

**Upward Trajectory of the Sharing Economy  
&  
Policy Reaction**

- The Case of Accommodation Sharing -

**By**

**Lee Eun Joo**

**Dissertation**

Submitted to  
KDI School of Public Policy and Management in  
partial fulfillment of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY  
IN PUBLIC POLICY

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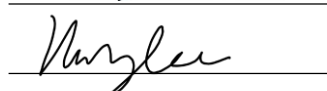
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## **Abstract**

### **Upward Trajectory of the Sharing Economy and Policy Reaction - The Case of Accommodation Sharing -**

**By**

**LEE, EUN JOO**

The purpose of this study is to provide implications on policy preparation and amendments on laws and regulations in accommodation sharing in Korea by exploring the current status of demand and supply sides. This study consists of four parts to investigate i) perceived characteristics of accommodation sharing, ii) the impact of attributes of accommodations sharing on business performance, iii) individuals' perceptions of policy reactions, and iv) exploratory research of current laws and regulations of different countries. First, this study finds that actual preferences of accommodation sharing conflicts with the issues on laws and regulations regarding property and sharing types. Guests who prefer to share entire houses consider instrumental attributes related to properties, while guests who prefer a portion of the house consider relatively more about social interactions, sustainability, and community benefit. Sharing a portion of the houses is legal and more suitable for policy intentions because the policies promote the local economy and community recovery by maximizing the utility of resources and interactions with the community. Further, this study finds that individuals with experience of accommodation sharing tend to have more positive attitudes toward accommodation sharing and perceive more necessity of policy reactions. Among proposed policy instruments, individuals perceive local ordinances, government publicizing and campaign, trust marks, taxation, penalties, and government controls are effective to build trust in accommodation sharing. Individuals evaluate that policies geared toward the majority of the public are more effective, and governments should establish a strategic approach as to which policies are introduced in public and which role the government plays in the departments. Currently, governments have been required the incompatible roles of eliminating regulatory barriers for newly introduced sharing economy business and minimizing the damages to existing industries. This study provides policy and managerial implications what is the most important for the citizen satisfaction associated with proper preparations and amendments of laws and regulations.

**Keywords:** Accommodation sharing, Sharing Economy, Policy Reactions, Policy Intention, Legality, Promotion, Regulation, Individual's Perception.

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## **I. Introduction**

The fourth industrial revolution has changed all aspects of human behavior in the global environment. People today live in material prosperity and convenience provided by the first and second industrial revolution. The cotton production with the steam engine led to the success of the first industrial revolution, and the fast spread of automobiles and electric mass production were the symbols of the second industrial revolution. The third industrial revolution with computer and Internet and communication technology (ICT) is considered to be the knowledge information revolution, based on high connectivity between people and virtual contents such as the world wide web and e-commerce. Eventually, people in the twenty-first century will shortly face the fourth industrial revolution, does would not yet have a clear definition, but we can expect comprehensive and innovative changes in the areas of artificial intelligence, the Internet, big data archives, 3D printing, or nanotechnologies (Schwab, 2016) based on far more enhanced connectivity and intelligence (Floridi, 2016).

During this upheaval, technology industries, as well as existing businesses, would be required to collaborate with one another; furthermore, technology-driven connectivity would increase the value of user-generated content because individuals consume and at the same time produce things, and these transactions offer more business opportunities such as the YouTube creators (van Dijck, 2009) or active individual participation in both demand and supply sides in the sharing economy. For instance, the connectivity via technology-enabled platforms allows the market to match efficiently both demand and supply and provides services beyond the e-commerce environment. Connectivity in the sharing economy is a combination of online and offline transactions between individuals as well as small business entities to deal with specified or customized services and resources (Richardson, 2015).

The traditional meaning of sharing activities has been already a part of our lives to use goods and services with other people, give parts of things, and even share a feeling or experience. However, technological advancement provides business opportunities to individuals (Sundararajan, 2014) at low searching and operation costs (Henten & Windekilde, 2016). The sharing economy has induced dramatic changes in traditional industries, covering sectors far beyond imagination. The sharing economy has grown rapidly in terms of accommodation, transportation, knowledge, finance, labor, and many other tangible and intangible resources. In the case of accommodation sharing such as Airbnb, Guttentag (2015) explained how traditional brick-and-mortar tourism industries might falter because of introducing disruptive products and services into the market.

Currently, the sharing economy extends service by combining one business with another field, such as tourism with experience and knowledge of local residents. Also, Uber, a transportation sharing business, extends its service from transportation sharing to delivery, health, and travel services (Uber Technologies Inc., 2018). Based on a report from the Brookings Institution, the sharing economy is expected to grow from \$14 billion in 2014 to \$335 billion by 2025 (Yaraghi & Ravi, 2016). The sharing economy encourages not only the connection and participation of individuals in the peer-to-peer economy but also business convergence and integration across fields.

The sharing economy has become widespread merits of academic attention and attempts to recognize the positive and negative impacts of the sharing economy from social, individual, and business perspectives. There are many risks and concerns involving stakeholders such as existing industries, the labor market, and demand and supply sides. Defenders claim that the new technologies and businesses may lead the new world, but critics are concerned with unequal access, labor exploitation, or conflicts with current regulations and taxation (Schor, 2016). In spite of all the pros and cons, the sharing economy clearly shows a number of growing trends.

Therefore, this study aims to understand the fundamental definition and characteristics of the sharing economy in the context of society, identify significant factors for rapid growth and risk, and analyze policies to boost market opportunities and minimize disadvantages.

## 1.1. Development of the Study

### *Lack of Studies on Accommodation Sharing*

Previous studies on accommodation sharing apply variables that affect accommodation sharing, mostly with perspectives of economics, urban planning, and business. Other previous researches on accommodation sharing related to policy issues have some limitations (see Table 1.1.1.) First, policy-related studies rarely apply key variables that are crucial to accommodation sharing. Second, policy-related studies are widely applied in exploratory research rather than quantitative analysis. Therefore, there is a lack of researches on accommodation sharing that fosters policy preparation and establishment by applying necessary key variables. There are also few studies that apply both qualitative and quantitative research approaches with primary and secondary data.

**Table 1.1.1. Examples of Previous Studies related to Policies on Accommodation Sharing**

No	Title and source	Application of variables	Analysis	Applied Policies
1	Taming Airbnb: Toward guiding principles for local regulation of urban vacation rentals based on empirical results from five US cities (Wegmann & Jiao, 2017)	O Percentage of Airbnb listing, Density, Ethnic groups, Rents, Vacant housing	Regression & Spatial Analysis	i. Policies based on data ii. Limit concentrations iii. Dedicated staff iv. Distinguish between business and P2P
2	Is home sharing driving up rents? Evidence from Airbnb in Boston (Horn & Merante, 2017)	O Airbnb density, Number of rooms, Crime, Permits	Regression & Spatial Analysis	Differentiate regulations and taxes between P2P and B2C Limit in certain areas.
3	Who Benefits from the "Sharing" Economy of Airbnb? (Quattrone, Proserpio, Quercia, Capra, & Musolesi, 2016)	O Census, data for Airbnb, Hotel, Attractiveness, Demographic, Housing information	Regression Analysis Spatial Analysis	Regulation - regulation permits - avoidance of concentration Enforcing Refining by engaging citizens
4	How Airbnb Short-Term Rentals Exacerbate Los Angeles's Affordable Housing Crisis: Analysis and Policy Recommendations (Lee, 2016)	X	Exploratory	i. Prevention of hotelization ii. Implement occupancy tax iii. Community benefits agreements
5	When Tourists Move In: How Should Urban Planners Respond to Airbnb? (Gurran & Phibbs, 2017)	X	Exploratory	i. Evaluation impacts on housing markets/ communities. ii. Revision of zoning/controls.
6	Up in the Air: Harmonizing the Sharing Economy through Airbnb Regulations (Interian, 2016)	X	Exploratory	i. Mandating insurance ii. Collecting tourist taxes iii. Limits the number of days iv. Facilitating compliance and registration
7	A policy approach to the impact of tourist dwellings in condominiums and neighborhoods in Barcelona (Lambea Llop, 2017)	X	Exploratory	i. Different levels of prohibition ii. Monitoring distributions of accommodation sharing iii. Control of non-registered. iv. Regulating room rentals.
8	Platform economies and urban planning: Airbnb and regulated deregulation in London (Ferreri & Sanyal, 2018)	X	Exploratory	i. Regulated deregulation ii. Technology-led governance iii. Different Level of local planning enforcement Algorithmic regulation
9	Airbnb: A Case Study in Occupancy Regulation and Taxation (Kaplan & Nadler, 2015-2016)	X	Exploratory	1st bill: legality of individual renting during vacation 2nd bill: exemption upto 30days Collaborative governance

For this study, the major variables of accommodation sharing are found in Studies 1 and 2, and policy instruments extracted from Study 4 are utilized in Study 3. Furthermore, this study aims to provide important information to policymakers by discovering the asymmetry between the current usages of accommodation sharing and regulations that apply to accommodation sharing in each region. By investigating laws and policies on accommodation sharing, this study proposes an integrated policymaking process with citizens' perceptions of positive and negative aspects of accommodation sharing that are crucial to the P2P sharing economy.

#### *Reasons to Study Accommodation Sharing*

Platforms such as Airbnb and Homeaway provide global service by connecting citizens across the world, while laws and regulations on accommodation sharing are not recognized by global users. For instance, the legal status of sharing entire houses or proportions of houses could be different for each city or country. Additionally, the increasing number of accommodation sharing and illegal multiple listings by individual hosts might cause significant losses for traditional hospitality businesses such as hotels, hostels, and resorts. Policymakers should be concerned about the legal status of accommodation sharing in each society by considering diverse aspects. This study emphasizes that the importance of legal status under laws and regulations has significant impacts on existing businesses, communities, and other stakeholders in accommodation sharing.

#### *Reasons to Discuss Accommodation Sharing in Korea*

Among various sharing economy, accommodation sharing accounts for the largest portion of the sharing economy in the national account to measure economic activities in Korea. Despite significant potential growth, accommodation sharing is highly related to legal concerns. In Korea, most of entire house sharing is illegal under current laws and regulations, because the current laws on P2P accommodation do not allow sharing accommodation without hosts. In terms of property types, studio and efficiency apartments, also called "officetels" in Korea, are not allowed in accommodation sharing under the recently revised enforcement decree of both the Building Act and the Tourism Promotion Act (Ministry of Culture, Sports and Tourism, revised in 2019; Ministry of Land, Infrastructure and Transport, revised in 2019; Kim, 2019; Seoul, 2016). The discussion of laws and regulations of accommodation sharing has become necessary in Korea to prevent the illegal use of accommodation sharing. Also, the government is required to consider how to respond promptly to market demands such as entire house

sharing and various property management services related to accommodation sharing, which is currently illegal in Korea. Due to the lack of legal background and social consensus, this study highlights the necessity of laws and regulations in accommodation sharing.

### *Conflicts and Legal Perspectives on Accommodation Sharing*

As mentioned above, the lack of legal background on accommodation sharing in Korea occurs from the different backgrounds and purposes of legislation (see Table 6.3.3). Accommodation sharing has been developed in the form of homestays. In terms of legality of homestays, the homestays in fishing and farming villages provide opportunities for villagers to earn additional income by providing a proportion of their properties for guests since the 1990s (Chae, Jin & Ahn, 2012; Lee, 2000). The homestays for foreign travelers in urban areas has been introduced as a cultural exchange program to provide accommodations and foods for foreign travelers in 2011 (Kim, 2017). Currently, accommodation sharing mostly provides services in terms of homestays in fishing and farming villages or homestays for foreign travelers in urban areas. Therefore, Korean guests do not allow to use accommodation sharing in urban areas (Kim, 2019), while governments announce to modify laws and regulations (Song, 2015). In addition, legally host must stay with guests in Korea because the policies emphasize social interactions and security concerns, except for the experience of Korean traditional houses (Song, 2015). However, entire house sharing is significantly preferred by foreign and domestic guests and is legally accepted in other cities and countries. The development of integrated services of accommodation sharing with various concierge service and security technologies would cause migrate concerns associated with entire house sharing; therefore, various studies and preparations are continuously required.

### *The Perspective of Global and Local Citizens and Legal Issues*

Accommodation sharing is a service to provide accommodations for global guests in Korea. The guests' expectations are based on global customers' perceptions of hospitality services, while provided services should be met local market conditions. Foreign guests might expect various cultural experiences when interacting with local hosts while the guests are staying in P2P accommodations. Guests are rarely aware that the legal status of P2P accommodation sharing could be different in each city and country, while they expect its services to be legal. This study emphasizes the importance of awareness of local policies and regulations on accommodation sharing from the perspectives of both global users and local hosts.

