a dominant role in understanding the essential factors and methods of using technology, as well as being referred to in numerous recent prestigious studies (Davis *et al.*, 2023; Alshurideh *et al.*, 2023; Won *et al.*, 2023). TAM's core variables, perceived usefulness and perceived ease of use, have been proven to be the principal causal mediators between objective information technology (IT) design characteristics and technology adoption and use (Davis *et al.*, 2023). In addition, the majority of research in online contexts like e-commerce, food delivery, online learning and internet banking applies the original and extended TAM model as the main theory (Abuhassna *et al.*, 2023; Yang *et al.*, 2023; Yao *et al.*, 2022).

Introduced by Davis (1989), TAM postulates that perceived usefulness and perceived ease of use are the major beliefs influencing a user's attitude and intention to embrace a new technology. However, in their refined version, Davis and Venkatesh (1996) eliminated the role of attitude due to its low significance in the technology acceptance model. Particularly, perceived usefulness refers to the extent to which a person believes that the use of new technology will improve his or her performance. Perceived ease of use is the perceived simplicity of using a new technology. Finally, the user's aim is shown by his or her preparedness or dedication to use the new technology (Alamri *et al.*, 2019). According to Fishbein and Ajzen (2011), intention is a factor that motivates and prepares an individual to be ready to perform a behavior in the future. From a business perspective, purchase intention is an important factor in customer behavior because of its ability to influence the customer's actual choice (Flavian *et al.*, 2020). If a customer's purchase intention is high, it is more likely that this person will consume this product and vice versa (Hwang and Lee, 2019). In terms of technological service, customer purchase intention (or customer adoption)

is defined as a state of consciousness in which customers have a detailed understanding of this usage context and alternative technological product choices (Sun *et al.*, 2016).

Consequently, in basic terms, TAM asserts that consumers evaluate a technology favorably if it is easy to use and supports them in achieving greater performance; hence, they are more likely to embrace the new technology (Wang *et al.*, 2020a; Venkatesh, 2022). In the context of online ride-hailing services, earlier research indicated that if clients regarded the system as user-friendly and beneficial, there would be a greater likelihood of adoption (Aw *et al.*, 2019; Flavian *et al.*, 2020). As a consequence, TAM has been validated with consistent outcomes and is commonly used to explain innovation uptake (Al-Emran and Teo, 2020).

3. Analytical framework and hypothesis development

Currently, TAM states that purchase intention is determined by two factors: perceived usefulness and perceived ease of use (Davis, 1989); however, several studies in this area also show that intention to use is indirectly affected by other factors in the business environment, like social factors or psychological factors (Al-Sous *et al.*, 2023; Hong *et al.*, 2023). By reviewing existing literature, it suggests that the connection between mindfulness and a customer's purchase intention is far more complex than a simple direct relationship and that this relation is likely to be affected by perceived usefulness (Flavian *et al.*, 2020; Sun *et al.*, 2016). By contrast, very few current studies investigate the relationship between mindfulness and perceived ease of use, especially in a ride-hailing context.

3.1 Mindfulness – perceived usefulness

Numerous prior studies have established the potential that the mindfulness of an individual might enhance the perceived value of a new product (Daniel *et al.*, 2022; Flavian *et al.*, 2020; Sun *et al.*, 2016). Specifically, as a user becomes more aware of their specific wants and how technology items might fulfill them, their impression of the usefulness of the product will improve.

Customers who are conscious of their usage prefer to look for exceptional features and functionalities in the service they are considering (Taneja and Ali, 2021; Medberg and Gronroos, 2020). In the case of online ride-hailing services, if users are aware of these services, they will study their beneficial features, such as affordable costs, rapid service and dependable drivers (Ali *et al.*, 2022). The more often users use ride-hailing applications, the simpler it is for them to recognize new and innovative features. In addition to comprehending the novelty of online ride-hailing services and being aware of alternatives, customers' perceptions of their usefulness are also enhanced (Lee and Wong, 2021; Maziriri *et al.*, 2020). The reason is that when consumers see the distinction favorably, they may find it more convenient and valuable. In addition, Sun *et al.* (2016) claim in their MTA-TTF (task-technology fit) model that higher mindfulness might lead to greater technological fit. The first phase of this approach is the empirically supported connection between mindfulness and perceived usefulness (Hirsch and Chen, 2022; Sun *et al.*, 2016). Hence, mindfulness may positively improve customers' perceptions of a technology's usefulness. *H1* is stated as follows:

H1. Mindfulness directly impacts the customer's perceived usefulness of Vietnam's online ride-hailing service.

