

**MODELLING E-HAILING SERVICE
CONSUMPTION: THE MODERATING EFFECT
OF SITUATIONAL FACTORS**

EMILY YAPP HON TSHIN

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OF SITUATIONAL FACTORS**

by

EMILY YAPP HON TSHIN

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LIST OF SYMBOLS

A	Number of PLS or PCA components in the model
a	Number of the PLS or PCA component
b	PLS regression coefficient
f	Effect Size
R	Coefficient of determinant
β	Beta Value

LIST OF ABBREVIATIONS

AA	Alternative attractiveness
AINT	Advocacy Intention
AVE	Average Variance Extracted
CA	Cars' ambience
CB-SEM	Co-variance-Based approach
CC	Collaborative Consumption
CINT	Continuance Usage Intention
CMB	Common Method Bias
CMV	Common Method Variance
CR	Composite Reliability
CV	Convenience value
DC	Drivers Characteristics
EV	Economic Value
HTMT	Heterotrait-Monotrait Ratio of Correlations
HV	Hedonic Value
MCO	Movement Control Order
PERVAL	Customer Perceived Value
PI	Promotional incentives
PLS-SEM	Partial Least Squares Structural Equation Modeling
PwC	PricewaterhouseCoopers
SAT	Satisfaction
SINT	Switching Intention
SPSS	Statistical Package for the Social Sciences
STV	Sustainability Value
SV	Social Value
UIA	Universiti Islam Malaysia
UiTM	Universiti Teknologi Mara Malaysia
UKM	Universiti Kebangsaan Malaysia
UM	Universiti Malaya
UMS	Universiti Malaysia Sabah
UPM	Universiti Putra Malaysia

UPNM	Universiti Pertahanan Nasional Malaysia
USM	Universiti Sains Malaysia
UTHM	Universiti Tun Hussein Onn
UTM	Universiti Teknologi Malaysia
VIF	Variance Inflation Factor

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MODEL PENGGUNAAN PERKHIDMATAN E-HAILING: KESAN PENYEDERHANAAN FAKTOR SITUASI

ABSTRAK

Kajian ini bertujuan untuk memahami apakah perhubungan antara nilai tanggapan pengguna dan kepuasan dalam perkhidmatan e-hailing. Kajian ini juga mengenalpasti sama ada kepuasan pengguna akan mendorong kepada niat penggunaan berlanjutan, niat advokasi dan mengurangkan niat beralih. Selain itu, faktor situasi yang terdiri daripada ketersediaan masa, ciri-ciri pemandu, persekitaran kenderaan, insentif promosi dan daya tarikan alternatif berfungsi sebagai pembolehubah penyederhanaan. Kerangka teoretikal kajian ini dibangunkan berasaskan Model Kesetiaan Tanpa Aksi dan teori PERVAL. Kuasa Dua Terkecil Separa–Pemodelan Persamaan Struktur (PLS-SEM) digunakan untuk menganalisis data yang diperolehi. Melalui sampel 493 mahasiswa Millennial, hasil kajian menunjukkan bahawa nilai tanggapan khususnya nilai kemudahan, nilai ekonomi, nilai kelestarian dan nilai hedonik mempunyai kesan signifikan dan positif terhadap kepuasan. Di samping itu, kepuasan pengguna mempunyai hubungan positif terhadap niat penggunaan berlanjutan dan niat advokasi; tetapi hubungan yang negatif terhadap niat beralih. Tambahan pula, hubungan negatif antara kepuasan dan niat beralih lebih kuat ketika daya tarikan alternatif adalah rendah. Kajian ini telah berjaya mengembangkan Model Kesetiaan Tanpa Aksi dengan memperkenalkan faktor situasi sebagai penyederhanaan dalam hubungan nilai tanggapan-kepuasan-kesetiaan. Selain itu, kajian ini juga mengesahkan keperluan untuk menrangkumi nilai kelestarian ke dalam teori PERVAL. Kajian ini juga menyumbangkan beberapa implikasi praktikal. Keterbatasan dan cadangan kajian di masa depan juga dibincangkan.

MODELING E-HAILING SERVICES CONSUMPTION: THE MODERATING EFFECT OF SITUATIONAL FACTORS

ABSTRACT

This study attempted to understand the relationship between users' perceived value of and satisfaction in e-hailing services. It also identified whether users' satisfaction led towards their continuance usage intention, advocacy intention and reduced switching intention of e-hailing services. Besides, situational factors consisting of users' time availability, drivers' characteristics, cars' ambience, promotional incentives and alternative attractiveness functioned as moderators. The development of this study's theoretical framework was established through the Non-Action Loyalty Model and PERVAL theory. Partial Least Squares-Structural Equation Modelling (PLS-SEM) was used to analyse the data collected. Through a sample of 493 Millennial university students, the findings revealed that perceived value specifically convenience value, economic value, sustainability value and hedonic values have a significant and positive effect on satisfaction. Also, satisfaction was positively related with continuance usage intention and advocacy intention; but negatively related with switching intention. Furthermore, the negative relationship between satisfaction and switching intention is stronger when alternative attractiveness is low. This study has successfully extended the Non-Action Loyalty Model by incorporating situational factors as moderators within the perceived value-satisfaction-loyalty link. In addition, it has also validated the necessity to include sustainability value into PERVAL theory. This study also contributed several practical implications. Limitations and future research were discussed as well.

CHAPTER 1

INTRODUCTION

1.1 Overview of Chapter

This chapter presents the research relating to collaborative consumption. The background, dynamics and the evolution of collaborative consumption are first presented, followed by introducing collaborative consumption users and the associated issues. The problem statements of collaborative consumption are next presented, leading towards the research questions and objectives of the research. The significance of this study from a theoretical and practical perspective is next discussed, followed by a definition of the key constructs or terms and organisation of the remaining structure of this thesis.