### *Mutual Understanding of Policy Issues among Stakeholders*

Based on research outcomes, this study would provide a thought-provoking opportunity to highlight cooperation with stakeholders of accommodation sharing, including lawmakers, the government as policymakers, guests, hosts, platforms, and communities. Lawmakers establish and amend laws based on the social consensus on accommodation sharing. Based on the legal background, the government prepares public policies to promote business and regulate illegal transactions. Hosts improve their services under the laws and regulations, while platforms work closely with hosts to develop their system and filtering schemes for guest convenience. The close collaboration among all participants in accommodation sharing can contribute to economic growth in society through individual participation and minimize adverse effects.

### *The Purpose of the Study*

The purpose of this study as follows. First, this study emphasizes the necessity of policy reactions due to unawareness of the legal status of accommodation sharing in each city and country. Second, this study investigates the characteristics of accommodation sharing from the perspectives of global guests and local hosts through applying qualitative research. Third, this study explores the significance of obtained attributes on the performance of accommodation sharing by using quantitative data. Based on the characteristics and the significance of the attributes of accommodation sharing, the study identifies benefit and risk factors. Lastly, this study investigates laws and policies on accommodation sharing in terms of individuals' perceptions by applying a modified model of policymaking.

This study consists of four parts. Study 1 conducts qualitative research by analyzing guests' reviews and hosts' responses from Airbnb. The first part of the study identifies the main characteristics based on frequently stated words generated from guests' opinions of accommodation sharing. The second part of the study explains the distribution of negative reviews in connection with accommodation sharing types, housing types, the status of superhosts, and locations, which can be associated with legal and social concerns.

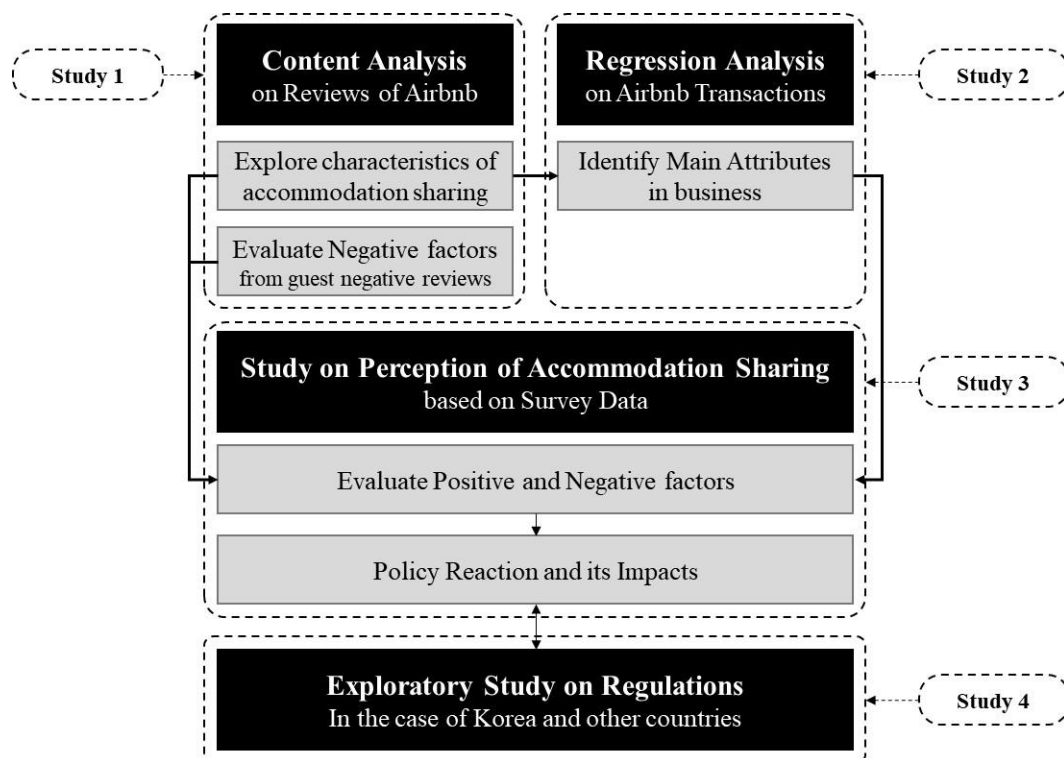
Study 2 examines the attributes of accommodation sharing that influence business performance and focus on specific preferences of experienced guests. This quantitative research applies key factors found in study 1 and matches the relevant variables from the business transactional data of Airbnb. Study 2 continues to investigate which attributes are significant determinants of the price of accommodation sharing. Also, Study 2 measures the competency of accommodation sharing with other accommodation businesses such as hotels



by comparing the impacts of distance on performance. Studies 1 and 2 deal with the perspectives of global users and local hosts of accommodation sharing provided in Korea and provide expected legal, social and economic risk factors.

Study 3 aims to explore the perceptions of individuals of accommodation sharing by applying the concepts of proposed policymaking procedures. The findings from studies 1 and 2 are applied to study 3 by exploring positive and negative aspects of accommodation sharing related to policy issues based on individual perceptions with the integration of policy reactions under legal, cultural and social circumstances in Korea. Also, Study 3 finds how effective policy instruments improve trust in accommodation sharing and potential growth. Study 4 conducts a comparative analysis of laws and regulations of accommodation sharing in various countries, including legislation, registration, taxes, penalties, and other regulatory issues. The components of the integrated study are summarized in Figure 1.1.1.

**Figure 1.1.1. The Component of Proposed Studies 1, 2, 3, & 4.**



## 1.2. Development of Research Questions

Sharing services within a small number of groups or in certain communities have been taking place for a long time. However, the sharing economy has only recently become more widespread with technological advances and a growing variety of consumer preferences. Many previous and ongoing studies have attempted to explain the essence of the sharing economy as an economic and social phenomenon. Therefore, this study attempts to answer the following questions:

Study 1: What are the main characteristics of accommodation sharing?

This study plans to focus on accommodation sharing among various services in the sharing economy. The characteristics of accommodation sharing might provide a chance to identify common features of the sharing economy and to distinguish it from other accommodation businesses such as hotels. In order to identify the characteristics of accommodation sharing, this study utilizes the numbers of reviews on the Airbnb platform as to how experienced guests evaluate P2P accommodations. In particular, the negative factors of accommodation sharing are drawn from the guests' complaints. The positive factors can foster accommodation sharing, but negative factors may cause guests to hesitate to use or to be damaged by the sharing. This study tries to link the negative factors to policy reactions to ensure the reliability of accommodation sharing in the market.

Study 2: How do the defined attributes of accommodation sharing impact business performance?

While hotels provide standardized rooms and services to guests, accommodation sharing may provide diverse types of accommodations in terms of properties owned by individuals. As important as the comparative study of hotel and accommodation sharing, this study is useful to look into how the defined factors of accommodation sharing affect the guests' decisions to stay. For instance, the study examines how factors such as price, size of space, type of property, availability of amenities, and others may influence business performance in terms of occupancy rate.

Study 3: Which positive and negative factors influence the individual perception of accommodation sharing and policy reactions?

This study explores which expected positive and negative factors of accommodation might influence overall attitudes of individuals, both positive and negative, regarding final decisions (Mittal, Ross, & William T., 1998; Birinci, Berezina, & Cobanoglu, 2018). This study proceeds to investigate the relationship between overall attitudes of accommodation sharing

and perception of policy needs. Among various policy instruments for promoting and regulating accommodation sharing, the study measures how the effectiveness of the policy instruments improves trust in accommodation sharing.

Study 4. Which policies and regulations are applied in different countries?

In Korea, previous studies show that the impact of accommodation sharing on existing hospitality industries is still insignificant (Choi, Jung, Ryu, Kim, & Yoon, 2015; Kim, Lee, & Hwang, 2016). However, the number of registered accommodations on the Airbnb platform has dramatically increased since 2014, and many small and medium-sized accommodations and hotels are concerned with business losses. Therefore, this study aims to highlight the importance of legal preparation by comparing the laws and regulations among various countries as to how policies promote legal transactions and regulate risks of accommodation sharing.

This study utilizes primary and secondary data and employs qualitative and quantitative research methodologies to support the hypotheses formulated from the proposed research questions.

## **II. Literature Reviews**

### **2.1. Sharing Economy**

This study explores the definition and issues of the sharing economy. Researchers and practitioners describe the concepts of sharing economy with various terminologies, so-called collaborative economy, collaborative consumption, access-based economy, and others. This study compares various terminologies from the previous studies and summarizes the characteristics of the sharing economy.

#### **2.1.1. Definition of Sharing Economy**

‘Sharing’ is not the new concept and people have already shared objects, knowledge and many other things in their own daily lives. However, recently, sharing has drawn more social and academical attention. Walsh (2011) introduced the sharing economy as one of ten ideas that will change the world. The previous studies define the modern concept of sharing economy with several terminologies such as the access-based economy (Bardhi & Eckhardt, 2012), collaborative economy (Botsman, 2015), on-demand economy (Jaconi, 2014) and others. These terminologies might have some similarities and dissimilarities but have been used interchangeably among people (Trivett & Staff, 2013). Therefore, this study compares different terminologies previously defined and seeks a generally accepted definition of sharing economy to demonstrate its distinctiveness from the preexisting concepts.

First, finding the definitions from the dictionaries helps drawing the basic image of the sharing economy. The Oxford dictionary defines that sharing economy is an economic system in which assets or services are shared between private individuals, either free or for a fee, typically by means of the internet (Oxford, accessed 2018). Meanwhile, Collins dictionaries define sharing economy as an economic system, or part of one, in which goods are rented or borrowed directly from individuals rather than from businesses (Collins, accessed 2018). Comparing these two definitions, the extracted distinctiveness of sharing economy are transactions of both tangible and intangible objects between individuals, with or without payment, by means of the internet. Apart from the dictionary definitions, terminologies and arguments put forward by other scholars and practitioners also explain the characteristics of sharing economy.

Lessig (2008) introduced the sharing economy as an opposite concept of the commercial economy, so the fundamental idea of sharing economy is not regulated by price scheme and even free of it. Whereas Lessig defines that the hybrid economy contains all

possible exchanges with less value of economic gain but the pursuit of shared aims, Belk (2007) attempted to distinguish between sharing in a traditional sense and the collaborative consumption as a modern concept of sharing economy, in term of ownership. For example, Belk distinguishes contractual renting and leasing from sharing, so define the collaborative consumption as ‘pseudo-sharing’ in the middle of sharing and market exchange by coordinating the acquisition and distribution of resources for compensation, but still excluded gift-giving with transferring ownership (Belk, 2014). In addition, Tapscott & Williams (2008) introduced the concept of ‘Wikinomics’ that is characterized by cooperation with the mass collaboration of peer production with benefit from the internet such as Wikipedia, Linux, and many others.

Continuously, Botsman & Rogers (2010) defines collaborative consumption as the reinvention of traditional market behaviors with a broad definition, including bartering, lending, renting, gifting and swapping. Later, Botsman (2015) redefines collaborative economy is the decentralized networks and marketplace for matching idle resources from the needs to the owns by means of the platform, which allows the sharing economy immediately responding on-demand, so-called ‘On-demand economy’ (Jaconi, 2014). Within the community-based online network, the market-mediated and access-based consumption is conducted to share the access to goods and services among peers without transferring ownership (Bardhi & Eckhardt, 2012; Hamari, Sjöklint, & Ukkonen, 2016). From these terminologies following Table 2.1.1, the sharing economy is conceptually realized as cooperative consumption behaviors by coordinating goods and services from ownership to the short-term accessibility based on the demand via the platforms.

**Table 2.1.1. The Summary of Definition of Various Terminologies related to Sharing Economy**

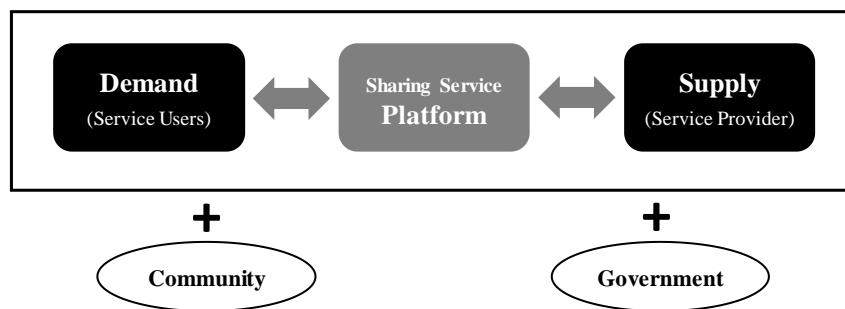
<b>Terminology</b>	<b>Description</b>	<b>Publication</b>
Collaborative Consumption	The reinvention of traditional market behaviors—renting, lending, swapping, sharing, bartering, gifting—through technology, taking place in ways and on a scale not possible before the internet	(Botsman & Rogers, 2010)
Collaborative Economy	An economic system of decentralized networks and marketplaces that unlocks the value of underused assets by matching needs and haves, in ways that bypass traditional middlemen	(Botsman, 2015)
Access-Based Consumption	defined as transactions that can be market-mediated but no transfer of ownership	(Bardhi & Eckhardt, 2012)
On-demand Economy	the economic activity created by technology companies that fulfill consumer demand via the immediate provisioning of goods and services	(Jaconi, 2014)
Peer-to-Peer Economy	A decentralized model whereby two individuals interact to buy or sell goods and service directly with each other, without an	(Hayes, 2015)

	intermediary third-party, or without the use of a company of business	
Platform Economy	Digital intermediaries or actually increasing the extent of gig or contract work; a set of online digital arrangements whose algorithms serve to organize and structure economic and social activity	(Kenney & Zysman, 2016)

The listed terminologies above describe fully or partially the key essence of sharing economy, so people use these terminologies interchangeably and may consider them as synonyms. According to the question of whether these terms are distinctively different, Botsman (2013) tried to break them down the different levels of definition, but at the same time agreed the common core ideas explain the overlap. Although this study clarifying sophisticated different from the terminologies has a high academic value, this study attempts to understand the concept of sharing economy which is generally accepted and well-described sharing economy from the sharing activities in daily lives.

