

Intention determination of sharing economy business provider in the theory of planned behavior model using partial least square (case study: Airbnb Indonesia)

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Abstract — The Sharing economy is also known as collaborative consumption. It means the practice of sharing resources and replacing traditional ownership with sharing, lending and borrowing. Besides, Internet technology development has a role as transaction facility that present information to individuals which creates the optimization of resources. To motivate more people to take part in sharing economy, this research should have an understanding of why people would take part in it. Especially in the side of provider's intention, nowadays people start to think use value of goods instead of the ownership. It means they admit the new concept of "use". According to the characteristics of the sharing economy and the previous studies, This research believe the TPB (Theory of Planned Behavior) model would be appropriate to study this case. So far, the Theory of Planned Behavior has many research bibliographies and most of researches have shown that it is a very powerful and predictive model for explaining human behavior. This research proposes model that determine intention of business provider in participating of sharing economy that will be analyzed using Partial Least Square.

Keywords — *Sharing Economy, Provider's Intention, Theory of Planned Behavior, Partial Least Square.*

I. INTRODUCTION

Nowadays, the development of internet technology establishes a basis for effective way between providers who own resource and users who need them but do not what to own them [1]. With the aid of Information and Communication Technology by using platform, a new economy model nowadays is using sharing economy business model which transfer the temporary use right of idle resources from provider to demander, improving the efficiency of the existing resources, promoting the sustainable development of social economy [2]. The implementation of sharing economy in this technology era includes the creation of computer and mobile applications that are used to facilitate the transaction process, marketing, and information retrieval by both service providers and consumers. Some applications for sharing economy business service providers are currently becoming top-minded for the world's population, including Uber (transportation), Airbnb (accommodation), and Grab (transportation).

In 2015, Tutek [3] has identified 10 global trends which influence tourism development sector of many countries in

this world in the middle and long term. The first five trends have a major influence in the side of demand. They are silver hair tourists, generation Y and Z, growing middle class, emerging destinations, and political issues and terrorism. While five trends in the side of supply are technological revolution, digital channels, loyalty, health and healthy lifestyle, and sustainability. Those trends have affected global tourism industry.

Airbnb is an accommodation platform which apply sharing economy model which provide different offer. Airbnb offers consumers someone's home as a place to stay, instead of a hotel. On Airbnb, consumers can find places to take a rest while backpacking trip, or consumers can find a place to stay for a month during your internship. Also, if providers want to rent out extra room in their own home or apartment, they can rent out through Airbnb. Providers can receive fast money as typically consumers stay in short period and pay immediately after. Airbnb is short term rental properties which can give benefit both for consumers and providers. Here are the difference of Airbnb with other accommodation platform (Table 1).

Table 1. Type of Accommodation

Airbnb	Other Platform
House (share and entire)	Hotel
Villa	Guest House
Regular Apartment	Hotel-like Apartment

Judging from its history, Airbnb is an accommodation booking platform that was launched in 2007, nowadays Airbnb become world's biggest accommodation sharing site. In indonesia, Airbnb has its own place in the mind of consumer. In fact, Indonesia has many tourism places to be visited by local and foreign tourists. This condition also affect number of using Airbnb as the choice to find place to stay. Airbnb Indonesia which generates its revenue through service fees to hosts and guess has high revenue projection at 10 Areas [4]. (Table 2).

The success of Airbnb Indonesia requires providers to share their own home for consumers as well as consumers to accept the offer. But still, what makes people agree the idea of sharing and taking a part. So, this research seek understanding by proposing TPB (Theory of Planned Behavior) model to explain dan predict participation behavior. This research base its model on the TPB by

identifying the perceived investment of production, perceived loss of production, the freedom of working time, the perceived demand, and the openness toward providing sharing service influence the intention of the sharing economy business provider.

Table 2. Top 10 Monthly Revenue Projection on Airbnb Indonesia Platform – September 2018 (IDR) [4]

No	City / Area	Monthly Revenue Projection
1	Greater Bali	19.195.804
2	Greater Lombok	18.198.566
3	Yogyakarta Special Region	9.752.515
4	Greater Jakarta	9.674.501
5	Greater Riau	9.401.562
6	Bogor	8.358.957
7	Bandung	8.230.210
8	Malang	6.310.092
9	Solo	6.278.802
10	Surabaya	5.645.035

II. LITERATURE STUDY

A. Sharing Economy

Sharing economy is a recent business model that is built on the concept of shared resources [5]. The ability to share these available resources then allows consumers to get access to goods or services when they need it, instead of having to buy it and only use it when they need it. Collaborative consumption divides into three types, namely:

- 1) Production service system
In this concept, the product is sold as a service, the product is no longer exclusive to be an item that has to move ownership, both from individual ownership or company ownership. Peer to peer rentals can involve personal items owned by individuals or companies. This pattern causes the customer's mindset to be more inclined to assume that items are service goods rather than items that must be possessed.
- 2) Redistribution market
This approach states that previously owned goods will be transferred from parties who do not need to the parties or places that need them. In this case, the item will experience free hand movements. For example olx.com, carousell, eBay and other online stores or market place. It allows public to resell their unused personal items.
- 3) Collaborative lifestyle
This lifestyle arises from the similar needs or preferences of each individual to join, share, and exchange assets. For example individuals who rent office rooms as co-working space and the activity of renting house, villa, and guest room in a peer-to-peer manner by Airbnb platform.

The sharing economy has taught people how to share resources to produce a more efficient economy. With current technology especially ICT technology, sharing patterns are easier. However, the sharing economy model that exists today is not completely fair. The platform is only owned by certain people, therefore the parties that are connected do not always run symmetrically.

B. Airbnb Indonesia

Airbnb is an application that provides peer-to-peer property rental services. A system that allows property owners to rent property units to other parties in a generally short time as an alternative accommodation such as a hotel. This is part of creative disruption. If Uber, Grab, or Go-Jek disrupts the conventional transportation system, Airbnb disrupts the accommodation system supported by conventional hotels.

Until 2017 Airbnb services in Indonesia have been used by 880 thousand people. Of this amount, the host whose room is used to stay, earned a total income of more than IDR 1 trillion in the last year [6]. The concept of home sharing has also helped in channeling tourism benefits outside holiday destinations. In the last year the host in Indonesia generally received IDR 28.4 million or US \$ 2,100, with the total income of all hosts amounting to IDR 1.15 trillion or US \$ 84.6 million.

C. Theory of Planned Behavior

Theory of Planned Behavior (TPB) is a theory about predicting an individual's intention to engage in behavior at a specific time and place. This theory states that personal behavior is driven by behavioral intentions, where behavioral intention is a outcome of three determinants: individual attitudes toward behavior, perceived behavioral control, and subjective norms (Figure 1) [7].

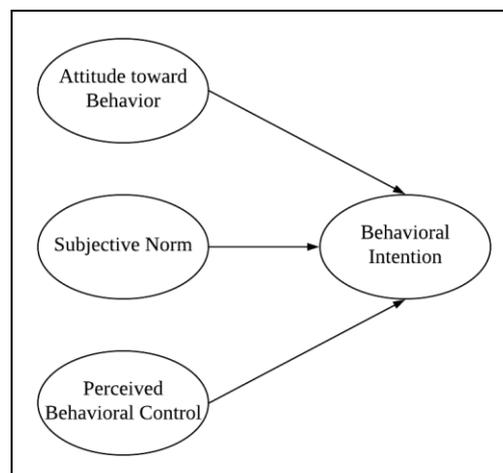


Figure 1 Theory of Planned Behavior

D. Provider Intention

Based on the Theory of Planned Behavior, the intention to conduct a behavior is the strongest factor of the emergence of this behavior. According to Ajzen [7] which is the main factor in the theory of planned behavior is a person's intention to bring about a behavior. By following the theory of planned behavior, intention is a function of the three main determinants, first is the personal factor of the individual, the second is the social influence, and the third is related to the control possessed by the individual [8].

Ajzen [8] suggests intention is a function of three factors, namely:

- 1) Personal factors are individual attitudes towards behavior in the form of positive or negative evaluations of the behavior that will be displayed.

- 2) Social factors are termed subjective norms which include individual perceptions of social pressure to display or not display behavior.
- 3) The control factor called perceived behavioral control which is a person's feelings will be convenient or inconvenient to display certain behaviors.

E. State of The Art

Nguyen [9] and So et al. [10] have been research in Airbnb global worldwide platform to study about customer value, value dimension, and motivation. Their research focus on consumer area and conduct qualitative quantitative approach to analyze their data.

Table 3. State of the Art

No	Title	Author (year)	Object / Study Case	Research Entity
1	Intention Determination of Sharing Economy Business Provider in the Theory of Planned Behavior Model Using Partial Least Square (Case Study: Airbnb Indonesia)	Resha Akbar, Luciana Andrawina (2018)	Airbnb Indonesia	Provider
2	Why Travelers use Airbnb again? An integrative approach to understanding travelers repurchase intention [15]	Zhenxing Mao, Jiaying Lyu (2017)	Airbnb USA	Consumer
3	Research on TPB Model for Participating Behavior in Sharing Economy [2]	Junfeng Liao, Shuhua Li, Tiange Chen (2017)	Unknown	Provider
4	Sharing Economy Perspective on an integrative framework of the NAM and TPB [16]	Yeong Gug Kim, Eunju Woo, Janghyeon Nam (2017)	South Korea Citizens who using Sharing Economy Platform	Consumer

Theory of planned behavior in sharing economy also researched by Hamari et al [11] and Ortbach et al [12]. Their researches are conducted in sharetribe user [11] and English Germany citizens [12] with quantitative approach. Hamari et al [11] uses structural equation model to determine consumer intention in sharing economy platform. Similar with this research Ortbach et al [12] uses partial least square but in different research entity.