1.2 Background

Leading up to the 21st century, technology has significantly revolutionised the way society purchase, consume and acquire products and services (Zhang, Gu, & Jahromi, 2018) via technology advancements such as online payments, GPS navigation systems, the Internet and smartphone devices. Consumers nowadays not only have unlimited access to information and entertainment, but also access to other under-utilised commodities such as houses, cars, knowledge and skills. Given these scenarios, many organisations especially following the global financial crisis (GFC) (between 2008 to 2010) (Evans & Schmalensee, 2016), have taken advantage of technology to build mobile application platforms that offer users many of these under-utilised commodities without the need to own them (Lee, Chan, Balaji, & Chong, 2018). For example, accommodation platforms such as Airbnb, VRBO, Tripping and HouseTrip, and; transportation/e-hailing platforms such as GrabCar, MULA, DECSEE and MyCar.

Here, the consumer can enjoy these services using their smartphone device, enabling them to book a ride and even to book accommodation. This form of service is known as collaborative consumption (this term is used interchangeably with sharing economy in the literature). Collaborative consumption can be described as swapping, sharing, bartering, trading and renting; and; being reinvented through the latest technologies and peer-to-peer marketplace in ways and on a scale never before possible (Botsman & Rogers, 2010).

1.2.1 The Dynamics of Collaborative Consumption

To gain a better understanding of collaborative consumption (CC), it is important to understand the CC environment, which essentially, involves three different parties. Benoit, Baker, Bolton, Gruber, and Kandampully (2017) stated that CC could be characterised as triadic. To be more specific, CC involves a (1) platform provider that enables exchange and acts as a “matchmaker” (Evans & Schmalensee, 2016); (2) a user who seeks access to assets; and (3), a peer service provider that serves the user. In addition to the involvement of these three different parties, the success of CC activities particularly for e-hailing services is also reliant on underlying technological requirements such as smartphones, reliable network connectivity, GPS, matching algorithm and a data repository (Amey, Attanucci, & Mishalani, 2011).

Figure 1.1 illustrates the CC environment using e-hailing as an example. As mentioned in the previous paragraphs, the collaborative consumption environment (CCE) involves three different parties. First, the service provider (a private individual who registers herself/himself with the e-hailing application as a driver. Secondly, the user will register themselves as a rider, and third the mobile application developed and owned by the e-hailing service organisation. As a user will need to travel somewhere

by car, the user can request this need using the e-hailing platform. Through a ride-matching algorithm, the system is able to identify the closest, available driver, informing them about the user's request. If a driver is available and agrees to accept the request, the platform will notify the user concerning this acceptance. At this stage, the driver will receive information about the location of where to pick the user(s) up from, while the user(s) will receive information about the driver's arrival time. Next, face-to-face interaction between user and driver (total strangers) will occur (i.e. messaging or voice call). Once the user has arrived at their destination, payment for the services is then carried out via cash, e-wallet or credit card. If the user chooses to pay by cash, then the driver needs to pay 'renting fees' to the platform organisation. Whereas, if the user decides to pay via electronic wallet, the e-hailing organisation will need to pay the driver 'service fees'. After the service, both the driver and user will rate each other according to their overall satisfaction level.

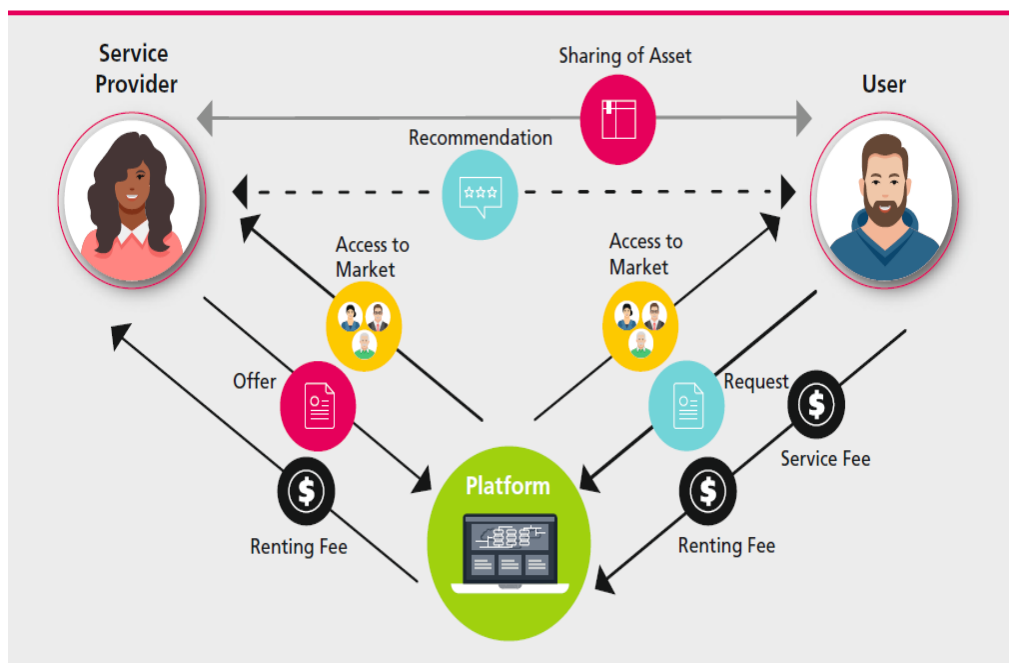
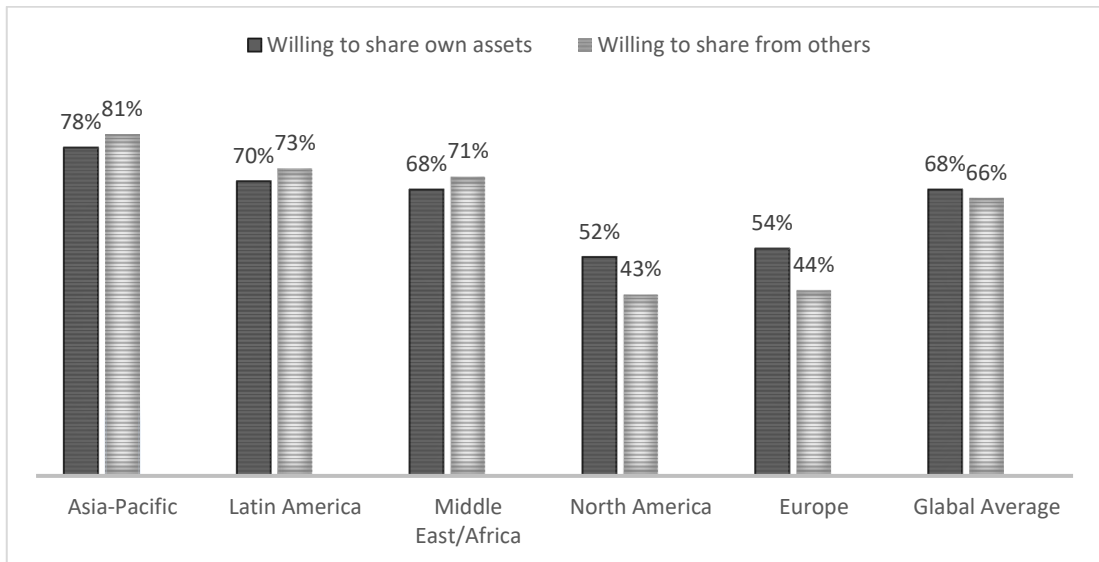