3.2 Mindfulness – perceived ease of use

The previous prestigious studies prove that mindfulness is a predictor of the technology acceptance model's variables, and ease of use is one of the most important parts of the TAM model (Flavian *et al.*, 2020; Venkatesh, 2022). Particularly, ease of use is the amount of work a person can perceive and should implement to use a technology (Wang *et al.*, 2020b). As was said above, when people are awake, they are likely to be aware of their needs and how technology can be used to meet those needs. In this way, customers will be better able to judge how easy it is to use the technology. Furthermore, Sun *et al.* (2016) developed the concept of “mindful technology adoption,” which points out the degree to which a person thinks that this technology fits their specific needs and abilities in a mindful state. Mindfulness can help people have a better idea of how easy it is to use technical information systems. Nevertheless, this relationship is still diverse in several studies (Hirsch and Chen, 2022; Flavian *et al.*, 2020); thus, it is essential to investigate the connection between mindfulness and perceived ease of use in the context of ride-hailing services. So, the *H2* is put forward:

- H2.* Mindfulness directly impacts the customer's perceived ease of use of Vietnam's online ride-hailing service.

3.3 Mediator variables: perceived usefulness and perceived ease of use

In addition, in the context of mindfulness and customer technology acceptance, these connections are complicated because mindfulness can contribute to perceived usefulness and perceived ease of use that leads to a customer's purchase intention. These complexities and interdependence among variables lead to the following two hypotheses, which would study the mediating role of perceived ease of use and perceived usefulness in the relationship between mindfulness and purchase intention, both as individual mediators.

Mindful individuals differentiate and refine experiences through categories and distinction (Daniel *et al.*, 2022). Thanks to mindfulness, a noble person pays closer attention to the distinctions between online ride hailing service and other modes of transportation, such as public transportation or traditional hailing, and appreciates the novelty of online ride hailing service (seeking technological novelty) (Stankov *et al.*, 2020). Moreover, a thoughtful individual is aware of the local contexts and the useful characteristics of online ride-hailing services (Chalermpong *et al.*, 2023). These customers are thus eager to participate in the online ride-hailing service process (Stankov *et al.*, 2020). In contrast, a less thoughtful customer has a relatively negative perception of new services like ride-hailing services, so they may resort to other means of traditional transportation (Bharti *et al.*, 2022). The *H3* should be presented as:

- H3.* Perceived usefulness mediates the relationship between mindfulness and customer purchase intention for Vietnam's online ride-hailing service.

Mindful conceptualizing focuses on cognitive flexibility; they appreciate nuanced contexts, including adaptive and alternative ways to mobilize them (Brunelle and Grossman, 2022). Meanwhile, the basic pillar of any technological development is that it is easy to use (Wang *et al.*, 2020a). A mindful technology user is more aware of how easily technologies can be adapted to them. In this way, the user's ability to have intention toward a specific technology is increased (Rodrigo *et al.*, 2022). In other words, if a thoughtful user cannot see the ease of use, they may not tend to use this technology.

Obviously, perceived ease of use can favor a higher intention to use information systems from a customer in a mindfulness state. In the case of ride-hailing services, [Flavian et al. \(2020\)](#) supported the role of mindfulness and perceived ease of use in promoting customer attitude and usage intention, while [Hirsch and Chen \(2022\)](#) state that there is no relationship between these variables. Therefore, this connection should be taken into consideration. The *H4* can be proposed as:

H4. Perceived ease of use mediates the relationship between mindfulness and customer purchase intention for Vietnam’s online ride-hailing service.