Hereby, by analyzing previous studies, this study endeavors to sum up that sharing economy is an economic system that individuals as users allow to access both tangible and intangible objects such as goods and services via digital platforms based on membership without transferring ownership. The sharing economy provides extended business opportunities for micro-suppliers with technologies to response immediately on demands, visually demonstrated in Figure 2.1.1.

**Figure 2.1.1. The Framework of Sharing Economy**



Further, this study posits the important roles of the community and government for the sharing economy. Obviously, the service demanders, suppliers and platform providers in the square in Figure 2.1.1 are the major players, but individuals in the communities who are not providing any sharing economy services or the community as whole may also have an influence in vitalizing economy in their communities (Dillahunty & Malone, 2015; Quattrone, Proserpio, Quercia, Capra, & Musolesi, 2016), changing the rental price (Wachsmuth & Weisler, 2018). Also, government policies have a significant influence on promoting and

regulating the sharing economy (Schor, 2016; Ranchordas, 2015). Therefore, sharing economy includes direct transactions among service users, service providers, and platform providers; and indirect transactions to communities and governments.

### 2.1.2. Issues of Sharing Economy

While defining the sharing economy with previous studies and terminologies, it is recognized several controversial issues about sharing economy.

First, in terms of market orientation, it is questioned whether the sharing economy includes both monetary and non-monetary transactions. If there are two different types of interpersonal hospitality exchange platforms, so-called Airbnb for-profit and Couchsurfing on free of charge, it is fuzzy to define whether both services are parts of sharing economy. Based on Belk's argument for collaborative consumption (2014), couch surfing is not part of sharing economy, rather gift-giving. However, the Oxford dictionary clearly states that sharing economy contains all activities for a fee or free. Also, sharing economy platforms in terms of market orientation and market structure by Schor (2016) includes both for-profit and non-profit activities, as well as both peer-to-peer and business to peer transactions, in the sharing economy. Therefore, this study admits that sharing economy may include both profit and not-for-profit transactions.

Secondly, the sharing economy has great value to provide business opportunities for individuals via the digital platform (Zervas, Proserpio, & Byers, 2014), but is sharing economy equal to the peer-to-peer economy? For instance, Relayrides (currently changed the name to 'Turo') operates peer-to-peer (P2P) car sharing, but Zipcar does business to consumer (B2C) type (Botsman, 2015). Still, other studies show Zipcar is one of the companies in the sharing economy (Sundararajan, 2013; Schor, 2016). Then, if any private hotel owner registers as a host on the Airbnb platform, the services are considered sharing business or not. The sharing economy is highly competitive in traditional industries. The sharing economy brings innovative change from traditional fields with digital technology. However, the study admits that there are no clear qualifications which B2C types can be classified as part of the sharing economy. The study still put great weight of peer-to-peer activities on the definition of sharing economy as the innovative changes against the traditional business environment.

Thirdly, it is quite challenging to distinguish the difference between sharing economy and traditional rental business. For instance, what is the difference between borrowing a car from Avis and Zipcar? One of the clear-cut traits of sharing economy is transaction without transferring ownership, but this is the same as the rental and sharing economy, rather many

activities of sharing economy would be part of the rental business (Sundararajan, 2013). However, the comparison between car rental and car sharing helps to understand the small differences between rental and sharing (Ko, 2015). Compared to the rental business, sharing economy business offers customized services (type, duration, providers, payment, etc.) based on the membership and mostly operates on applications of the smartphone. While going to the rental office and pick-up a rental car for days, Zipcar membership holders make reservations via phone or smartphone apps on an hourly or daily basis and then pick up the cars from the local parking lots. Therefore, the distinctiveness of sharing economy is prerequisite membership and relatively flexible duration of rental to individual users, compared to traditional rental business.

**Table 2.1.2. A Comparison to of Rental vs. Sharing in the case of Car Sharing and Car Rental**

	<b>Car Sharing (Nanum-Car)</b>	<b>Car Rental</b>
Users	Members	Anyone
Rental Time Segments	30 minutes (available 24 hours/day)	1 day (available within business hours)
Outlets	All across the city	Designated branches
Payment	After use	Before use
Contract Type	Upon first applying for membership	New contract each time
Pick-up & Drop off Process	Automated	Personnel required
Insurance	Included	Additional
Source: Car Sharing page on the Seoul Metropolitan Government website ( <a href="http://traffic.seoul.go.kr/archives/9344">http://traffic.seoul.go.kr/archives/9344</a> ) (Ko, 2015)		

Fourthly, the sharing economy is a matter of providing temporary accessibility without transferring ownership regardless of for a fee or free. However, there is another service categorized as sharing economy but transferring the ownership. For example, ‘Open closet’ in Korea receives clothes donation such as a pair of formal business suit for fresh graduates to prepare job interviews and this service could be classified as a sort of peer-to-business-to-peer transaction by combining non-monetary transaction (many individual donations to the entity) and monetary transaction (the entity to many individuals), as well as producing social benefits. It is quite confusing how to define this business as a donation or a rental for the second-hand items. It is hard to classify between the pure charity donation and crowdfunding without any claim of redemption. Despite some unclear concepts, still sharing economy produces the value of transactions by social enterprises with the collaborative network on the platforms of production, consumption, and redistribution. This new model of sharing economy could become a new driver for social innovation (Roh, 2016) and almost similar idea to the hybrid economy to leave the benefit to the society (Lessig, 2008); however, it is not the same as the gift-giving with transferring ownership, mentioned by Belk (2014).



Fifthly, some criticize that sharing economy is mere platform based for-profit business (Drahokoupil & Fabo, 2016) because the for-profit-transaction on the digital platform generates their profit from the transaction fee (Schor, 2016). The sharing economy has been developed based on technology advances such as web 2.0 and smartphones, and this is a core feature of sharing economy. The website and smartphone apps to sharing service become a business platform to match the owns and the needs, so-called (digital) platform economy (Kenney & Zysman, 2016), but involving digital platform is one of characteristics of sharing economy but not enough to distinguish from typical virtual (online) transactions, so-called e-commerce. Then, there are two points to be questioned whether platform providers are equal to sharing economy and whether the business of platform providers is required to exclude from the range of sharing economy. The answer would be 'No' because platforms themselves do not solely represent the entire concept of sharing economy, although these platforms take a great role in sharing economy to provide immediate responses to sharing requirements. However, the platform providers run the platform business and one of the key players in sharing economy.

Lastly, it is questioned whether sharing economy is beneficial to society if any shareable goods, services or other items should be socially accepted and regulated to trade in the sound market. Schor (2017) discusses the potential problems of inequality among the bottom 80% of the distribution. The study of Blablacar shows similar results that lower-income levels tend to become passengers whereas the higher-income people are more frequent to be drivers (Shaheen, Stocke, & Mundler, 2017). Not only unequal accessibility and distribution, sharing economy as the new business has the pitfall of laws and regulation to protect both demand and supply sides, as well as taxation (Schor, 2016). The sharing economy provides both advantages and disadvantages. The society should be aware of the severe disadvantages and try to minimize the negative impact on societies.

Despite these issues discussed, this study adopts that sharing economy includes both monetary and non-monetary transactions without transferring ownership upon requests for tangible and intangible resources, so it has similarity to the on-demand economy and access-based consumption. It means that sharing economy allows temporary access to what people need just right at the time they need.

### 2.1.3. Types of Sharing Economy

According to what people can share, Lessig (2008) mentioned that sharing economy is a sort of hybrid economy and it contains all possible exchanges such as mobility, space, tools, labor, knowledge & experience, and others, which assets might be under-utilized or

service might be great to improve efficiencies of utilities (Cohen & Kietzmann, 2014; Zervas, Proserpio, & Byers, 2014). According to the first version of the collaborative economy honeycomb (refer to Appendix B), Owyang (2014) classified startups into six families based on Mesh Index: goods, food, services, transportation, space, and money; and he upgrades the third version with companies from 16 industries into 41 categories (Owyang, 2015). As the sharing economy deal with more goods and services, it needs more delicate classifications. The potential range of sharing economy services become unlimited and much more creative.

#### 2.1.3.1. Accommodation Sharing

The fundamental idea of accommodation sharing is to provide unused rooms or guestrooms to travelers for several days with some amount of money or for free via the online platform. Airbnb becomes very successful accommodation sharing business which was founded in 2008 and currently serves their services almost everywhere over the world, more than 5 million places to stay in more than 81,000 cities and 191 countries (Airbnb, accessed in 2018). Airbnb is an international brand of accommodation sharing, but many countries have local brands of accommodation sharing businesses to provide rooms and related to hospitality such as Kozaza in Korea.

Like other sharing economy businesses, room sharing itself is not a new concept in many other countries, including Korea. In rural farming or fishing villages, the villagers have additional income from short-term room renting to travelers. Casa homestay in Cuba, for instance, provides additional income for the local community and contribute to the tourism in Cuba (Sulkowski, 2017), a country where faces lack resource since the containment of Cuba against the States. Almost the same as these traditional homestays, accommodation sharing is followed the same business framework that a single person or an individual household rent extra rooms, unused part or full houses, expectedly increasing efficiencies of their properties. In many countries, accommodation sharing grows dramatically fast with digital platforms from traditional small homestay or bed & breakfast business because the digital platform matches hosts and guests efficiently; and technology secures the payment and transaction trust (Trivett & Staff, 2013).

The process of accommodation sharing is quite simple. Hosts register available rooms or houses on the digital platform, and guests choose accommodation by filtering criteria based on their preference. The platforms such as Airbnb provide matching services and earn service fees from both sides of hosts and guests. Compared to the hotel industry including hostel, accommodation sharing provides more accessible and affordable hospitality service with lower

costs, and allow to experience local authenticity and diversity of homely residence at the local community (Trivett & Staff, 2013), so guests have more alternatives with different types of properties and qualities of service from accommodation sharing. Also, the sharing service is a kind of bilateral multi-transactions (many-to-many) which has been provided by thousands of hosts to potential guests through the web site or app, but the traditional hotel business provides one-to-many transaction, i.e., a single provider to hundreds of guests, with standardized rooms and services (Kurtz, 2014).

As stated above, accommodation sharing can provide diverse hospitality services that fit more closely with guests' needs and preferences. For example, Airbnb provides rooms and houses with a wide range of prices, while 'Onefinestay' specializes luxury house with full packages of professional hospitality service (Guttentag, 2015). In addition, Airbnb allows short-term P2P rental via monetizing network hospitality, but 'Hospitality Club' founded in 2000 and 'Couchsurfing' in 1999 serve short-term rental between peers on non-monetizing network (Lampinen & Cheshire, 2016) because these services put more value on social interaction and community spirits than mere economic gains (Ikkala & Lampinen, 2015). Currently, accommodation sharing creates a market combining with other highly related tourism such as Experience in Airbnb: a local tour or experience program provided by local residents, so the types of accommodation sharing would become more subdivided and extended the business coverage in order to respond market demands as well as consumer expectations.

In spite of many benefits of accommodation sharing such as low price, social interaction, local authenticity, and homely properties, the voice of concern becomes significant. Accommodation sharing provides rooms and houses from individuals with unstandardized service and causes uncertainty; for instance, when people share accommodation on the platform, they realize that the provided accommodation is not same as the photos on the profile what people expect to have, or both guests and hosts may experience serious safety and security issues (Guttentag, 2015). Furthermore, accommodation would negatively influence on the small and medium-sized hotel businesses (Zervas, Proserpio, & Byers, 2014). Also, this rapid growth of urban accommodation sharing might lead shortage of affordable long-term rental housing (Lee, 2016).