Figure 1.1 Dynamics of Collaborative Consumption

1.2.2 The Development of Collaborative Consumption

Nowadays, consumers are accelerating their demand for convenience, desire for instant gratification and environmental awareness. As such, this rising demand has helped CC to flourish. Globally, people are willing to share within their respective communities (see Figure 1.2), ‘being willing to share their own assets’ which means that service providers are more open to sharing their underutilised assets with others. Also, ‘willing to share from others’ means that users are willing to accept/use other parties underutilised assets.

As seen from the chart in Figure 1.2, the Asia-Pacific region comprises the most people, and service providers who are willing to share their assets (78%) and users who are willing to share from others (81%). This is followed by Latin America (70% willing to share their assets and 73% who are willing to share from others), the Middle East/Africa (86% willing to share their assets and 71% who are willing to share from others), Europe (54% willing to share assets and 44% who are willing to share from others) and North America (52% willing to share assets and 43% who are willing to share from others). On average, 68% globally, are willing to share their assets and 66% are willing to share from others. Also, from observing the chart, it is evident that people globally are willing to share and accept the use and sharing of assets. Moreover, it also suggests that communities are accepting and acknowledging the growth of CC. Such willingness will also contribute to the success of CC.



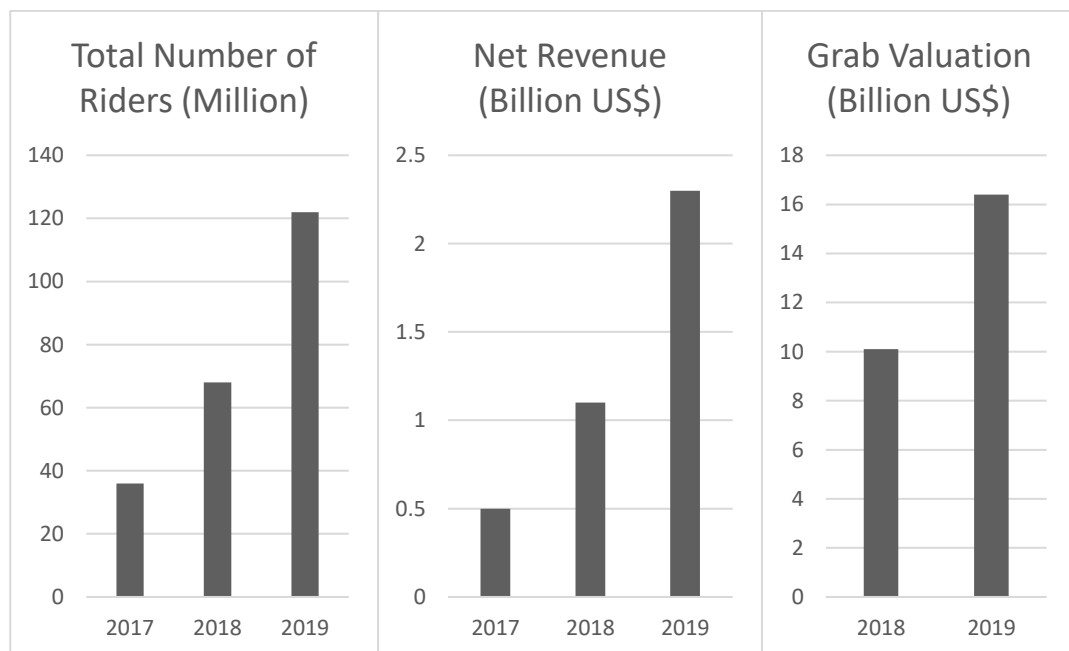
Source: Van Welsum (2016)

Figure 1.2 The Rise of the Sharing Economy

Furthermore, CC could provide the inherent advantage of further enjoyment of the activity, convenience, economic gains, price advantages, providing more alternative choices, new consumption experience, social interaction, support for the local economy, environmental sustainability and reduce over or hyper-consumption (Ertz, Durif & Arcand, 2016; Hamari, Sjöklint & Ukkonen, 2016; Kathan, Matzler & Veider, 2016). According to a 2015 report produced by PricewaterhouseCoopers (PwC), 86% of respondents agreed that it makes life more affordable, 83% agreed it makes life more convenient and efficient, 76% agreed it is better for the environment, 78% agreed it builds a stronger community, 63% agreed it is more fun than engaging with traditional companies, and 32% agreed that it allowed greater choice in the market.

In contrast, CC has had a significant impact on incumbent industries, especially in the hotel and transportation industries which have signalled powerful changes (Barnes & Mattsson 2016). For example, the company Airbnb, had 416,000 guests staying in New York City, translating into one million lost room nights for the city's hotels. Regarding transportation services, traditional car rentals, local taxis and public

transportation are likely to experience a significant impact from e-hailing (taxi-hailing application on a smartphone device). These examples further indicate that CC is rapidly growing. PwC (2015) further reported that the revenues generated by a sharing economy that includes CC would increase from US\$15 billion in 2014 to an estimated US\$335 billion by 2025. In other words, this suggests that CC is growing quickly. As a result, this new business model is here to stay, and will definitely experience continual growth in the near future. Similarly, Airbnb in the hospitality industry and Uber in transportation will also continue to experience exponential growth. Notably, both companies have already surpassed an estimated US\$1 billion in revenue in less than a decade of being established and have already reached market valuations between \$30 and \$66 billion USD respectively without owning a room or a car.