3.4 Perceived ease of use – perceived usefulness

[Davis \(1989\)](#) discovered that perceived usefulness and perceived ease of use are separate but connected criteria across a number of technologies. [Feng et al. \(2021\)](#) and [Flavian et al. \(2020\)](#) statistically validated this correlation between perceived ease of use and perceived usefulness. For example, those who regarded mobile health applications ([Octavius and Antonio, 2021](#)), mobile grocery buying apps ([Dirsehan and Cankat, 2021](#)) or mobile taxi hailing apps ([Ofori et al., 2022](#); [Siyal et al., 2021](#)) as user-friendly were much more likely to see them as valuable. In this context, ride-hailing service providers may monitor a driver’s location to estimate their arrival time and provide consumers with alerts. This automatically given information allows users to track without difficulty, thereby providing potential use. Consequently, if this feature is seen as simple to use, it should also be perceived as beneficial. The suggested *H5* should be stated as follows:

H5. Perceived ease of use directly impacts the customer’s perceived usefulness of Vietnam’s online ride-hailing service.

Therefore, this study would like to propose an analytical framework as [Figure 1](#).

4. Research methodology

4.1 Research procedure

With a view to finding out the real situation of online ride-hailing services in the Vietnamese market, a questionnaire based on the research’s theoretical framework is proposed to collect the opinions of Vietnamese customers toward this topic. The theoretical framework is

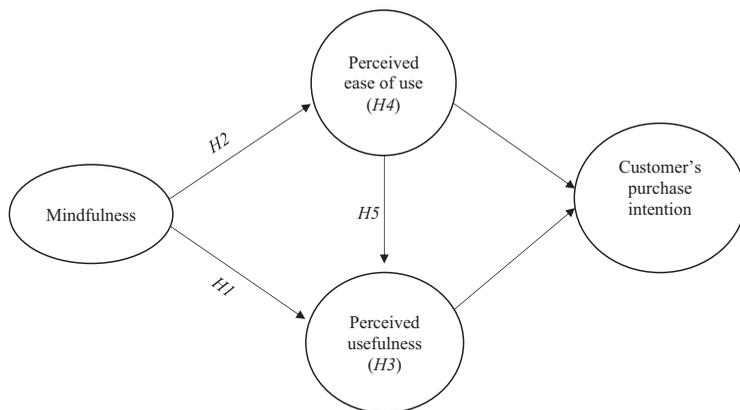


Figure 1.
Proposed analytical
framework

adapted from prestigious prior studies about the technology acceptance model and mindfulness, such as [Hirsch and Chen \(2022\)](#), [Lee and Wong \(2021\)](#) and [Wang et al. \(2020b\)](#). The final questionnaire includes 16 items, which use a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

In addition, the data collection process is carried out online through social media platforms (like G-mail, Facebook, Instagram, etc.) during the period of February 2022–March 2022. The target respondents are Vietnamese customers, especially those who have experience with online ride-hailing services. Under the researcher’s attempt, the author sends the survey link directly to individuals in the researcher’s network or specific online groups. To reduce nonresponse bias, the author always attempts to recruit responses from individuals or groups that pay more attention to ride-hailing services. In addition, questionnaire content does not require personal information or sensitive topics, and it is made clear that all information will be kept confidential and used exclusively for research purposes. Last but not least, these inquiry items are closed-ended and very common in the context of ride-hailing, so it does not require much time or effort for respondents to answer these questions.

4.2 Sample size and data analysis

In quantitative analysis, sample size depends on the number of variables or populations. Since there is no precise number of ride-hailing service users in Vietnam, the author decides to use a method that depends on a number of variables. According to [Hair et al. \(2013\)](#), the number of observations is required to be at least five times higher than the number of question items ($N = 5 * \text{question items}$). In this study, the number of items is 16, so the minimum required sample size should be 80 observations. Moreover, [Tabachnick and Fidell \(2007\)](#) point out that the number of sample items must be over $50 + 8 * \text{question items}$ ($N > 50 + 8m$). This way, the sample size should be 178 observations. To ensure the reliability of the research results, 250 surveys are distributed, but only 237 are qualified. This number of respondents meets the sample size requirement; therefore, it can be suitable for quantitative analysis using covariance-based structural equation modeling (CB-SEM) ([Hair et al., 2013](#); [Dash and Paul, 2021](#)). Valid datum is analyzed by a covariance-based SEM approach through the following steps:

- measurement model; and
- structural model.