In order to prevent or at least minimize such harm or disadvantages, it is very important to establish the appropriate level of regulation to guide accommodation sharing service to protect customers and for hosts to prepare the services and business (Oskam & Boswijk, 2016). Meantime, the regulation is not only matters of transaction itself, but also it is highly related to the impact on the existing industry and other related markets such as real estate

and housing market; and the impact on the local economy, in order to protect the local tenants or residence, based on how to define sharing economy (Lee, 2016; Oskam & Boswijk, 2016). This study will continue to look into the policies and regulations related to accommodation in study 4.

In summary, accommodation sharing is socially networked hospitality service from individual hosts to travelers via a digital platform. This business is expected to grow rapidly with many advantages for both guests and hosts, and to improve the quality and types of accommodation in order to deliver the detailed customer needs. It brings more business opportunities for individuals who look for additional incomes, seek social interaction, or share experiences. However, this sudden growth may influence the market negatively or positively, so it is required to establish appropriate regulation to promote the new business at the same time to protect hosts and users, as well as the communities.

#### 2.1.3.2. Transportation Sharing

The car-sharing allows consumers to access cars for short periods of time by either paying per use or free of charge. The broad concept of transportation or mobility sharing may include not only physical vehicles but also other types of transportation such as bicycles or buses, as well as other related transportation services including carpooling, sharing parking lots and even car repair & maintenance. These transportation sharing are provided with services under the many different names such as car sharing, P2P car rental, ride sharing, ride service, carpooling, shared parking, and others.

The process of car sharing is also simple and similar to other transportation sharing services. Zipcar, one of the largest car-sharing services in the States, provides Zipcar membership program. The first step is becoming a Zipcar member with a valid driving license and credit or debit card by selecting a membership plan. Next, as soon as downloading the app, people can utilize a Zipcar with their membership card, so-called the Zipcard. People can choose available vehicles at the nearest parking place to pick up the car. Then, checking in and out the car with only tagging the Zipcard is simple. Zipcar user uses a car based on the reservation schedules. Other ride-sharing services such as Uber and Blablacar might have a similar process to use through the platform. Due to the easy access via the platform, the service becomes convenient and the advanced technology also allows for lower transaction costs and flexible service operation for 24 hours per day in all year (Sundararajan, 2013), so it might be more convenient and accessible than traditional rental business with a combination of parking lot sharing.

Together with existing services including car rental and carpooling, car sharing service is expected rapid growth to approximately 12 million users by 2020 (Cohen & Kietzmann, 2014). Owing to the digital technology advance, people feel easy to access transportation sharing and transportation sharing causes many positive effects such as economic benefits and convenience. For example, Zipcar mentioned that their sharing service provides benefits such as saving money, easy accessibility, on-demand and complement to other transportation. Based on Zipcar estimation, it saves about \$600 per month from fuel, insurance, parking and repair over car ownership. Apart from the financial favor, people reduce their effort to repair and maintain their cars and even have more choice of cars or a type of service based on their purposes, so it might be highly attractive for individuals to involve in sharing economy with the positive economic perspective.

In addition, for the environmental perspective, the increase in the efficiency of car expects positive environmental effects (Meijkamp, 1998). However, the environmental effects are quite controversial. The sharing could reduce the number of cars and results decrease air pollution as well as the increasing use of public transit (Katzev, 2003), but others concern that people may drive more because of fewer burdens of driving a car with convenience and lower costs (Schor, 2016). Car sharing would improve the efficiency of vehicles and the less ownership of cars expect to cause higher usages of public transportation, so such social benefits motivate increasing the market and business with growing demands.

Although transportation sharing becomes attractive to use with many advantages such as economic gain, convenience, technology, and environmental protection, there are several negative concerns. For example, P2P carsharing and the ride-sharing (e.g. Uber) are illegal in some countries because of safety and insurance issues, conflicting against existing transportation industries such as taxi or bus, and conflicting against current law itself by prohibiting private-operated passenger transport (Dosen & Rosole, 2016). In Korea, these services are currently illegal according to the Passenger Transport Service Act. The law prohibits any transportation service with personal or rental cars, and it means only business registered vehicles deliver transportation services. However, carpooling for commuting is partially allowed in certain hours, so the new ride-sharing – ‘Poolus’- deliver the carpooling service but still this service conflicts current taxi industries (Kim, 2017). Car sharing might conflict against current laws and regulations, as well as the privilege for current businesses and industries.

Regardless of these conflicts against existing industries and both advantages and disadvantages, transportation sharing successfully become a global trend. Therefore, balanced

and smart regulation becomes necessary to protect the working rights of taxi and bus drivers and to minimize the harm to them. By accelerating this mobility sharing business, alternative transportation can provide convenient and secured services to passengers (Cannon & Summers, 2014). Now, the society would experience a new generation of transportation such as a self-driving car, drone, and other transportation tools, so people are more willing to access the mobility on request (Greenblatt & Shaheen, 2015) instead of owning a car or depending on only classical types of transportation including bus, subway, and others. That is a reason why transportation sharing is more than a car or ride-sharing and later it would be a prelude to global competition with advanced technologies.

#### 2.1.3.3. Monetary Sharing: Crowdfunding

The sharing of monetary resources is commonly called crowdfunding. The crowdfunding offers great opportunities for start-ups to have seed money or initial funding for their projects from the public on internet and technology platforms. Crowdfunding is a method of funding a variety of new ventures, allowing individual founders or entrepreneurs of for-profit, cultural, or social projects to raise external financing from a large individual audience with relatively small contributions using the internet platform, without standard financial intermediaries (Mollick, 2014; Belleflamme, Lambert, & Schwienbacher, 2013). The new technologically innovative process changes the traditional capital market (Beaulieu, Sarker, & Sarker, 2015), and the monetary sharing might be named as crowd-investing or crowd-financing.

Massolution defines crowdfunding into four types of services: donation-based patronage, reward, lending, and equity model. The difference between the types of crowdfunding is that donation-based crowdfunding has no responsibility to return the original amount whereas the equity-based crowdfunding is expected to earn compensation based on the share of equity or profit-sharing arrangement. Lending model crowdfunding requires a repayment, whereas reward type has some non-financial reward without principle pay-back (Crowdsourcing LLC, 2012). Often the lending and equity types of crowdfunding initially have legal issues in several countries, rather donation and reward types are reluctant to prepare legislation (Tomczak & Brem, 2013). In Korea, donation and reward crowdfunding has no legal background, and only have legal background and regulation for equity types.

Crowdfunding provides more opportunities for entrepreneurs to access strategic funding at the early stage which was not available in the traditional capital markets and avoid the risks of personal guarantees for bank loans (Tomczak & Brem, 2013). In the case of

Kickstarter, creators develop their profile and explain their projects on the platform, while funders filter candidates for lending and make small loans from the minimum amount, \$ 40 on Kickstarter. Then, funders might have some reward based on the amount of loan (Kickstarter PBC, 2018). Zopa is almost the same to make a loan via an online platform, but the peer-to-peer lending scheme allows monetary interests and even trade the loans, as well as investing in risky capital (Zopa Limited, 2018). Zopa is a lending type whereas the Kickstarter is rewarding type.

According to donation types of crowdfunding, Kiva is a pure donation. Lenders choose sectors and geographical regions and make loans from \$25 directly to beneficiaries. The lenders can add an extra donation to Kiva operation. Also, interestingly it is a type of microfinancing that beneficiaries pay back the principal and the money can come back to the lenders' Kiva account. Then the lenders can choose either to donate to Kiva or re-lend loans to other Kiva beneficiaries. However, the beneficiaries have no legal responsibility to pay a loan back, but it records a 96.9% repayment rate (Kiva, 2018). The Kiva is a mixed model of micro-lending and donation type and contributes to creating social value and the virtuous cycle of peer capitals. In Korea, there are several crowdfunding platforms: Wegeneration (donation), Ohmycompany, tumbldug, wadiz (reward), popfunding, funding tree, money auction (lending), open trade, opportune (equity), but also the platform may access more mixed types of crowdfunding.

Among various advantages, for start-ups, it could be one of the ways to have the seed money or initial investment based on ideas. Also, crowdfunding would be not only a platform for capital but also a method of interaction between lenders and creators, so they might develop their own ideas and collaborate with each other (Gerber, Hui, & Kuo, 2012). With donation and reward types, individuals or small groups initiate the business or campaigns and produce community benefits (Belleflamme, Lambert, & Schwienbacher, 2013). Related to impacts on the community, the success of funding is highly related to the geographical characteristics (Mollick, 2014) because people are more interested in their own societies. However, some other researches state that the geographical constraints are not influenced in individual participation to crowdfunding (Agrawal, Catalini, & Goldfarb, 2014) based on high online connectivity. In most cases of reward and donation types as well as non-profit micro-lending, lenders are well-aware that the core value of crowdfunding is social interactions and social innovation with virtuous intention regardless of geographical constraints and redemption of full principal.

Despite all the benefits, crowdfunding has some limitations. The crowdfunding may still have a limit of access, and information asymmetry (Belleflamme, Lambert, & Schwienbacher, 2013). Crowdfunding might face any vigilance of the traditional capital market, but it might face conflict against existing businesses as soon as the size and frequency of lending amount become larger. However, individuals might participate in crowdfunding to create social and community benefits as well as own reward and profit-sharing, due to lower transaction costs, better matching schemes and higher benefits (Belleflamme, Lambert, & Schwienbacher, 2013; Agrawal, Catalini, & Goldfarb, 2014).

In order for reliable crowdfunding, the establishment of laws and regulations avoid risks of illegal transactions and to protect funders and creators (i.e., lenders). For instance, it is required the trustworthy intermediaries (i.e., platforms). The transactions of lending and reward crowdfunding are required to protect the right to claim the money and to assure reward schemes. For the lender's perspectives, the ideas and properties of the entrepreneurs should be protected when the lenders open their ideas and designs on the platform and share with other lenders (Gerber, Hui, & Kuo, 2012). In the case of Kiva, the monetary transactions cross borders become important to check the laws and regulations of partner countries. Additionally, the peer-to-peer lending in Korea has negative images of an illegal private loan with hyper interest rates, so lending type crowdfunding platform providers should check and prepare legal qualifications. The importance of appropriate laws and regulations are emphasized in order to minimize possible financial damages.

The process and basic mechanism of crowdfunding are almost the same as another sharing economy such as peer-to-peer (many to many) transactions via digital platform for-profit or not-for-profit. With more collective wisdom, it would become available and sustainable capital markets for individuals and small entrepreneurs based on legal foundations and embraceable social norms for innovation.

#### 2.1.3.4. Other Types of Sharing Economy

In the earlier sections, this study reviews about accommodation sharing, car sharing, and crowdfunding, but there are various other sharing economy businesses such as labors (e.g., TaskRabbit), tools (e.g., tools library, TechShop), knowledge & experience (e.g., human library, Skillshare), energies (e.g., Gridmates, Root Energy), and others, so the range of sharing economy would be unbounded. The more start-ups and platform providers to have various new sharing services and combined services one another based on high connectivity of ICT, the stable Fintech to secure money transferring (Demirgüç-Kunt, Klapper, Singer, Ansar, &



Hess, 2018), and to seek for niche markets (Heinrichs, 2013; Ranchordas, 2015). Also, the more significant social innovation to weight values on social interaction and fair resource distribution (Ranchordas, 2015). It means more open-source knowledge and resources available or increases accessibility at affordable costs.

As the sharing economy is developed across the fields, more studies about sharing economy should measure the impacts of sharing economy and help the sharing economy generates greater social benefits.

### **III. Study 1: Qualitative Research using Secondary Data**

This study conducts qualitative research by collecting reviews of both demand (i.e. guests) and supply (i.e. hosts) sides. By investigating the contents of reviews, this study examines how information shared by guests and hosts enhances interaction, improves positive perspectives and decreases negative issues of sharing accommodation. This study also identifies factors for policy considerations from the content analysis.

#### **3.1. Literature Reviews: Qualitative Research using the Verbal Data with CAQDAS**

The qualitative research allows study 1 based on natural settings, mainly unstructured or semi-structured observation, interviews, documents, or visual & digital materials from multiple data sources. (Creswell & Creswell, 2018). The data in a qualitative study could not be converted to numeric values and mathematical and not be eligible to apply statistical tools (Yu, Jannasch-Pennell, & DiGangi, 2011). However, qualitative research follows the general research process from organizing and preparing data, initial reading, coding, developing description and thematic analysis, applying software packages, representing findings in tables, graphs and figures, and then interpreting the findings as well as comparing them with previous studies and theories (Creswell & Creswell, 2018). Among various analytical methods for the qualitative data such as content analysis, case study, cross-case pattern analysis, cross-case thematic analysis, study 1 applies content analysis to realize the significant attributes from reviews of accommodation sharing.