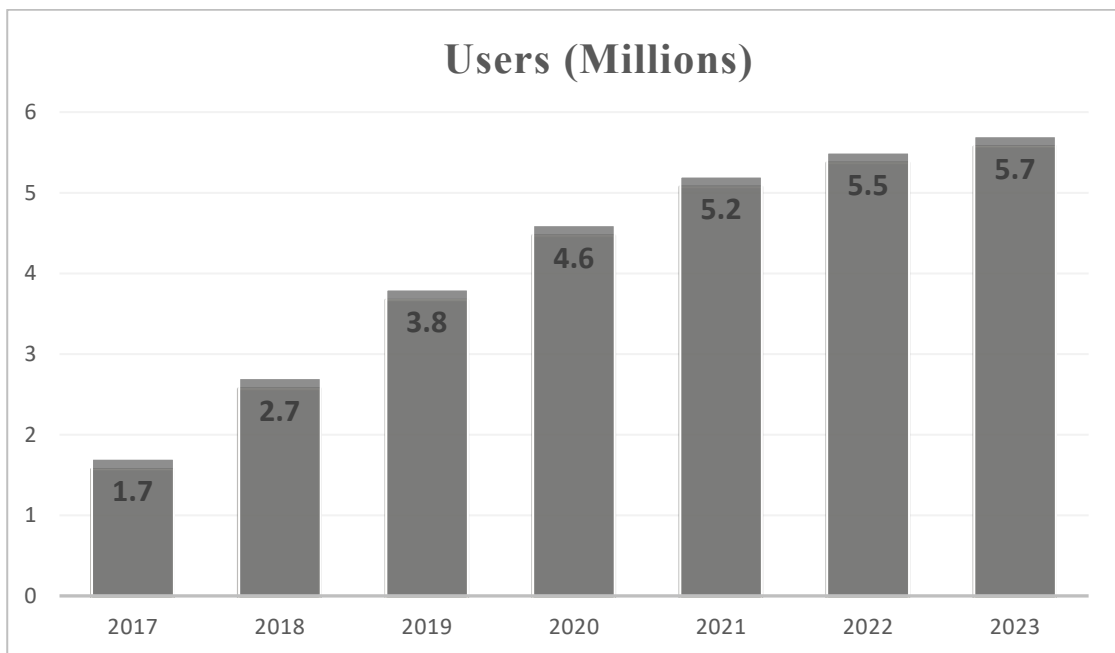


Source: Trefis Team (2019)

Figure 1.3 Grab Number of Riders, Net Revenue and Grab Valuation in Southeast Asia Region

Whereas, in the Southeast Asian region, e-hailing via Grab is forecasted to reach US\$20.1 billion in revenue by 2025 (Newcomer & Lee, 2018). As seen from the chart

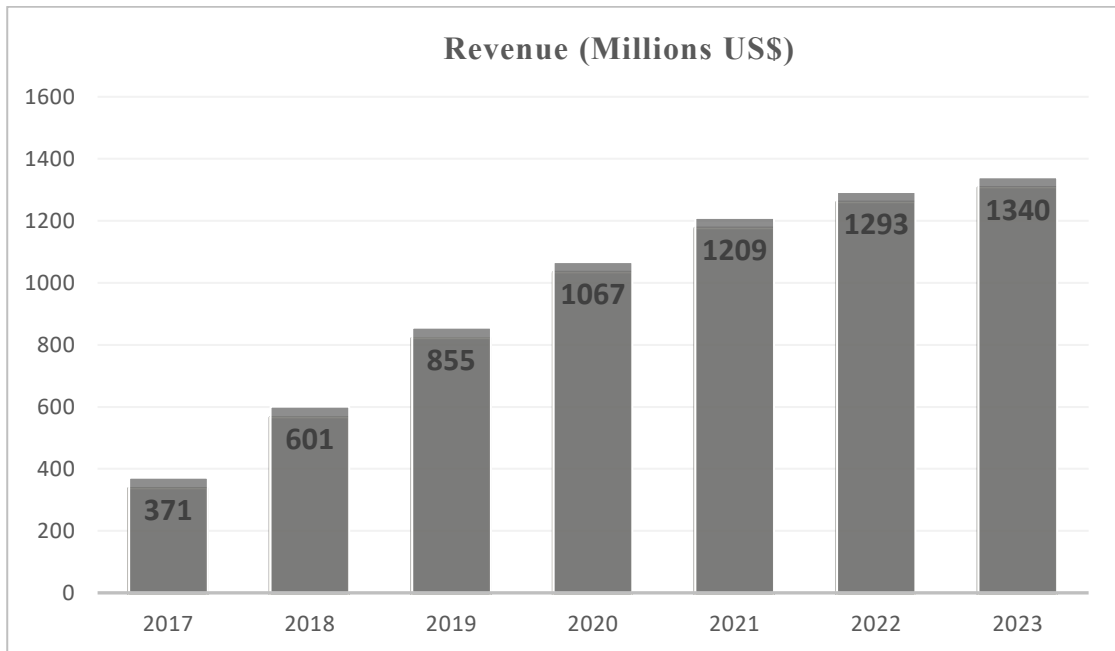
in figure 1.3, Grab has witnessed significant growth in rides booked via their Apps has increased from 36 million in year 2017 and this figure is expected to increased to 122 million in the year 2019. These figures also reflect Grab’s net revenue. Trefis Team (2019) further reported that the net revenues generated by Grab increased from US\$5 million in 2017 to an estimated US\$2.3 billion in 2019 which is US\$8 billion in different. Due to the increase of Grab’s usage and net revenue, Grab’s market value has also increased from US\$10.1 billion in 2018 to US\$16.4 billion in 2019.