Variable	Cases (%)	Variable	Cases (%)
<i>Age</i>		<i>Occupation</i>	
18–22	69 (29.11)	Student	79 (33.33)
23–30	88 (37.13)	Office staffs	87 (36.71)
31–40	42 (17.72)	Freelancer	55 (23.21)
41–50	29 (12.24)	Unemployment	16 (6.75)
Over 50	9 (3.80)		
<i>Area</i>		<i>Gender</i>	
Megacities (Hanoi, Ho Chi Minh City)	173 (73)	Male	108 (45.57)
Other cities	64 (27)	Female	129 (54.43)

Table 2.
The respondent’s
demographic
information

5. Research result

5.1 Demographic analysis

The demographic analysis in Table 2 points out several remarkable facts. First of all, a majority of respondents belong to the groups of 23–30 years old (37.1%) and 18–22 years old (21.9%). Second, office staff are the main occupation (36.71%), followed by students (33.33%). Moreover, almost all respondents are working and living in megacities like Hanoi and Ho Chi Minh City (73%). Finally, the number of female and male respondents is quite balanced, at 54.43% and 45.57%, respectively. The research sample meets the requirements of reliability and validity, which is good for representing the population.

5.2 Measurement model

The study performed confirmatory factor analysis (CFA) to test the validity and reliability of four measurement scales, which are presented in Table 3. All four constructs have Cronbach alpha values greater than 0.6, commonly regarded as the threshold for acceptability (Hair et al., 2013). In addition, when testing the convergent validity, most factor loadings of each item are greater than 0.70, except for PU4, MF4 and MF5. Therefore, these three items will be removed from the data set for further testing. Moreover, the composite reliability for all constructs was above the recommended 0.70 level (Hair et al., 2013), and the average variance extracted (AVE) shows that all factors were above the 0.60 threshold for

Measurement items	Corrected item-total correlation	Factor loading
<i>Perceived usefulness (PU) – adapted from Lee and Wong (2021), Cronbach alpha = 0.908, composite reliability = 0.935, average variance extracted = 0.829</i>		
I can accomplish my goals more effectively when using ride-hailing service	0.772	0.869
I can accomplish my goals more rapidly when using ride-hailing service	0.692	0.882
Ride-hailing is useful to me as I can do what I need during the trip	0.503	0.886
<i>Perceived ease of use (PEU) – adapted from Lee and Wong (2021), Cronbach alpha = 0.889, composite reliability = 0.927, average variance extracted = 0.760</i>		
It is simple to comprehend how to use ride-hailing services	0.529	0.824
I find ride-hailing services to be a simple process to learn	0.613	0.868
When using ride-hailing services, I do not have to put in a lot of mental work	0.669	0.870
I have no difficulties finding the right drivers	0.703	0.763
<i>Mindfulness (MF) – adapted from Hirsch and Chen (2022), Cronbach alpha = 0.781, composite reliability = 0.878, average variance extracted = 0.707</i>		
I believe that the pricing of the ride-hailing service is commensurate with my income	0.601	0.794
I believe that ride-hailing services are less expensive than conventional transportation	0.592	0.711
I believe ride-hailing services make my everyday life more convenient	0.537	0.872
<i>Purchase intention (PI) – adapted from Wang et al. (2020b), Cronbach alpha = 0.803, composite reliability = 0.918, average variance extracted = 0.791</i>		
Assuming I have access to ride-hailing, I intend to use it	0.612	0.705
I would select ride-hailing services when I have a longer route to take	0.611	0.831
I plan to use ride-hailing services in the future	0.553	0.843

Table 3.
Final result of
internal and
convergent validity

good convergent validity of the scales (Fornell and Larcker, 1981). The result points out that the scales demonstrated good internal and convergent validity.

A test for discriminant validity was conducted, and the results are presented as a correlation matrix in Table 4. It was found that the square root values of the AVE of each construct were generally higher than the correlations between it and any other constructs in the model, which demonstrated adequate discriminant validity. Moreover, it is recognized that the mean for most constructs of the framework is from 3.5 to 3.9, which shows the medium compliance of Vietnamese customers with these statements.