##### **3.1.1. Content Analysis and Grounded Theory**

Content analysis is a nonreactive technique for gathering and analyzing the content of text such as words, meanings, pictures, symbols, ideas, themes, or messages (Neuman, 2003) with quantitative techniques such as charts and tables, in order to identify patterns, themes, biases and meanings (Berg, 2004). This research technique draws replicable and valid inferences from text to the context for support argument. Content analysis allows building a model to describe the phenomenon or relationship in a conceptual form in the inductive or deductive analytical process (Elo & Kyngäs, 2008) by recognizing the meaning units.

Like the content analysis, the grounded theory is frequently applied to qualitative studies. Although content analysis and grounded theory have many similarities, some studies distinguish the distinctiveness of content analysis and grounded theory (Cho & Lee, 2014). Grounded theory is an inductive methodology to develop theoretical terms of general features

of the topic while collecting and coding data simultaneously (Glaser & Strauss, 1967; Matin & Turner, 1986), and is often applied with the inductive approach when there is no or weak existing theories. Grounded theory is useful to gather and analyze data and to extract meaningful context from observed texts by concept labeling, categorizing, identifying and hypothesizing relationships among categories, while content analysis is systematically described the meaning in certain respect that research specified from research questions by categorizing and finding themes from categories but not finding relationship among categories.

A meaning unit as words, sentences, paragraphs, themes, concepts, and semantics can be a content unit or coding unit, and the coding might shorten the texts into concepts to aware what to count, what to analyze, levels and units of analysis, how to effectively employ coding frames (Berg, 2004). Coding is the process of organizing the data by breaking texts of image segment and sorting words in representative categories to measure frequency, direction, intensity, space. From the coded data, researchers might identify patterns by describing magnitudes how the pattern is different from or similar to previous researches (Berg, 2004).

This study applies content analysis with ground theory approach because guests' reviews and hosts' responses analyze without theories but inductively approach to find the characteristics of accommodation sharing from the reviews as user-generated contents, by coding, classification, creating concepts and themes with similar meaning, and develop the hypotheses to measure the relationships between the characteristics of accommodation sharing. Also, data collecting, coding, categorizing and thematic analysis are applicable for both content analysis and grounded theory, so it would be benefits to conduct qualitative research to interpret and understand the core value of the text. Lia and To (2015) apply a content analysis of social media by applying the grounded theory approach, and quantitatively analyze qualitative contents such as impressions, opinions, and feelings.

Like social media, the interactive media development allows the content created and provided by users, so-called user-generated content (UGC), and it is easily accessible and available to collect electronic data such social media, blog, online reviews, and various lexical and visual data, from online platform and website. Yang and Fang (2004) analyze 740 customer reviews to indicate major service quality drivers of satisfaction and dissatisfaction in terms of online service such as platforms and hosts responsiveness. Camilleri and Neuhofer (2017) examine guest reviews and host responses based on the relationships among categories and concepts of words. Gretzel and Yoo (2008) measure how reviews have influences in decisions of accommodations and interpret by combining demographic characteristics.

This study also utilizes the content analysis to analyze the reviews of accommodation sharing, in order to identify the main attributes of accommodation sharing from their experiences without applied theoretical backgrounds. The attributes would distinguish the characteristics between accommodation sharing and traditional hospitality businesses such as hotels. Also, the findings from the content analysis contribute to developing the following study 2 and potential risks in terms of legal and social concerns. This study conducts the content analysis based on word frequency by using computer-assisted qualitative data analysis tools (CAQDAS) and the analytical tools allow to deal with a large quantity of verbal data.

### 3.1.2. Computer Assisted Qualitative Data Analysis (CAQDAS)

Recently qualitative researches apply computer software for efficient data management to analyze texts with faster and more advanced statistical packages. However, the software packages only help to organize or categorize data but not analyze and interpret for researchers (Merriam, Tisdell, 2016). The process of data management consists of data preparation, identification, and modification. For data identification, the researcher should code the data based on the analysts' motivation and assign categories (Merriam & Tisdell, 2016), but some software provides auto coding and rough analysis by algorithms. Nvivo Plus provides a function of automated coding by grouping information such as themes and sentiment from large volumes of text in minutes as well as images (QSR International). Not only saving time and efforts of researchers, but the CAQDAS also helps to visualize the relationship among codes and themes such as word cloud, word tree, clustering, etc. (Merriam & Tisdell, 2016; QSR International). Most software packages become standardized and offer quite similar functions as marking text, building codebook, indexing, categorizing, creating memos, displaying multiple text entries, importing & exporting data, displaying graphics and matrix and still have some differences (Merriam, Tisdell, 2016). For instance, the advantage of Leximancer is automatic analysis text documents to identify high-level concepts in the text and to deliver the key ideas and insights with interactive visualizations (Leximancer Pty Ltd., accessed in 2018). This study also applies both Leximancer and Nvivo software packages to identify the main concepts and themes by analyzing word frequency from the reviews. These tools improve the reliability to cross-check on the findings.

### 3.2. Hypotheses Development from Negative Guests' Reviews

On the reviews, guests express both positive and positive feelings. This study investigates the selected negative reviews to identify the expected negative factors of

accommodation sharing. Based on the analysis of guests' reviews, the study initially finds the negative factors related to properties, sanitation, location, communication, accuracy, security, and hosts.

This study examines how accommodation sharing types with entire houses, private rooms, and shared rooms are related to the listed categories of negative factors. Airbnb listing is originally categorized as the three types of accommodation sharing: entire houses, private rooms, and shared rooms. Entire room sharing means that guests use an entire house without the existence of a host. Private room sharing means that guests use a room in a house with the existence of a host while guests do not share the room with the host or other guests. Shared room sharing means that guests share a room with other guests and with the existence of a host.

While sharing the entire houses are strictly prohibited in New York and major cities in Korea, many other cities allow the number of nights on operations for sharing entire houses. The types of sharing such as entire houses or a portion of houses have highly related to the legal issues because of the adverse effects of accommodation sharing on local housing markets and other accommodation businesses. Therefore, this study hypothesizes sharing types in regard to types of complaints and shows how the risk factors are related to sharing types.

**H1:** Accommodation sharing types (entire house sharing, private room sharing, or shared room sharing) are not independent of the types of complaints.

For the legal transactions of accommodation sharing, the many governments set the qualifications and restrictions of appropriate properties. For instance, the hosts for foreigners in the homestay, currently legalized service in Korea, are required to submit agreement of residents of upstairs and downstairs of apartments in the district of Gangbuk in order to decrease the conflicts between neighbors due to the harms from hosting guests (Kim, 2018). In Portugal, accommodation sharing can be permitted only the multiple household building such as apartments have separate entrances for local residents and guests for accommodation sharing because the regulation aims to reduce any inconvenience to local residents. This study hypothesizes how the type of housing is related to the categories of complaints.

**H2:** The housing (residential property such as apartment or houses) types are not independent of the types of complaints.

The Airbnb awards superhost badges to hosts who have a higher average overall rating based on the reviews from at least 50% of the guests with at least ten stays and have no cancellation as well as 90% response rate within 24 hours (Airbnb Inc., accessed in 2018). Tuebner, Dann, and Hawlitschek (2017) find that the superhost badge is a signal of the

outstanding quality of hosts and could improve the trusts of hosts as well as favorable price factors. This study examines whether the status of superhost is related to the categories of complaints of accommodation sharing and the test expects to show the effectiveness of certificates of hosts' services indirectly.

**H3:** The status of being superhost is not independent of the types of complaints.

Accommodation sharing shows the tendency to locate in several highly dense areas of registered accommodations (Ki & Lee, 2019; Dudás, Vida, Kovalcsik, & Boros, 2017) and the complaints and evaluation are highly associated with sanitation, location, hosts, and properties based on the analysis of the guests' reviews. This study examines the relationship between geographical distribution and the types of complaints. The unbalanced distribution might require the specified policies and regulations in each district.

**H4:** The districts of accommodation sharing is not independent of the types of complaints

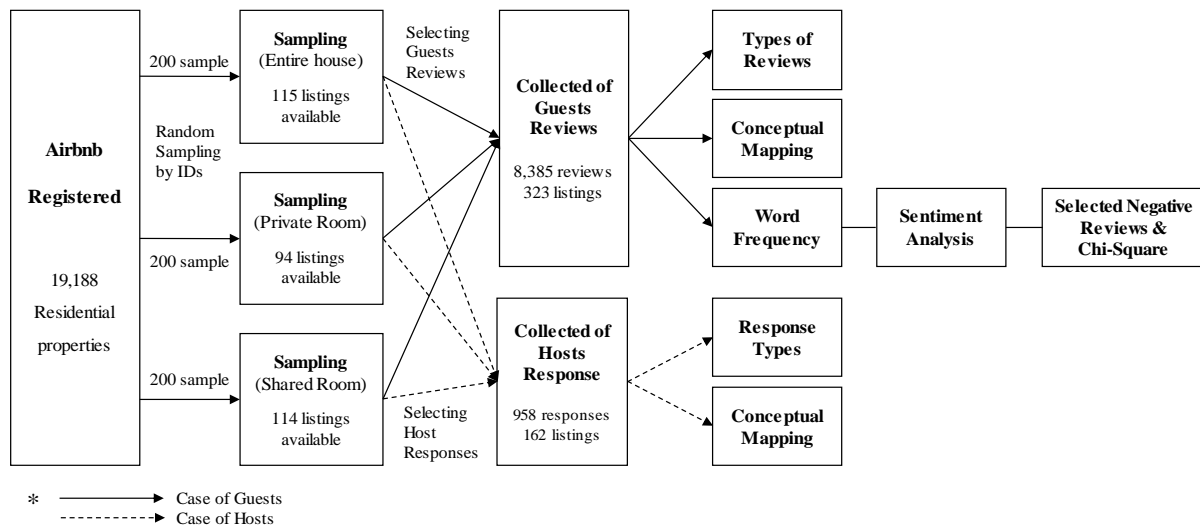
### 3.3. Research Methodology of Content Analysis

#### 3.3.1. Research Design

Stuy 1 applies the content analysis of Airbnb reviews, obtained from the website. It examines two levels of data, such as sentence and word. First, this study intends to find the types of reviews in terms of the main topics of accommodation sharing via classifying keywords and descriptions of the experience of both guests and hosts. Second, the study investigates the details of reviews in the level of words so that this study may find out the key attributes of accommodation sharing via the frequency of words. Among qualitative research analytical software, this study adapts Leximancer, Nvivo, and R. Leximancer helps easy recognition of themes and provides thematic visualization from the auto-coded reviews. Nvivo and R help to analyzes word frequency and compounding words to find the detailed factors of accommodation sharing. Third, this study includes sentiment analysis of reviews and classifies the type of negative sentences into the attributes of accommodation sharing. This chapter shows the key characteristics of accommodation sharing during the guests' experiences and the significant factors to evaluate provided services by analyzing the guest reviews of Airbnb. Airbnb has a volume of reviews on the platform compared to other local accommodation sharing platforms.

The procedure for selecting and analyzing guests' reviews and hosts' responses is summarized in Figure 3.3.1.

**Figure 3.3.1. Summary of Review Selection and Analysis Procedure**



### 3.3.2. Description of the Qualitative Data

This content analysis deals with the lexical data of the Airbnb, which listings have been operated from May 2017 to April 2018 and its number of listing during this period is 24,314 homes provided by AirDNA, a provider of short-term vacation rental data and analytics with daily tracking performance over 80,000 markets globally based on the machine learning algorithms (AirDNA, LLC, accessed in 2018). Among these listings, the study would randomly select the samples and collect the reviews belong to each listed accommodation sharing. This study selects the reviews from each accommodation sharing type with residential properties and focuses on the 8,385 guest reviews and 958 host responses written in English.

#### 3.3.2.1. Organization of Property Types

Airbnb listings are classified in 94 property types on the platform, but this study categorizes the Airbnb listings into seven property types: house, apartment, bed and breakfast, guesthouse, hotel, hostel, and others, because it helps to distinguish between the commercial types and the residential type of properties (Appendix C). A few types of listings such as dorms, cave, yurt, pension in Korean style and some others are re-grouped to ‘others’, but it is less than 2% in the total listing. Therefore, the listings have been reclassified into the house (6,884), apartment (12,304), bed & breakfast (1,338), guesthouse (2,258), hotel (398), hostel (786) and others (341).

The samples are randomly selected from 19,199 residential properties (79% of total listings) such as houses or apartments. The samples exclude commercial listings such as hotel, hostel nor others because this study aims to find which aspects of sharing economy the guests

importantly evaluate. Particularly, in Korea, the ‘guesthouse’ is legally defined as a sort of ‘bed and breakfast’, and bed and breakfast in many cases are similar types of hostel although some of the guesthouses are still closed to peer-to-peer accommodation, so this study with a conservative perspective may not include bed and breakfast for sampling.