Table 4. State of the Art (Continued)

No	Title	Author (year)	Object / Study Case	Research Entity
5	The Sharing Economy: Why people participate in collaborative consumption [11]	Juho Hamari, Mimmi Sjoklint, Antti Tukonen (2015)	Share tribe user	Consumer
6	To share or not to share: Towards understanding the antecedents of participation in IT enabled sharing services [1]	Martin Matzner, Friderich Chasin, Lydia Todenhofer (2015)	IT enabled sharing service	Provider - Consumer

Regional airbnb platform research have been conducted by Liang et al [13] and Johnson et al [14]. Their researches are held in Jamaica [13] and North America [14]. Liang et al [13] study about sharing economy for both entity {consumer and provider} uses service dominant logic to solve their problem. Johnson et al [14] explores about the linkages between switching intention, trust, and satisfaction for customer entity, their research uses structural equation modelling.

To identify and strenghtening our research this research make comparation table between our research and previous research classified by object / study case and researh entity as seen on table 3.

III. CONCEPTUAL MODEL

This research integrate two level factors of TPB and provide the next level factors. This research add variable that affect provider's intention. According to the definition of sharing economy, provider who share idle resource has their own characteristics since they have the ways of production. So that, behavior intention are affected by particular factors such as Freedom of working time, Perceived Investment, and Perceived Loss [2].

Goal of sharing economy is to make idle things and resources (such as data, talent, goods, and services) which is owned by provider available to consumer in public who require the resources. Based on an economic perspective, sharing economy is a step to upgrade the used of goods while resources decrease [1].

So, this research expand the basic of TPB Model (Figure 2) by adding factors that influence the intention to provide resource. They are Freedom of Working Time, Perceived Investment, Perceived Loss, Perceived Demand, and Openness toward Providing Sharing Service. Based on proposed model of this research and literature study, this research define variables that are (table 4):