Using self-reported measures may result in common-method variance. Harman’s single-factor test can investigate common method variance when all survey items are included in an exploratory factor analysis and the first factor that emerges without rotation serves as a proxy for the common method variance. In this study, the first factor accounts for less than 50%, indicating that there is no significant common method variance (Hair et al., 2013). In addition, Table 5 summarizes model fit indexes of measurement models that pass the minimum acceptance levels recommended in the literature; thus, the proposed framework is significant enough to state research results.

5.3 Structural model

The hypothesis was tested by analyzing CB-SEM. In addition, the model fit indexes of the structural model (presented in Figure 2) pass the minimum acceptance levels recommended in the literature (Hair et al., 2013); thus, the proposed framework is significant enough to state research results. Figure 2 also points out that all direct paths are significant, except for the relationship between perceived ease of use and purchase intention (PEU → PI), because the *p*-value of this path is 0.704 (over 0.05). To be precise, dotted arrows present insignificant relationships, while solid arrows state significant relationships. As such, there is no relationship between perceived ease of use and purchase intention, and there are three direct effects being supported in this study:

- (1) Mindfulness has a significant impact on perceived ease of use, with mindfulness explaining 76.0% of perceived ease of use.

Variable	Mean	Standard deviation	MF	PEU	PI	PU
<i>MF</i>	3.824	0.099	0.841			
<i>PEU</i>	3.940	0.035	0.872	0.872		
<i>PI</i>	3.587	0.037	0.500	0.500	0.889	
<i>PU</i>	3.877	0.021	0.887	0.865	0.554	0.910

Table 4.
Descriptive analysis
and discriminant
validity

Model fit	Recommended value	Value
Chi-square/df	≤ 3	2.257
Comparative fit index (CFI)	≥ 0.90	0.967
TLI	≥ 0.90	0.956
Root mean square error of approximation (RMSEA)	0.00; 0.08	0.073
Normed fit index (NFI)	≥ 0.90	0.943
GFI	≥ 0.90	0.921
SRMR	0.00; 0.08	0.056

Table 5.
Model fit summary of
measurement model

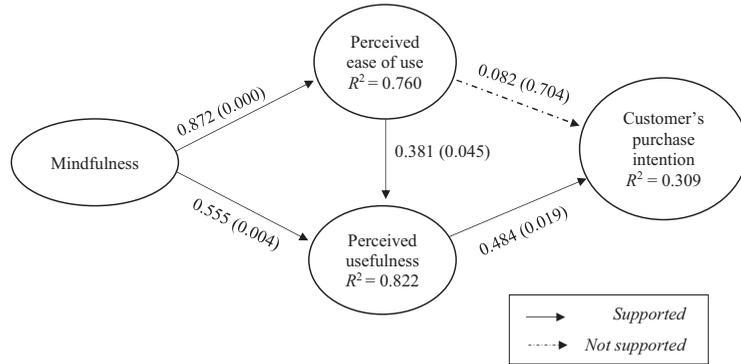


Figure 2.
Result of refined analytical framework

Notes: Chi-square/df: 2.257; comparative fit index (CFI): 0.967; TLI: 0.956; root mean square error of approximation (RMSEA): 0.073; normed fit index (NFI): 0.943; GFI: 0.921; SRMR: 0.056

Table 6.
Summary of indirect effect analysis

Dependent variable	Independent variable	Indirect path	Bias	2.5%	97.5%	<i>P</i> -value
Perceived usefulness	Mindfulness	MF → PEU → PU	-0.020	0.006	0.612	0.002
Purchase intention	Mindfulness	MF → PEU → PI	-0.002	-0.319	0.442	0.098
		MF → PU → PI	0.023	0.022	0.659	0.001

- (2) Mindfulness and perceived ease of use significantly impact perceived usefulness. A combination of mindfulness and perceived ease of use accounts for 82.2% of perceived usefulness.
- (3) Perceived usefulness significantly impacts purchase intention and accounts for 30.9% of purchase intention.