Source: KajiData Research (2019)

Figure 1.4 E-hailing Users in Malaysia

Based on the KajiData Research (2019) in figure 1.4, the bar chart display e-hailing users in Malaysia will be increasing from 1.7million in 2017 and estimate to increase to 5.7million users in year 2023.



Source: KajiData Research (2019)

Figure 1.5 E-hailing Revenue in Malaysia

According to KajiData Research (2019) in figure 1.5, it shows that e-hailing revenue is expected to increase from US\$371 million in 2017 to US\$1340 million in the year 2023. In a survey initiated in 2015 by the Land Public Transport Commission (SPAD), it was found that 66.6% the survey's respondents confirmed their preference in using a mobile application to hail a ride. It is interesting to see that Malaysians want Uber and GrabCar (prior to the period of this current research, Uber was still operating in Malaysia) to remain in operation in the country. Furthermore, the statistics also revealed that 80% of the general public preferred to use Uber and/or GrabCar services (Premanathini, 2016). In Malaysia, e-hailing has witnessed hundreds of millions of ringgit in potential income shifting from traditional taxi services to e-hailing services, since the latter has dominated the country's public transportation sector for many years (Kanyakumari, 2018). In addition, compared to other modes of public transportation, the advantages of e-hailing are 'speediness, privacy, comfort, lack of parking fees, door-to-door and are available 24 hours a day' (He & Shen, 2015). Furthermore, the taxi

industry in Malaysia is at the top of the list, which compares the ten worst taxi services globally (Brown, 2015), this has encourage more Malaysian uses e-hailing services. As at October 2019, Land Public Transport Agency (APAD) (previously known as Land Public Transport Commission, SPAD) listed 42 e-hailing companies along with their respective mobile applications (Choong & Lai, 2019), as shown below:

1. Big Blue Customer (Big Blue Capital (M) Sdn Bhd)
2. BitCar (BitCar Malaysia Sdn Bhd)
3. Che (My Leisure Tour & Travel Sdn Bhd)
4. Cioaz (Ideal Technology Advancement Sdn Bhd)
5. Dacsee (DMD Technology Sdn Bhd)
6. DOB (DB Network Sdn Bhd)
7. Diffride (Diff Global Solutions Sdn Bhd)
8. DrivegthWeweJourney (Global Transportation Network Sdn Bhd)
9. Eazi Car (Eazi Car Sdn Bhd)
10. Eevom (Eecom Sdn Bhd)
11. eLIMO (GoGlobal Empire Travel & Tour Sdn Bhd)
12. EZCab (EZCab Sdn Bhd)
13. Faszz (Faszz Technology (M) Sdn Bhd)
14. Firecab (H2H Eservices Sdn Bhd)
15. Firstone (H2H Eservices Sdn Bhd)
16. Frenzt (Wekaotim Sdn Bhd)
17. Gabir Malaysia (Gabir E-hailing Holding)

18. Get Car (Power Travel and Tours Sdn Bhd)
19. GoJo (Asian Famous Tours & Travel Sdn Bhd)
20. Grab (Grabcar Sdn Bhd)
21. I Cabbi (Robust Universal Sdn Bhd)
22. JomRides (USGA (M) Sdn Bhd)
23. Kwikride (Kwikride Sdn Bhd)
24. Linkz (Pure Ride Sdn Bhd)
25. Mann Go (Mann Ventures Sdn Bhd)
26. Maxim (Aist Malaysia Sdn Bhd)
27. Mula (Mula Car (M) Sdn Bhd)
28. My2sg (Travelers Tours Malaysia Sdn Bhd)
29. MyCar (Platform Apps Sdn Bhd)
30. MyGo (Sackz Exclusive Sdn Bhd)
31. Nuc (Neo Urban Consolidated Sdn Bhd)
32. PicknGo (Pick n Go Sdn Bhd)
33. Pickup2u (Pick Up Holding)
34. Pisang (Tonggak Niaga Sdn Bhd)
35. Riding Pink (Riding Pink)
36. Ridez (Vertec Technology Solution Sdn Bhd)
37. Taxi Go (Cab Mmobility Sdn Bhd)
38. Tutucars (Tutucars Sdn Bhd)

39. Texspo (Texspo Technology Sdn Bhd)

40. Tutucars (Tutucars Sdn Bhd)

41. UNID (Cubiqsoft Sdn Bhd)

42. ZeppOn (Zepp On Sdn Bhd)

Due to this fierce competition from e-hailing services, local taxi drivers have protested over e-hailing services given e-hailing services have disrupted the taxi operators' income (Azhar, 2016).

1.2.3 Collaborative Consumption Users

Notwithstanding, CC services have attracted a diverse group of consumers though, Millennials who were born between 1980 and 2000 (Gurau, 2012) tend to use CC services the most (Colby & Bell, 2016; Hwang & Griffiths, 2017; Mittendorf, 2018; PwC, 2015). This is not surprising given this generation has grown up in an interconnected world in which they live in and have access to various sources of information via the internet and through social media (Cheng, 2019; Lenhart, Purcell, Smith, & Zickuhr, 2010). In other words, Millennials are digital natives, tech-savvy, value the versatility of smartphones and stay engaged to the issues that are of personal importance to them (Cheng, 2019). Moreover, if they need certain information or finding a solution to their problem, they tend to go online and explore or interact with other online users. Furthermore, as Millennials' characteristics tend to be more about caring for others, they have less interest in assets, are less interested in keeping up with materialistic trends and are less invested in obsessive consumerism as a way of life. In other words, CC services have become very relevant for them (Hwang & Griffiths, 2017). Millennials also opt for convenience and flexible services (Sweeney, 2006).