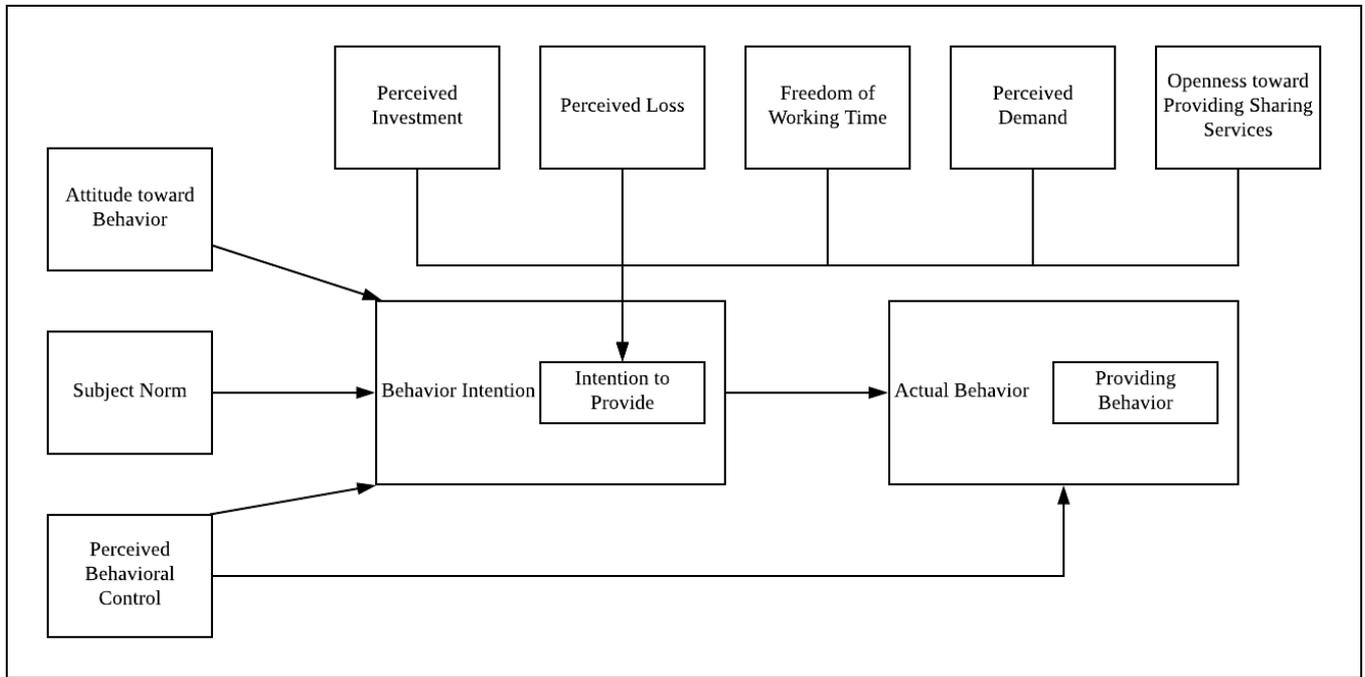


Figure 2. Proposed Model

Table 5. Definition of Variables

Variables	Definition
Perceived Investment	The level that describe believe of provider to prepare investment that support resource availability. [2]
Perceived Loss	The level that describe believe of provider to aware of loss by providing resource. [2]
Freedom of Working Time	The level that describe believe of provider to get more free working time by participating in sharing economy. [2]
Perceived Demand	Collaborative consumption can perform when amount of demand from consumer appropriate with provider expectation [17]
Openness toward Providing Sharing Services	The level that describe believe of provider to share their resources with the others, this is related to how provider can solve and manage their worry when their resource is used by consumer. [18]
Attitude toward Behavior	The level that describe believe of provider to do a particular behavior. [2]

Table 6. Definition of Variables (Continued)

Variables	Definition
Perceived Behavioral Control	The level that describe believe and perception of provider to do a particular behavior. This variable describe the person's perception which encourage or prevent the implementation of behavior. [2]
Behavior Intention	How hard a person is willing to try, and how motivated he or she is, to perform the behavior. [19]
Actual Behavior	Person's intention to act a behavior which is an outcome of subjective norms and attitude towards behavior. [19]

IV. DATA COLLECTION AND PROCESSING

A. Data Collection

To fulfill the background, purposes, and proposed model of this research, this research identify the characteristics of respondents that are:

- 1) Providing in minimum 6 months.
- 2) The area of accommodation are Greater Bali, Greater Lombok, Yogyakarta Special Region, Greater Jakarta, Greater Riau, Bogor, Bandung, Malang, Solo, and Surabaya.
- 3) Accommodation Type: Shared Room in House, House, Villa, and Standard Apartment.

B. Data Processing

This research do online questionnaire sharing for spesific correspondence to know the intention of provider. Collected data will be conducted by multivariate analysis and spesifically partial least square. By this descriptive statistical analysis this step can answer the research questions and take conclusions of this research.

Pre eliminary study has been done and produce table 5 which contain amount of accommodation type in every area / city and fulfill the requirement of respondents characteristics.

**Table 7. Data Population
(Classified to Area and Type of Accommodation)**

No	Area / City	Shared room in house	Entire House	Entire Villa	Entire Apartment
1	Greater Bali	507	997	653	124
2	Greater Lombok	204	531	225	120
3	Yogyakarta Special Region	197	450	31	23
4	Greater Jakarta	265	140	238	512
5	Greater Riau	49	24	9	2
6	Bogor	48	181	89	61
7	Bandung	170	230	207	227
8	Malang	72	170	116	6
9	Solo	58	20	23	-
10	Surabaya	63	21	122	86

Pre eliminary study has been conducted in every area by using sampling to test validity and reliability of data. This step has been done to conform the characteristic of respndence candidate in every selected area.

V. CONCLUSION

The factors which affect behavior of people in participating sharing economy is restricted. This research discuss on a particular term in which people may take part of providers based on the TPB model and the previous research. This research combine some factors of new TPB model, allocate a new means to indicate the process of why people especially providers participate in sharing economy. By using TPB model which determines and predicts participation behavior in sharing economy, the platform can improve the way to deliver information by understanding the factors that affect people to take part in sharing economy.

Behavior intentions of provider are result of the general variables of TPB Model that are Attitude toward the Behavior, Subject Norm and Perceived Behavior Control. In accordance with shared resource which transfered in sharing economy, the providers who own resources of production have their own factors that are Perceived Investment of Production Material, Perceived Loss of Production Material, Freedom of Working Time, Perceived Demand, and Openness toward Providing

Sharing Services. This research propose a model for determining intention of business provider in participating of sharing economy.

From a practical perspective, this research aims giving some suggestions to managerial and creating innovation of previous sharing service by determining factors which motivate people in participating sharing economy.

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