In addition, the decomposition of the path coefficient was used to point out indirect effects among paths. According to the values of indirect effect, direct effect and total effect in Table 6, there is an indirect effect between mindfulness and purchase intention. However, due to the *p*-value of MF → PEU → PI being 0.098 (over 0.05), it means that purchase intention is not indirectly related to mindfulness through perceived ease of use. Besides, with a *p*-value of 0.001, the indirect effect of MF → PU → PI can be confirmed.

As a result, the results of the statistical analysis state that *H1*, *H2*, *H3* and *H5* should be supported, while *H4* is not supported.

6. Discussion, implication and limitations

6.1 Discussion

According to research results, there are several outstanding discussions that should be highlighted, as shown below. To begin, with a beta coefficient of 0.484, perceived usefulness is shown to have a positive impact on Vietnamese customers' intentions to use online ride-hailing services. Perceived usefulness also mediates the relationship between mindfulness and intention to use, which is in line with many previous studies on mindfulness and

technology adoption, such as Sun *et al.* (2016) and Hirsch and Chen (2022). It can be asserted that, if customers become more aware of their needs and how technological services can satisfy them, their ability to assess the service's usefulness will improve (Flavian *et al.*, 2020). Thus, perceived usefulness is confirmed to significantly mediate the relationship between mindfulness and purchase intention in Vietnam's online ride-hailing service.

Second, perceived ease of use does not play a mediation role in the indirect effect of mindfulness and purchase intention, and perceived ease of use also does not pose a direct contribution to purchase intention. These findings clarify the complexity of connections among variables in current research, which is contrary to other studies like Hadidi and Carter (2016) and Flavian *et al.* (2020). This result implicates two viewpoints:

- (1) Vietnamese customers always adopt online ride-hailing services no matter how easy or complicated they are; and
- (2) Vietnamese customers will not depend on technology's ease of use to evaluate or decide to adopt this service.

When combined with other findings, it is true that Vietnamese customers currently prioritize technology's usefulness over ease of use. Therefore, the role of perceived ease of use is not important in Vietnamese customers' perceptions of adopting an online ride-hailing service. This result can be considered a new contribution to both practical and theoretical background.

Last but not least, the current finding clarifies that the influence of mindfulness on perceived ease of use is slightly greater than its effects on perceived usefulness (0.872 and 0.555), which is also supported by Flavian *et al.* (2020). It means that, in a thoughtful state, Vietnamese customers can easily realize the simplicity of ride-hailing services rather than their effectiveness. In fact, this outcome makes sense for a stage of technological development in a developing country like Vietnam.

6.2 Implications

6.2.1 Theoretical implementations. This study contributes to our comprehension of the role of mindfulness in promoting customers' intent to purchase online ride-hailing services in Vietnam. By combining the MTA model (Sun *et al.*, 2016) and the technology adoption model (TAM) (Davis and Venkatesh, 1996), the present study proposes a model for promoting the adoption of ride-hailing services in Vietnam based on the role of mindfulness and consumer perception.

In one aspect, this study differs from previous research that investigated the role of perceived usefulness as a mediator between mindfulness and the purchase intention of Vietnamese consumers toward ride-hailing services. Nonetheless, perceived ease of use is demonstrated to be an insignificant mediator in the relationship between mindfulness and purchase intention of Vietnamese consumers toward this technology-based service, which is a novel area of study. Future research should evaluate the role of perceived ease of use in different contexts.

In another aspect, it contributes to the current understanding of the MTA model (Sun *et al.*, 2016) and the TAM model (Davis and Venkatesh, 1996) by demonstrating that mindfulness has a direct effect on perceived ease of use and perceived usefulness. These findings represent a novel contribution to the existing body of knowledge regarding consumer behavior in technology adoption. Future research on online ride-hailing services may use this study as a significant reference point.

6.2.2 Practical implications. According to the research results, businesses need to focus on developing customer awareness in certain situations, especially after the profound effects

of the COVID-19 pandemic. Nobly, several scholars state that researching online customers' behavior and awareness levels during the COVID-19 crisis is critical because it helps to develop a personalized shopping experience and avoid irrelevant items or dangerous purchases for human health and safety (Fedushko and Ustyianovych, 2022; Habib and Hamadneh, 2021).