### 3.3.2.2. Selection Procedure of Online Reviews

#### *Sampling Procedure based on Types of Accommodation Sharing*

This study applies accommodation sharing types such as entire house sharing, private room sharing, and shared room sharing, to select reviews because accommodation sharing types are considered important criteria for policy issues. Based on the assigned ID number, the reviews are collected from randomly selected 600 accommodation sharing listings that include 200 listings for each accommodation sharing type. Among 19,188 residential properties, this study eliminates listings without an overall rating and occupancy rate. With the listed ID of accommodation sharing, the available reviews from November to December in 2018 are collected from the Airbnb website with the assistance of Octoparse, the software to extract data from a website. Among 200 selected listings for the entire house type, 115 listings are accessible on the platform, including 7,241 guests’ reviews and 931 hosts’ responses. Among 200 selected listing for the private room type, 94 listings are accessible, including 3,655 guests’ reviews and 358 hosts’ responses. For the shared room type, 114 listings are accessible including 3,832 guests’ reviews and 289 host responses, because accommodation sharing is operated by many individual suppliers (i.e. hosts) and accommodation sharing is a free market of entry and exit without strategic interaction among hosts (Gunter & Önder, 2018).

Among the selected reviews, This study analyzes guests’ reviews and corresponding hosts’ responses written in English. This study presumes that the guests who have written their reviews in English are global customers, including both foreign travelers and domestic residents. The attributes of accommodation sharing from guests’ reviews should be interpreted in concepts of global users, not restricted to domestic users. The corresponding hosts’ responses show the attitudes of local hosts. These guests’ and hosts’ perspectives help to interpret the outcome of study 1. This study uses 8,385 guests’ reviews and 958 hosts’ reviews, as shown in Table 3.3.1. The guests’ reviews consist of 4,329 reviews of entire house sharing, 2,097 reviews of private rooms sharing and 1,959 reviews of shared room sharing, while the hosts’ response 525 reviews of entire house sharing, 262 reviews of private rooms sharing and 171 reviews of shared room sharing. Hosts partially respond to guests’ reviews based on their



intention and willingness and the numbers of hosts' responses have much less than the number of guests' reviews.

**Table 3.3.1. The Summary of Sampling: Number of Listings and Number of Reviews**

Type	Guest reviews			Host reviews		
	No. listings	collected	English written	No. listings	collected	English written
<b>Entire houses</b>	115	7,241	<b>4,329</b>	65	931	<b>525</b>
<b>Private rooms</b>	94	3,655	<b>2,097</b>	53	358	<b>262</b>
<b>Shared rooms</b>	114	3,832	<b>1,959</b>	44	289	<b>171</b>
<b>Total</b>	<b>323</b>	<b>14,728</b>	<b>8,385</b>	<b>162</b>	<b>1,578</b>	<b>958</b>

This study applies the content analysis with CAQDAS such as Nvivo, R, Leximancer to identify main attributes of accommodation sharing from the reviews in Table 3.3.1 by the experienced guests.

### 3.4. Analysis of Study 1

#### 3.4.1. Classification of Reviews

The mutual interaction is another significant characteristic of sharing economy via the reciprocal reviewing system on the platform, which enables both hosts and guests to evaluate and make a review to one another. This study notes that guests express feelings and evaluate the experienced services on the reviews after their staying more actively than hosts do, based on the comparison with the number of reviews between guests and hosts, 14,728 reviews and 1,578 reviews respectively.

This study classifies the guests' reviews based on types of contents: appreciation, evaluation, informative experience, complaints, and recommendation and it has been summarized in Table 3.4.1; i) appreciation is related to feelings of gratitude for hospitality. Those reviews include contents to build social interaction and trusts toward hosts and accommodation sharing, as well as influence positively to future guests; ii) evaluation is related to feeling of satisfaction about the accommodation during guest's staying; iii) experience is related to information based on guests' experience about property, hosts, as well as neighborhood; iv) recommendation is related to loyalty to recommend to other guests or decide to come back to the same place for their next visits based on their positive feeling of the accommodation and hosts; and v) complaints are a part of dissatisfaction by stating concerns and issues because the guests expect to improve the situation near future. Although severe complaints are stated the relatively small number of reviews and most of the negatively mentioned attributes are still tolerable but not reach guests' expectations, the complaints and

relatively negative nuance of reviews might have significant influences for future guests to evaluate the accommodations as alternatives.

**Table 3.4.1. The Summary of Guests' Reviews**

	Classification	Description	Examples of Reviews
1	Appreciation	To express the gratitude for the hospitality and helps	<ul style="list-style-type: none"> <li>- Thanks for being such a caring and thoughtful host that even provides transportation to us to the airport despite the early hours at 4 am.</li> <li>- I am very thankful to this host family! For someone who came to Korea for the first time and who cannot speak Korean well, his mum and dad provided me with the place that felt like home.</li> </ul>
2	Evaluation	To express the satisfaction of hospitality	<ul style="list-style-type: none"> <li>- Two thumbs up to such a great host!</li> <li>- The host lives up his name as a "Superhost"! He is very responsive and easy to communicate with. He even made time to meet us, guided us to his apartment, and explained every amenity to us. Couldn't agree more that he's the best superhost we have ever met.</li> <li>- I think it was the best accommodation ever in my experience.</li> </ul>
3	Experience (Informative)	To introduce the experience of stays (often contains information for potential guests)	<ul style="list-style-type: none"> <li>- If you are looking for a real Hanok experience this is the right place for you.</li> <li>- Strategically located above and conveniently connected to subway line 5 station, and airport limousine. Apart from that, local supermart, 24hr convenient stores, restaurants, and cafes are available within the building or around the building. Super convenient. (Bonus point: The view is beyond amazing...don't take our word for it...see it for yourself).</li> </ul>
4	Recommendation	To express loyalty to recommend to others or willing to stay the place in another time	<ul style="list-style-type: none"> <li>- I highly recommend staying at this place if you want to stay in a residential area but near the main central area.</li> <li>- We will definitely stay again here when we come back to Seoul</li> </ul>
5	Complaints	To express dissatisfaction and inform the reasons	<ul style="list-style-type: none"> <li>- the bed was a little dirty as there's a stain on the bedsheet.</li> <li>- The only complaint was that the internet was had a spotty connection at times</li> <li>- To be honest, this is the worst I've experienced. The inner sheet is dirty with some one's dried liquid (you know what it is) on it. The bar in the bathroom is not fixed, it falls by itself. The notice board on the entrance wall also falls on one side. The quality just doesn't look good. Hope Nate improve the house a lot to make it qualified for future guests</li> </ul>

Note: Examples have been randomly selected from the sample Airbnb reviews.

This study also classified the hosts' responses in to five types: appreciation, experience, evaluation, expectation, and explanation; summarized in Table 3.4.2; i) appreciation is related to a feeling to gratitude for guests to stay the accommodation of the hosts; ii) experience is related to the expression of their interaction and the host express their positive memories in the reviews, so this would be more personal experience-related; iii) evaluation is related to the reference of the guests to future hosts; iv) expectation is related to the hosts' willingness to accommodate the guests another time; v) explanation is related to excuses for inconvenience and complaints of experienced guests. For instance, among 525 total hosts' response regarding to entire house sharing, 30 responses (less than 6% of total hosts responses of entire house sharing) attempt to explain about inconvenience or complaints of

guests' experiences for eliminating the bad images of hosts' hospitality, while 417 host responses express the feeling of gratitude toward guests.

**Table 3.4.2. The Summary of Hosts' Reviews**

	Classification	Description	Examples of Reviews
1	Appreciation	To express hosts' feeling of gratitude for guest stays or positive reviews	<ul style="list-style-type: none"> <li>- Thank you for a warm review. Meeting wonderful people like you and your family is the best part of being an Airbnb host.</li> <li>- Many thanks for being a wonderful guest.</li> <li>- Hosting wonderful people like you and your family is what encourages me to be a better host. BTW, thank you for the crepe - it was extraordinary. It is always rewarding to see my guests had a wonderful time in Seoul</li> </ul>
2	Experience	To share the experience between hosts and guests and building personal interaction	<ul style="list-style-type: none"> <li>- I think that's why I was willing to help you anytime. Happy to hear you guys had the great time in Seoul which is your first trip.</li> <li>- We are so happy to meet you as a guest :) Hope you had a wonderful time in Korea and made a lot of good memories!</li> </ul>
3	Evaluation	To recommend the guests to future hosts	<ul style="list-style-type: none"> <li>- She was very nice and friendly girl. Her friends were great as well. The room was kept clean. We will recommend them as a guest</li> </ul>
4	Expectation	To express their willingness to hosting the guests	<ul style="list-style-type: none"> <li>- I will be glad to host your family again in a heartbeat on your next trip.</li> <li>- Take good care of yourselves in France and hopefully see you on your next visit.</li> </ul>
5	Explanation	To deliver their explanation or excuse for guests experienced inconvenience or complaints	<ul style="list-style-type: none"> <li>- Sorry for the inconvenience caused by bad soundproofing. I really want to handle this, but it seems that sound insulation was not taken into consideration since the house was first built. Anyways I hope you have a good time in Seoul!</li> </ul>

Note: Examples have been randomly selected from the sample Airbnb reviews.

This study finds that the guests' reviews can be classified with appreciation, evaluation, experience, recommendation, and complaints, while the hosts' responses can be classified with appreciation, experience, evaluation, expectation, and explanation. The guests tend to be more active attitudes to express their opinion and to evaluate accommodation sharing service precisely on their reviews, while hosts less likely evaluate their guests on their responses but they provide explanations against the negative reviews from the guests.

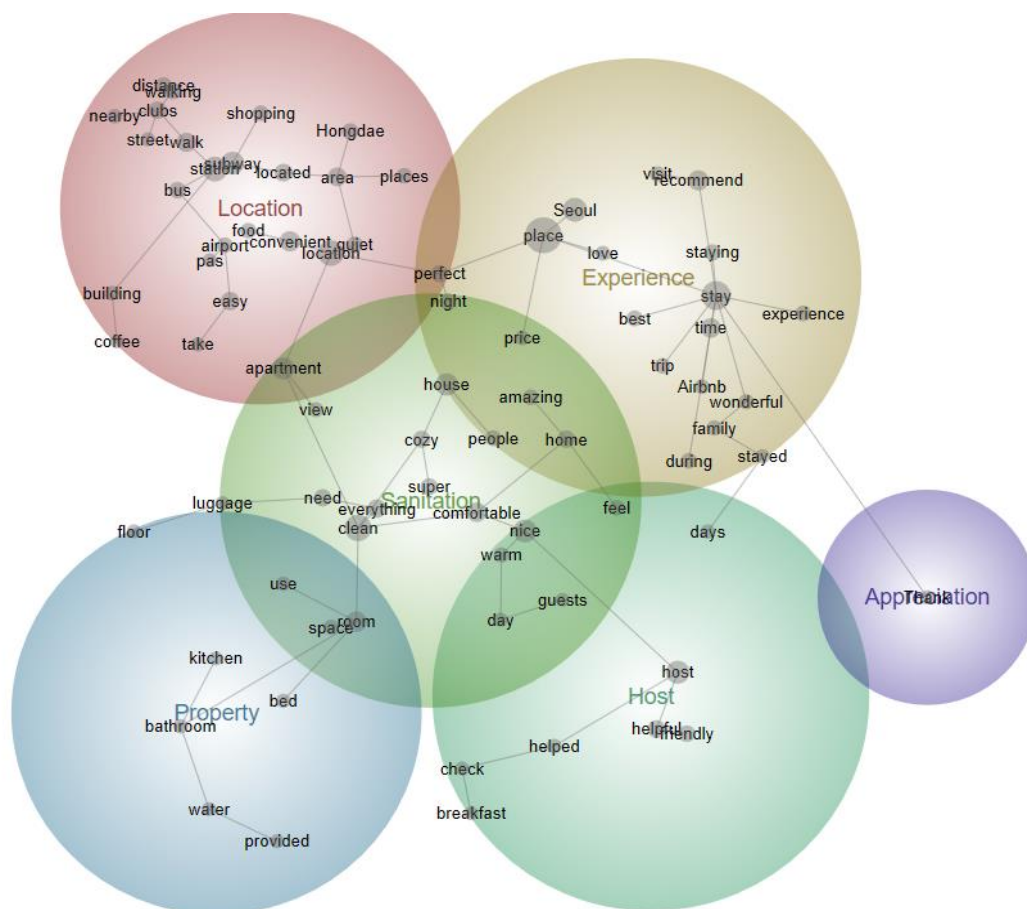
### 3.4.2. Visualization of Reviews

This study attempts to visualize major factors of accommodation sharing and to compare with findings from the classification of reviews, by analyzing the guest reviews written in English with qualitative analytical software, at the level of words. The applied software helps provide a conceptual map of main concepts and themes from hits of word-like. Compared to the study to classify the guests' reviews and corresponding hosts' responses, this study improves the thematic comprehension by clustering words-of-like meaning.