Even though Millennials are the noted generation that widely adopts CC services, they are also the most valued consumer for CC organisations (Hwang & Griffiths, 2017). However, Millennials have their own shortcomings. For example, they tend to be less loyal compared to other generations (Reisenwitz & Iyer, 2009). Furthermore, they desire products or services that match their personality and lifestyle needs (Caplan, 2005) and also have high expectations regarding certain brands and accept the services and products that provide them with the best value (Solomon, 2018). Not to mention, they are not tolerant towards delays (Sweeney, 2006) and expect their services to be instantly available (Hwang & Griffiths, 2017). Therefore, due to the above mention characteristics, this makes Millennials a challenge for CC organisations to satisfy.

1.2.4 Issues Related to Collaborative Consumption

According to Parente, Geleilate and Rong (2018), they state that the adoption of the CC application is one of the fastest and largest internationalisation movements to date, regardless of developed or developing countries. For instance, by 2025, e-hailing services in Southeast Asia are forecasted to reach US\$20.1 billion in revenue (Newcomer & Lee, 2018). Such figures indicate how profitable e-hailing services will continue to be. However, research on CC is relatively recent but is one of the fastest-growing fields of research. Though knowing and understanding what motivates users towards CC activities, especially in e-hailing services, are somewhat limited.

Similar to other service organisations, CC services also face competition which is always going to be an issue, especially concerning customer loyalty. Although a CC organisation emphasises that it intends to improve the lives of its customers, their good

intention is not sufficient for renowned consumers, especially in this digital business model (Tan, 2018). Such a situation occurs because CC users are more willing to seek out new challenges (Hiebert, 2016). In addition, customers in CC tend to be more willing to try new brands that could help them save both money and time (Hiebert, 2016). As a result, CC services such as GrabCar, Uber and Airbnb may not be willing to remain in providing these services long term, when there are new or similar competitors entering the market. As users can readily download e-hailing applications onto their smartphone at any time, their loyalty tends to be much lower, and their intention of switching services becomes more evident (Lin & Dula, 2016).

According to Lin and Dula (2016), as e-hailing is asset-light and depends on cloud-based mobile application technology, the barriers for competitors to enter the market are low. As it is easy for competitors to enter the market, more organisations are embarking towards e-hailing. For example, Uber (an e-hailing service organisation) had to withdraw themselves from China and Southeast Asia due to fierce local competition. As such, winning and improving customer loyalty, especially among the Millennial generation in such a competitive market is important, particularly for organisations that wish to compete and remain sustainable in the market. Furthermore, it can become difficult to distinguish between one e-hailing service from another.

1.3 Problem Statement

As the competition towards CC, especially for e-hailing services continues to intensify and the cost of acquiring new customers increases for e-hailing organisations, e-hailing organisations need to understand what they could do to enable customers to remain loyal. One of the solutions is to understand users' satisfaction. According to Cheng, Gan, Imrie and Mansori (2019), satisfactory purchase experience would appear

to be one requirement to enable users to have a continued interest towards a product or service that might lead towards users' loyalty. As a result, organisation should focus into users' satisfaction.

When e-hailing was initially introduced in Malaysia in 2012, there were only two e-hailing services which were Uber and Grab. Given the level of competition amongst the two organisations, both e-hailing organisations were fiercely competing with each other to retain their customer loyalty. However, in March 2018, Uber withdrew from Southeast Asia, given this fierce local competition (Newcomer & Lee, 2018). Also, as Uber had withdrawn from the market, and was subsequently acquired by Grab, other competitors began to enter the e-hailing service market without hesitation to compete with Grab. In Malaysia, as of Oct 2019, there are 42 registered e-hailing organisations with the Land Public Transport Agency (APAD) (Choong & Lai, 2019). Given the fierce competition and rivalry, e-hailing organisations need to remain competitive and remain sustainable in the long-run. One of the solutions to this issue is understanding users' satisfaction. Users satisfaction has been one of the popular subject particularly in marketing because users responses could determine users loyalty and this could lead to sustainability of an organisation (Anderson & Sullivan, 2008). However, to satisfied users, e-hailing organisation firstly need to understand users' perceived value towards the usage of e-hailing services.

According to Holbrook (1999); and; Stollery and Jun (2017) perceived value using perceived benefits (i.e. gains from the use of a product or service) is the basis of every marketing activity. More importantly (Bonsón-Ponte, Carvajal-Trujillo, & Escobar-Rodríguez, 2015; Kim, Xu, & Gupta, 2012) identified that value is the main antecedent towards customer satisfaction and intention especially for services that are technologically based. Based on the existing literature from the CC perspective (Hamari

et al., 2016; Hwang & Griffiths, 2017; Lee, Chan, Balaji, & Chong, 2018; Razli, Jamal, & Zahari, 2017; Stollery & Jun, 2017; Tussyadiah & Pesonen, 2016) many of these researchers have agreed that the main benefits of CC are economical and convenience values though several researchers have mentioned that CC users could gain social and hedonic values in the process. Very limited research has taken sustainability value into account, especially from the context of e-hailing. Sustainability value is relevant in the CC context as it could decrease the negative impact on the environment by reducing the production of end products and the utilisation of raw materials (Botsman & Rogers, 2011; Tussyadiah, 2015). Therefore, five values in which consumers can derive value from e-hailing service usage are related to the economic reasons, convenience, sustainability, symbolic and hedonic values. As users could derived these values through the usage of e-hailing services, they will be happy with the organisation. As they are happy with the organisation, this could lead towards users' satisfaction.

Arteaga-sánchez, Belda-ruiz, Ros-galvez and Rosa-garcia (2018); Bhattacharjee (2001); and Hsiao, Chang and Tang (2016) stated that customer satisfaction is an important outcome of providing a service because customers will ultimately become loyal as reflected in their continuance usage of a service. In addition, satisfaction will also lead to advocacy intention where customers will recommend, promote or even defend (Bendapudi & Berry, 1997) e-hailing services to their families and friends. Both of these intentions are classified as favourable outcomes for an organisation (Han, Kim, & Hyun, 2011). However, satisfaction could also lead to an unfavourable outcome (Han, Kim, & Hyun, 2011) known as switching intention. But, the understanding of switching intention in e-hailing industry remains unclear. Therefore, it is important to consider both favourable and unfavourable outcome simultaneously. In addition, more importantly researcher should also need to introduce moderators into these relationships

because Tuu and Olsen (2010) stated that “current knowledge fails to explain fully the prevalence of satisfied customers who defect and dissatisfied customers who do not’ (p. 151). Due to this, moderator is needed to help to understand deeply these relationships could be intervene particularly users’ situational factors.