First, one of the most outstanding results refers to the indirect relationship between mindfulness, perceived usefulness and purchase intention among Vietnamese customers. As such, ride-hailing providers should launch more effective marketing campaigns to promote customer mindfulness in terms of the service's usefulness. In fact, some brands are implementing this strategy well such as Grab and Gojek. These campaigns refer to the usefulness of online ride hailing in helping to reduce infection spreading during epidemic season and traffic congestion during rush hours. Moreover, another usefulness being advertised by brands is the simplicity of ride-hailing applications to have a perfect drive (Grab, 2020; Gojek, 2021). When customers understand the good aspects of this service and pay attention to them, it's likely that they will use ride-hailing services with more frequency in their daily lives.

Second, because mindfulness has direct positive impacts on perceived ease of use and perceived usefulness, businesses should consider the importance of social influences when trying to stimulate customer mindfulness by sharing useful information and simple instructions. Particularly, the rise of social networks has strengthened this (Wang *et al.*, 2020a). For example, brands should work with favorite and trendy influencers, or key opinion leaders, to gain more attention from Vietnamese customers. When customers are more attracted to online ride-hailing services, they are more likely to realize their usefulness and ease of use. Moreover, ride-hailing providers should collaborate with prestigious bank systems to seek support for online payment assurance. As a result, ride-hailing companies can take advantage of bank customers by attracting current bank customers to use their services. On the other hand, the sponsoring bank can provide customers with useful information so that the transaction process will not be negatively impacted. In this way, customers become more aware of this specific ride-hailing service, recognize its usefulness and intend to use it in the future.

Table 7 summarizes the research conclusion and implications

Table 7.
Conclusions and
theoretical and
managerial
implications

Conclusions	Theoretical and managerial implications
Perceived usefulness significantly mediates the relationship between mindfulness and purchase intention in online ride-hailing services	Ride-hailing providers should launch more effective marketing campaigns to promote customer mindfulness in terms of the service's usefulness. When customers understand the good aspects, they will use ride-hailing services more frequently in their daily lives
Perceived ease of use does not play a mediation role in the indirect effects of mindfulness and purchase intention	Vietnamese customers always adopt online ride-hailing services, no matter how easy or complicated they are. Future researchers can refer to this outcome in different contexts
Mindfulness has direct positive impacts on perceived ease of use and perceived usefulness before promoting purchase intention	Business providers should consider the importance of social influences in the customer's mind when sharing useful information and simple instructions

6.3 Limitations and future scope of study

Despite the author's efforts, the study still encounters several limitations, which may directly or indirectly affect the overall findings. First, the sample size needs to be larger. Due to the hindrance of COVID-19, the questionnaire was only delivered online via Google Drive, which reduced the number of participants. Social distancing and lockdowns also pose significant impacts on customers' perceptions and behaviors toward the survey. Future studies should increase the sample size for better data validity and reliability. Another issue with the study may be related to the dependent factor; this study just ends with customers' intentions to adopt ride-hailing services. Nevertheless, the actual behavior has not been examined, even though this action plays an important part in defining precedented factors of the customer journey in Vietnam. As such, further research might consider actual usage as a dependent factor when investigating the topic of ride-hailing services.

7. Conclusion

In the context of Vietnam's online ride-hailing service, this research intends to investigate the influence of mindfulness on a customer's purchase intention, focusing on the mediating effects of perceived ease of use and perceived utility. During the period of February 2022 to March 2022, online data collection is conducted, with Vietnamese social media platforms playing a crucial role in reaching target respondents. A sample of 237 qualifying replies was analyzed using Smart PLS 4.0 software. These results demonstrate that perceived usefulness has a favorable effect on the intention to use online ride-hailing services and that it mediates the association between mindfulness and intention to use among Vietnamese customers. In contrast, perceived ease of use does not mediate the relationship between mindfulness and purchase intention, nor does it contribute directly to usage intention in Vietnam's online ride-hailing service. As a result, these findings differ from the previous research in that they address the literature gap on the influence of mindfulness on a customer's purchase intention through the mediation effects of perceived ease of use and perceived usefulness.

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