### Conceptual Mapping of Guests' Reviews

The result provides the lists of concepts based on the weighted frequency of words in sentences such as place (5,163 counts), stay (3,838), clean (2,752), host (2,721), location (2,511), recommend (1,661) and other 67 concepts (refer to Appendix D). The concepts clustered based on the level of themes. This study classifies the 73 concepts into six themes: location, experience, sanitation, property, host, and appreciation, and they are visualized in Figure 3.4.1. The six themes are less likely to match the listed types of guests' reviews in Table 3.4.1. The types of reviews are categorized based on guests' behavioral contents including appreciation, evaluation, experience, recommendation, and complaints; whereas the themes and concepts of the reviews on the conceptualization have reclassified that experience and recommendation has reclassified into experience and the evaluation and complaints mainly describe about location, sanitation, property and hosts which are highly related to the key attributes of accommodation sharing.

**Figure 3.4.1. Themes of Airbnb Guests' Reviews of All Types of Listings**



\*. Leximancer outcome: visual concept 100%, theme size 50%, otherwise the default settings

The conceptual map provides clusters based on logic how similar concepts connected closely and different concepts connected with distance. As shown in Figure 3.4.1, major clusters include location, experience, sanitation, property, host, and appreciation related; i) one of the major clusters, location, is associated with terms of physical location and transportation such as subway station, convenient, walking distance, shopping, and food, bus, street, recommend and more; ii) experience is associated with terms stay, during trip, price, best, wonderful, family, experience, and visit and the guests express recommendation based on their overall perception of hospitality. The intersection between experience and location as well as sanitation on the conceptual map explains guests have relatively higher concerns about their experiences in location and sanitation of accommodation sharing; iii) sanitation is associated with terms such as clean, comfortable, cozy, space, but significantly shared the concepts including properties and facilities such as house, room, apartment, kitchen, bed, and bathroom in other themes. The interactions of sanitation between host, property, location, and experience explain how the sanitation is a significant quality factor of accommodation sharing; iv) property is associated with the accessibility of facilities such as a bathroom, bed, provided, floor, kitchen, and water. The sharing accommodation provides various services and facilities depending on hosts and their properties whereas hotel business provides standardized rooms and services; v) host is associated with the term of hospitality which is provided to guests, so it is expressed with words such as host, helpful, friendly, check, breakfast, and guest. The accessibility of property and interaction with hosts are unique characteristics of accommodation sharing; vi) appreciation is associated with guests' feelings of gratitude, mostly to hosts and their hospitality. (See Table 3.4.3)

Particularly, guests in accommodation sharing value the easily accessible public transportation and location for guests to manage their own way to reach the place of accommodation and available house facilities such as kitchen and several rooms for themselves and their traveling companion. Also, the guests have opportunities to build personal and mutual interactions with hosts and highly associated with emotional trust and satisfaction. This uniqueness of accommodation sharing could be one of the reasons why people prefer sharing accommodation over the hotel.

**Table 3.4.3. List of theme and related concepts from Guests' Reviews**

	Theme	Concepts	Hits	Example
1	Experience	place, stay, Seoul, recommend, time, night, staying, best, experience, during, trip, visit, wonderful, family, love, Airbnb, price, stayed	13,652	A great location and a nice host. Highly recommend. Thank you! A great place near the subway station. The host was very polite and willing to help when needed. Even if you don't know any Korean the host speaks a decent amount of English. Overall a great experience (for my time using Airbnb) and would recommend this place to anyone. A great place to stay during your time in Seoul.
2	Sanitation	clean, nice, house, room, comfortable, everything, home, need, cozy, super, people, amazing, feel, warm, view, space, use, day	12,053	Compare with other houses where I stayed, this house is exactly what I expect from the photos, everything is very clear and accurate as same as their profile, clean, decent brand new apartment, most of all very comfortable to stay as the host informed me all of what I need as soon as I arrived, feel like home.
3	Location	location, station, subway, apartment, convenient, walk, area, easy, located, clubs, perfect, bus, quiet, walking, distance, places, shopping, food, airport, building, nearby, take, street, coffee	10,890	Location is perfect - it's a few meters away from the local bus and subway stations plus there are a lot of restaurants, convenient stores, a bank and a big shopping area all within walking distance. The subway station and city bus stops are located in 5 minutes walking and one min. shuttle bus
4	Host	host, helpful, friendly, helped, days, check, breakfast, guests	5,103	The was really prompt with responding to messages, he brought us breakfast on time every morning, allowed us early check-in, waited for us at the Hanok to personally check us in and also helped us book a taxi to the airport.
5	Property	bathroom, bed, provided, floor, kitchen, water	1,243	provided necessary amenities in her place from toiletries (except toothpaste), warm water in shower and dishwasher, tissues, towels, kitchen utensils, clothes dryer stand, coat hanger, washing machine, air purifier, AC, floor heater (also for 2nd floor), hairdryer, lint roller, detergent, dish soap and sponge, waste plastic.
6	Appreciation	thank	539	Thank you for everything you've done for me during my long stay!! Words cannot explain how grateful and blessed I was by your care and friendship

Note: Leximancer outcome: visual concept 100%, theme size 55%, otherwise the default settings

Based on comparison of concepts among entire home, private rooms, and shared rooms, 41 commonly stated words with different rank are covered 84% of occurrence of word in reviews of the entire home, 90% of private rooms and 89% of shared rooms, with the terms such as place, stays, location, apartment, clean, host, station, recommend, nice, house, subway, convenient, restaurants, room, helpful, time, comfortable and others, see on Appendix E.

However, the unique words shown only one of sharing accommodation types indicate the distinctiveness of each type. In the case of an entire home sharing, the words such as distance, trip, view, needed, shopping, nearby, convenience, Wi-Fi, floor, space, building, coffee, and more are frequently stated. The words within the category of private rooms are cozy, family, walking, love, feel, warm, breakfast, helped, days. These words indicate that sharing of the entire house is relatively higher concerns with the availability of property and the accessibility of convenience in the neighbor, while the private rooms have shown more interaction with hosts and their families of accommodating the guests as well as an emotional feeling of hospitality. In the case of shared rooms, it shows the relationships between other

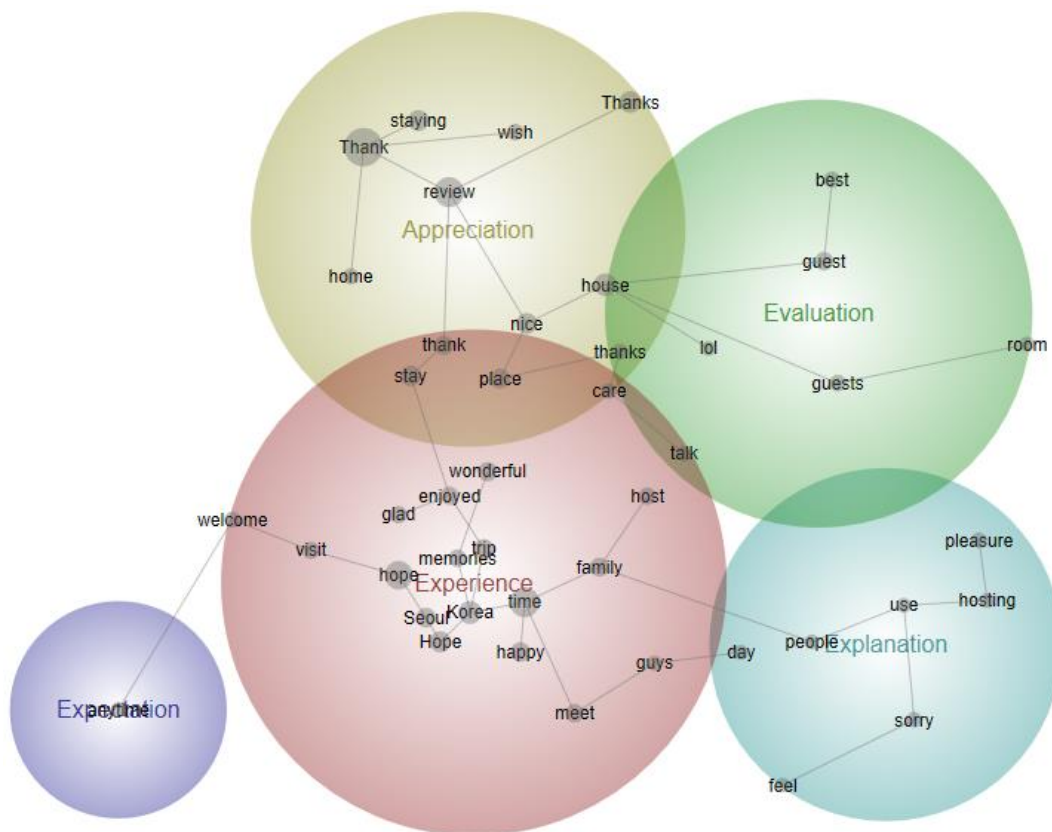
guests, while the social interaction with the type of private room has more with hosts and their families.

These clustering concepts help to identify important attributes of accommodation sharing. This study finds that clusters based on reviews include hosts, location, sanitation, properties, and experiences. The cluster of hosts is closely related to sanitation and experience.

### *Conceptual Mapping of hosts' Reviews*

The conceptual map provides the list of concepts from the hosts' reviews such as time (218 counts), reviews (216), hope (198), house (133), staying (197), guests (96), stay (88) place (83) and others. These concepts are classified into five themes: appreciation, experience, explanation, expectation, and evaluation and visualized in Figure 3.4.2. This study finds that the conceptual map has presented the types of hosts' reviews on Table 3.4.2 as same as the list of themes in Table 3.4.4 because the host's responses highly stated behavioral and emotional contents whereas the guests' reviews describe various contents related to properties and qualities of accommodation sharing.

**Figure 3.4.2. Themes of Airbnb Hosts' Reviews of All Types of Listings**



\*. Leximancer outcome: visual concept 100%, theme size 50%, otherwise the default settings

As shown in Figure 3.4.2, the concepts are clustered into five themes: appreciation, experience, evaluation, explanation, and expectation; i) appreciation is an expression of hosts' feeling of gratitude for staying with them or leaving good reviews. The majority of hosts' reviews are strongly associated with feelings of appreciation; ii) experience is associated with personal interaction between hosts and guests such as time, trip, family, enjoy, memories and others; iii) evaluation is associated with guests. The hosts less likely to evaluate their guests and the evaluation types of hosts' responses are highly positive. Hosts may state negative evaluation for future hosts if the guests behave extremely inappropriate; iv) explanation is an opportunity for hosts to justify guests' dissatisfaction or complaints; v) expectation is associated with willingness to host the guests in the future and are stated in Table 3.4.4.

**Table 3.4.4. List of theme and related concepts from Hosts' Responses**

	Theme	Concepts	Hits	Example
1	Appreciation	Thank, review, house, Thanks, staying, nice, stay, place, thank, wish, home, care, thanks	1,014	- Thank you for your review! I was so happy to hear that you had a great time at my house. Please come again and I wish you good luck. Even if it rained a lot during your stay, hope you had a good memory of Korea and my house, too!
2	Experience	time, hope, Korea, Hope, trip, Seoul, happy, wonderful, family, meet, enjoyed, memories, host, visit, glad, welcome, guys	773	- We are so happy to meet you as a guest. Hope you had a wonderful time in Korea and made a lot of good memories. - I'm glad I helped you while you stayed at my house. I hope you enjoyed your wonderful trip and had a nice memory. Thank you again!
3	Evaluation (Guest-related)	guest, guests, best, talk, room	261	- She was the best. She was very kind and used room very cleanly and took care of my puppies even when I was not home. We did not talk much but I could know she is a really good guest.
4	Explanation	sorry, pleasure, day, hosting, use, people, feel	178	- I'm so sorry to hear you are not satisfied with my room. - Really sorry about the table and chair, we'll try our best to improve our room facilities. We have to study and the working area on the 1st floor, it will be a nice choice to work here.
5	Expectation	anytime	46	- Visit me anytime if you come to Korea again. - Welcome anytime!

In short, the comparison between the classification and conceptualization of reviews, the study finds that guest reviews state both behavioral and emotional measurements and physical features of accommodation sharing while the hosts' responses mainly focus on the behavioral and emotional contents. Guests frequently state the concepts of property, sanitation, location, and hosts. These features are related to how the guests' experience, evaluate and complain about accommodation sharing. In terms of host responses, the results of analyzing both the conceptual map and the classification show that the hosts mention their appreciation toward guests' staying and their reviews, experiences, and evaluation of the guests,



expectations to host the guests and explanation. In terms of explanation have significant roles to explain against the guests' dissatisfaction or severe complaints which might produce negative images of their hospitality to future guests.

This study finds that the content classification and themes of conceptual mapping for hosts' responses show the same contents including appreciation, experience, evaluation, explanation, and expectation in Table 3.4.2 and Table 3.4.4. The study continues to analyze the word frequency of guests' reviews to explore detailed attributes of accommodation sharing in the following section.