While measuring these benefits as well as the outcome of satisfaction, e-hailing organisations should also consider situational factors. Monsuwé, Dellaert and de Ruyter (2004) point out that understanding consumer motives is through their participation in a service, in addition to situational factors, that need to be considered as well. However, the consideration of situational factors has always been ignored in consumer behaviour research (Hand, Riley, Harris, Singh, & Rettie, 2009). In previous literature, situational factors have served as moderators. For example, in self-service (Dabholkar & Bagozzi, 2002), online shopping (Monsuwé et al., 2004) and impulse buying (Chang, Yan, & Eckman, 2014) though it has yet to be explored from an e-hailing perspective.

Furthermore, there are varieties of situational aspects that can be moderators (Monsuwé et al., 2004). For example, in the e-hailing context, several situational factors need to be considered by the organisation such as the user’s time, the cars’ ambiance surroundings, the driver’s characteristics, promotional incentives and alternative attractiveness. Firstly, users time. Users who use e-hailing services consist of various types and purposes. Some users use e-hailing services because e-hailing services allow them to save time. This is particularly the case as with just one click on the mobile application platform installed on the device has enabled users to enjoy the immediate provisioning of a range of services. Such situations influence the satisfaction of users. Secondly, are the service providers. Service providers are the private individuals who own the property and deliver the service to the user. In return, the user pays them a fee to use the service. Also, due to this, service provider property or assets such as a car and

associated characteristics will moderate between their enjoyment and satisfaction. For example, in the e-hailing context, users' enjoyment will be influenced if they find out that the car's ambience surrounding that they are travelling in is dirty and the driver is very rude. In e-hailing services, customers might also continue using the services because of promotional incentives. Likewise, consumers might switch to another competitor because the competitor offers a more attractive feature or option compared to the current service provider. Therefore, to remain competitive and sustainable in the CC market, organisations should consider these situational factors.

1.4 Research Questions

From the issues discussed in the previous section, the research questions raised in this study include:

1. What is the relationship between perceived value (economic value, convenience value, symbolic value, sustainability value and hedonic value) and satisfaction in e-hailing services?
2. What is the relationship between satisfaction and continuance usage, advocacy, and switching intention in e-hailing services?
3. To what extent does time availability moderate the relationship between convenience value and satisfaction in e-hailing services?
4. To what extent do e-hailing cars' ambience and the drivers' characteristics moderate the relationship between hedonic value and satisfaction in e-hailing services?
5. To what extent do promotional incentives moderate the relationship between satisfaction and continuance usage intention in e-hailing services?

6. To what extent does alternative attractiveness moderate the relationship between satisfaction and switching intention in e-hailing services?

1.5 Research Objectives

Based on the research questions above, the following research objectives are developed, which are:

1. To examine the relationship between perceived value (economic value, convenience value, symbolic value, sustainability value and hedonic value) and satisfaction in e-hailing services.
2. To examine the relationship between satisfaction and continuance usage, advocacy, and switching intention in e-hailing services.
3. To examine the moderating effect of time availability on the relationship between convenience value and satisfaction in e-hailing services.
4. To examine the moderating effect of cars' ambience and driver's characteristics on the relationship between hedonic value and satisfaction in e-hailing services.
5. To examine the moderating effect of promotional incentives on the relationship between satisfaction and continuance usage intention in e-hailing services.
6. To examine the moderating effect of alternative attractiveness on the relationship between satisfaction and switching intention in e-hailing services.

1.6 Scope of Study

This study focused on modelling e-hailing services consumption particularly the use of GrabCar among Millennial users in Malaysia. Based on the premises underlying

value and loyalty theories, the impact of different types of values on satisfaction with e-hailing services was ascertained in this study along with the impact of satisfaction on loyalty towards e-hailing services in terms of continuance usage intention, advocacy intention and switching intention. In addition, this study also covered situational factors such as time availability, driver's characteristics, car's ambience, promotional incentives and alternative attractiveness that have the potential to moderate the perceived value-satisfaction-loyalty relationship.

1.7 Significance of the study

This study has both theoretical and practical significance, as presented in the following sections.

1.7.1 Theoretical Significance

Firstly, this study will contribute to the Four-Stage Loyalty Model where cognitive loyalty will represent the user's perceived value, affective loyalty will consist of satisfaction, and conative loyalty is the user's continuance usage, advocacy and switching intention. Since these relationships are multi-dimensional for each loyalty phase, it will be adding "further comprehension of the theoretical mechanism of loyalty formation and will broaden and deepen the theory" (Han, Kim, & Kim, 2011, p. 1008). Similarly, this will also provide empirical evidence to support this relationship from the context of e-hailing, especially in the context of Malaysia. Given this study focuses on the post-adoption behaviour of e-hailing services, it is an enrichment of the existing literature. As Thakur (2018) stated, there is very limited research focusing on the perspective of post-adoption behaviour.

Secondly, the introduction of situational factors such as time, cars' ambience, drivers' characteristics, promotional incentives and alternative attractiveness will be introduced as moderators. The introduction of situational factors as moderators will further contribute to the knowledge. Researchers such as Calvo-Porrall and Levy-Mangin (2019); Chen, Su, and Carpenter (2020); and; Hand et al. (2009) stated, situational factors have always been ignored in consumer behaviour research and have not been fully researched. In addition, the influence of the situational factors may vary in different parts of the globe (Brito, McGoldrick, & Raut, 2019). Furthermore, considering the situational factors will also help to expand the understanding of cognitive-affective-conative loyalty model.

Thirdly, in CC literature, not many researchers had considered PERVAL theory into their study. Although most common and agreeable value includes the economic value, convenience value, symbolic value and hedonic value are relevant value on PERVAL theory. However, sustainability value is one of the values that is scarcely mentioned in the literature, especially in the context of e-hailing and not to mention in PERVAL theory. Thus, sustainability value is one of the important values in CC because it could decrease the negative impact on the environment, especially in reducing the manufacturing of final products and consumption materials (Botsman & Rogers, 2011; Tussyadiah, 2015). Furthermore, sustainability value is one of the factors that drive consumer interest in using CC (Hasan & Birgach, 2016). Therefore, it is important to introduce sustainability value into PERVAL theory besides economic value, convenience value, symbolic value and hedonic value. Notwithstanding, the study will reveal the richness of perceived value and provide more substantial knowledge in understanding which of these perceived value dimensions are important to the e-hailing user. More importantly, this study could confirm whether sustainability

value should be included in PERVAL theory particularly when studying collaborative consumption particularly on e-hailing services context.

1.7.2 Practical Significance

As mentioned in the introduction, CC services, especially e-hailing, are a present trend of hailing transportation which has numerous benefits for users. These advantages could include economic value, convenience value, symbolic value, sustainability value and hedonic value. Especially, as organisations are in the business and position of attaining high customer perceived value, “organisations are able to attain competitive advantage and capitalise on their market position” (Plewa, Sweeney, & Michayluk, 2015, p. 568). Such situations will indirectly lead organisations to long-term success in the market. However, organisations that have limited budgets may experience difficulties in fulfilling these values all at once. Due to this, organisations need to know what are the important values that customers desire. As such, organisations can spend their budget wisely and at the same time, fulfil their customer needs accordingly. Botsman and Rogers (2011) mentioned that CC users should be taken care of because they are the primary initiators of CC services.

Likewise, organisations need to take note regarding the situational factors such as time availability, cars’ ambience environment, driver’s characteristics, promotional incentives and alternative attractiveness of other competitors. In this study, users’ time availability, cars’ ambience and drivers’ characteristics will impact both the values and user satisfaction while promotional incentives and alternative attractiveness will affect satisfaction and intention outcomes. Therefore, these situational factors are significant in influencing the user’s perceived value-satisfaction-intentions outcome.

Although e-hailing services provide services differently as compared to other modes of transportation, they share a similar goal, which is transit their customers to their destination securely and safely. Due to this, the results gained from this study could help to benefit and provide guidance for other modes of transportation service providers. Through this study, it will offer some insightful ideas to other modes of transportation service providers on what exactly users desire from their transportation providers and how they could improve their services. In other words, the results of this study will benefit not only e-hailing service organisations but also other modes of transportation service providers.

Nevertheless, as organisations understand what the benefits are that customers are seeking and focus on how to improve these values, this will indirectly lead to customer satisfaction. Here, Williams and Naumann (2011) observed that as customer satisfaction increased, this will invariably increase their repurchase intention, customer advocacy and lower switching intention. As a result, organisations' revenue, profitability and cash flow will improve and consequently lead to more positive outcomes on the firm's stock price and market valuation. More importantly, this will encourage more investors to invest into the profitable e-hailing organisations.

This study will also benefit the policy makers especially the government. Compared to other modes of transportation particularly taxi services, users prefer to use e-hailing services because of the benefits. Through this study, the government have a better understanding of users' perceived value. By understanding which perceived values are important for users, the government can monitor e-hailing organisations' activities closely particularly those related to economic value, sustainability value and promotional incentives. Through these monitoring efforts, e-hailing organisations would not be able to take advantage of e-hailing users.

This study is also significant to e-hailing drivers because e-hailing drivers are not considered as Grab’s employees but rather as self-employed individuals who provide their services to the public when there is a demand for them. As a result, e-hailing drivers also need to understand that their services particularly their characteristics as well as their car’s ambience do influence users’ satisfactions. Therefore, if the drivers provide users with the best services, the chances for the users to remain in the services is much higher. This would enable e-hailing drivers to continue providing their services and more importantly help them to sustain in the marketplace as an entrepreneur.

1.8 Definition of Key Constructs and Terms

To avoid any confusion in the interpretations of the concepts of this study, the definitions of the key constructs and key terms used in this study are presented in table 1.1.

Table 1.1 Definitions of the Key Constructs and Key Terms

Key Constructs	Key Terms and Reference
Collaborative Consumption	“Facilitated through network technology and accessible through mobile and computer devices, satisfies consumers’ diverse needs without the need for purchase/ownership” (Hwang & Griffiths, 2017, p.132) .
Economic value	User perceives the services as cost-saving and better value (Tussyadiah, 2016).
Convenience value	User perceives that the systems are easy to use and speedily achieving a task effectively and efficiently (Pihlström & Brush, 2008; Sigala, 2006).
Symbolic value	User perceives to enhance their image or status in their social system (T. S. H. Teo & Pok, 2003).

Sustainability value	“Optimises the environmental, social, and economic consequences of consumption in order to meet the needs of both current and future generations” (Luchs et al., 2011, p. 2).
Hedonic value	The user is feeling the enjoyment and pleasure as they use the product or services (Sweeney & Soutar, 2001).
Satisfaction	User’s positive feelings in response to evaluations of one or more experiences with a product/service (Woodruff, 1997, p. 143).
Continuance usage intention	User’s intention to continue using the services (Bhattacharjee, 2001)
Advocacy intention	User’s intention towards recommending, promoting or even defending an organisation’s product or service to other customers (Bendapudi & Berry, 1997).
Switching intention	User’s intention to reject the current use of service and adopt other services and/or service simultaneously (Cheng, Fu, & Yin, 2017).
Time availability	User’s busyness in their daily routine (Verhoef & Langerak, 2001).
Promotional incentives	Monetary and non-monetary incentives used by organisations to encourage user consumption (Koksal, & Spahiu, 2014).
Alternative attractiveness	User’s perception of obtaining more satisfactory services from an alternative provider (Cheng et al., 2017).
Drivers’ characteristics	Driver’s attributes such as driver’s respect towards users, personable style, friendliness, responsiveness and availability (Kim, & Kim, 2012).
Cars’ ambience	Interior conditions in a car such as cleanliness, comfortable seating, background music and the smoothness of the ride (Wen, Lan, & Cheng, 2005)