### 3.4.3. Analysis of Word Frequency

Analyzing word frequency is designed to support the attributes found on the conceptual map and table (see Figure 3.4.1 and Table 3.4.3) and to explore the detailed attributes of accommodation sharing based on the number of words on the guests' reviews in terms of sharing types. The list of the twenty most frequently is mentioned in Table 3.4.5, which covers above 20% of entire words. Each sharing type has a similar list of words with a different order and frequency. It may provide the characteristics of accommodation sharing types. The frequent words from all the guest reviews are followed in order: location, host, sanitation (clean), transportation (station, walk, subway), property (house, rooms, apartment), recommendation, convenience, interaction (friend), comfort, closeness, appreciation.

In the case of entire house sharing, the words related to properties such as apartment, convenience, everything to be provided have higher ranks and the word of restaurants is located on the list. In the case of private room sharing, the words of the host, location, and room are the most frequently stated terms and located on the top of the list. The word of rooms which is highly stated in the reviews provides the implication that the guests who share the private rooms are concerned more with their rooms to stay, whereas the guests who share the entire house are concerned with the house or apartment as whole properties. In the case of shared rooms, the word frequency of host, house, and cleanliness are higher than the term of location. The word of guests is shown only at the category of shared rooms, and it explains the uniqueness of interaction with hosts and other guests in the shared room sharing, while the entire room and private room sharing have more interactions with hosts.

This study confirms that both the analysis of word frequency and the thematic analysis on the conceptual map of guests' reviews have consistent findings as followed. Guests may pay attention to location, experience, sanitation, property, host, and appreciation. The guests with the entire house have a higher value for location and properties, while the guests of private

room sharing are concerns with their rooms and relationship with hosts and their hospitality. In terms of the shared room, guests consider the personal interaction with both hosts and other guests. However, the relationship with hosts, accessibility with terms including location and transportation, and sanitation are important factors for all types of accommodation sharing.

**Table 3.4.5. The Top Twenty Most Frequent Words in the Airbnb Reviews**

	<b>All Type</b>	<b>Count</b>	<b>Entire</b>	<b>Count</b>	<b>Private</b>	<b>Count</b>	<b>Shared</b>	<b>Count</b>
1	places	6,092	places	3,193	place	1,498	place	1,401
2	stays	5,268	stays	2,709	stay	1,326	stays	1,233
3	locations	3,714	locations	2,284	hosts	927	hosts	910
4	hosts	3,517	hosts	1,680	locations	816	housing	823
5	cleaning	2,902	apartments	1,666	rooms	809	cleaning	676
6	stations	2,495	station	1,455	cleaning	787	helps	621
7	helps	2,409	cleaning	1,439	station	625	locations	614
8	housing	2,407	helps	1,220	helps	568	friends	518
9	rooms	2,159	conveniently	1,102	houses	556	rooms	464
10	apartments	2,154	recommend	1,097	recommend	520	recommend	433
11	recommend	2,050	walks	1,035	friends	417	stations	415
12	conveniently	1,785	housing	1,028	subway	411	subway	312
13	walks	1,695	rooms	886	walking	407	comfortable	304
14	subway	1,556	needs	837	comfortable	391	thank	304
15	friends	1,524	subway	833	convenient	395	closing	294
16	comforts	1,418	everything	783	apartment	380	convenient	288
17	closeness	1,391	close	752	close	345	guest	274
18	needs	1,346	restaurants	740	thank	341	kind	277
19	everything	1,325	comforts	723	homes	321	walking	253
20	thank	1,277	easy	659	everything	306	everything	236

Note: Some of the adverb (not, well, really, great, just, etc.) and adjective (good, great, etc.), proper noun (Airbnb, Seoul, etc.) were manually eliminated because they are no value to describe the significant accommodation factors

The lists of frequent words in Table 3.4.5 are excluded some adverbs and adjectives such as well, very, really, good, great, perfect, Seoul, Korea, and others. For instance, it is hard to distinguish the linguistic measurement with such adjectives and adverbs to describe the degree of good, great, or excellent. The compounding words have the advantage to find the tones and nuance of the main attributes of accommodation sharing based on a sequence of words. In this study, the compounding words mean a continuous sequence of words. This applies bi-gram with a pair of consecutive words. For instance, the host is described with terms such as great, nice, friendly, nice, and kind. Location is described with terms such as great, walking distance, good, convenient, close, and perfect. Properties are described with terms such as recommended, great, clean, feel home, and cozy. The compounding words mentioned more than 100 times are listed in Table 3.4.6.

However, all listed compounding words contain positive sentiment. By extending the list of compounding words, there are only a few negative tones of words related to the terms such as complaint, smell, bad, afraid. For example, complaints are linked with the place,

bathroom, location, price, and bed. The smell is linked to weird, bad, toilet, bathroom, and smoking. Therefore, this study conducts sentiment analysis to aware of the proportion of positive and negative reviews. Also, the study investigates negative reviews to find risk factors of accommodation sharing in the following section (Refer to Section 3.4.4).

**Table 3.4.6. The List of Compounding Words**

No.	bi-gram	counts	No.	bi-gram	counts	No.	bi-gram	counts
1	high recommend	695	27	train station	205	53	guest hous	130
2	subway station	667	28	clean comfort	202	54	comfort stay	129
3	place stay	587	29	easy find	199	55	clean cozi	125
4	great locate	547	30	host nice	199	56	clean tidi	125
5	great host	475	31	nice place	198	57	walk subway	124
6	convenience store	434	32	great stay	189	58	love place	120
7	recommend place	413	33	metro station	175	59	perfect locat	120
8	minutes walk	408	34	great time	170	60	place nice	119
9	great place	373	35	locate convenient	165	61	high recommend place	118
10	place clean	372	36	feel home	164	62	place conveni	118
11	min walk	364	37	host friend	164	63	nice host	117
12	walk distance	328	38	located close	163	64	wash machine	117
13	enjoy stay	304	39	good place	162	65	garden hous	115
14	seoul station	296	40	host help	161	66	travel seoul	114
15	room clean	291	41	public transport	160	67	quick respond	113
16	good location	273	42	time stay	159	68	time seoul	113
17	place great	270	43	friend help	156	69	nice clean	112
18	convenient location	250	44	answer question	146	70	bed comfort	110
19	close subway	245	45	located good	146	71	close subway station	109
20	stay seoul	239	46	apart clean	145	72	friend host	108
21	located great	230	47	easi access	143	73	station conveni	107
22	house clean	229	48	locat perfect	141	74	stay night	107
23	recommend stay	228	49	love stay	141	75	make feel	106
24	stay place	221	50	place locat	138	76	apart locat	102
25	visit seoul	220	51	great place stay	137	77	bus station	102
26	bus stop	214	52	host kind	136	78	great experi	101

Note: Compounding words is a continuous sequence of the word, particularly in terms of bi-gram for this study

Bi-gram is a pair of consecutive written units in texts

The analysis of the word frequency and compounding word count provides the implication of significant factors of accommodation sharing for experienced guests on how to evaluate the service and which attribute to be concerned. By comparing the key concepts from Table 3.4.3, the frequent compounding words are categorized into six major themes; i) location is described with convenience and closeness of physical location and associated with transportation such as bus, subway, workable distance, and station; ii) host is described of their attitudes and kindness such as nice, friendly, and helpful; iii) sanitation is stated as cleanliness; iv) property is availability of facilities and home appliance such as comfort, house, apartment, rooms, kitchen, bed, bathroom, wifi; v) experience is the overall perception of their staying in terms with play, stay, trip, visit Seoul, stay night and many others; vi) appreciation is stated as thank. The convenience of the neighborhood such as shopping, restaurant, convenience store, café, and others is associated with the location and how accommodation sharing is related to

community and local economy. The word of recommendation is categorized as experience on the conceptual map, but intuitively it is related to with hosts because the guests' reviews may increase the trusts of the host.

These key factors are described positively with modifiers of compounding words, so the higher occurrence of positive modifiers show that guests may prefer to post positive reviews. The comparison of word frequency and concept words among accommodation sharing types shows the commonly stated features such as location, host, sanitation, property, experience, and appreciation, but also provide some distinctive characteristics among accommodation types such as higher concern of properties and surroundings in case of entire house sharing, relatively high concern the room itself rather than properties and interaction with hosts in terms of private room sharing, and interactions between guests and hosts, as well as among guests in terms of the shared rooms sharing.

#### 3.4.4. Native Sentiment Analysis of Guests' Reviews

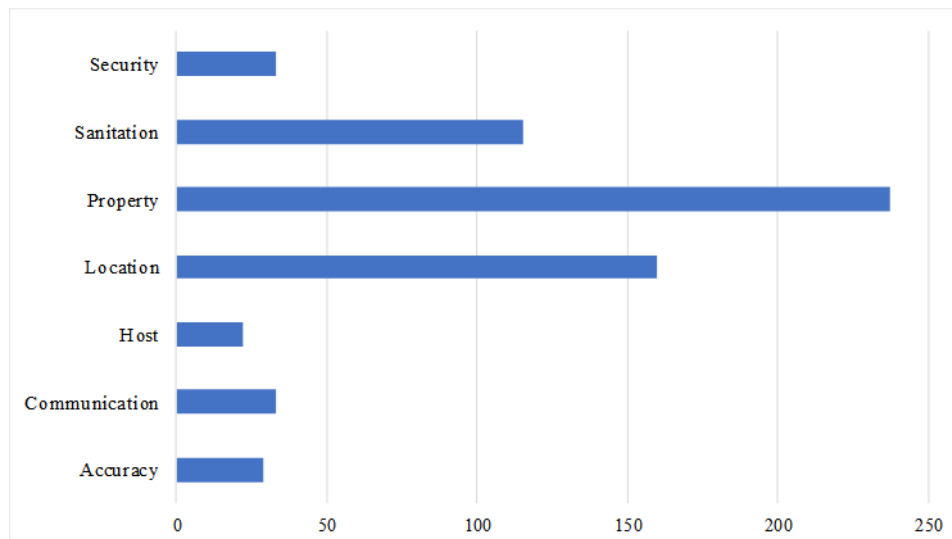
The study aims to explain the distribution of the negative reviews based on the causes why the guests express the negative attitudes toward accommodation sharing by applying sentiment analysis, and to find possible omitted attributes from the word frequency and conceptual analysis due to the small number of word frequency in spite of significant impact on accommodation sharing business operation. The sentiment analysis is a process of identifying positive or negative opinions or attitudes in the text or documents.

At first, the study conducts a sentiment analysis to categorize the reviews into negative and positive sentiments based on word occurrence. The results from the applied analytical packages show that the guests' reviews strongly tend to be positive attitudes, rather than negative attitudes such as complaints or dissatisfaction. From the total collected reviews, the software extract reference by splitting sentences from reviews, so 16,189 positive sentence references are extracted from the guests' reviews while only 1,348 negative sentence references are extracted, which is less than 10%. Among these negative references, 559 sentences are excluded for further study because these sentences with double negative have positive nuance in the sentence. For instance, "I don't think you cannot have a good time while staying here, highly recommend!", or "I did not get to eat properly on one of the days & the host was kind enough to help me order pizza delivery for myself" with kind hospitality to guests facing difficulties. Negative references about personal experiences such as sickness during their trips

and general negative evaluation without describing specific factors are also excluded. Therefore, this study utilizes 629 negative reviews for this negative sentiment analysis.

These 629 negative reviews are categorized into seven complaints by manually reviewing each negative references, regardless of the degree of dissatisfaction: accuracy (29 counts, 5%), communication (33 counts, 5%), host (22 counts, 3%), location (160 counts, 25%), property (237 count, 38%), security & safety (33 count, 5%), and sanitation (115 count, 18%), summarized in Figure 3.4.3. Accuracy issues are caused by poor or incorrect information, especially guests might feel unpleasant to realize that the places are different from the photos or their expectations. For example, ‘Only complaints I have is that the apartment is difficult to find (instructions are not that accurate) and the digital lock on the front door is a bit of a pain’ or ‘however the apartment does not look as good as on pictures.’

**Figure 3.4.3. The Number of Negative Reviews based on the Complaint Types**



Communication is highly related to the hosts’ responses. The guests feel inconvenient for late responses from the hosts or no interactions with hosts. For instance, ‘She didn’t reply a few times when we asked for some information and on the first night, we were locked out as our phones went dead and we couldn’t recall the number lock combination’ or ‘Just disappointed by the lack of social interaction with the host.’ Host attitudes are important because accommodation sharing as a type of peer-to-peer sharing might influence their business and build trust between users and peer service providers. For example, ‘the host attitude is not ideal’ or ‘I think he was pissed that I wasted electricity as I turn on the air conditioner when I closed the door.’ Security is very critical for P2P sharing because it is possibly related to criminals, but the number of severe negative cases in the sample reviews is

quite rare, such as ‘Unfortunately, we had a bad experience where thief entered the house while we went out in the evening.’ Most reviews related to security is the guests’ feeling of insecurity in the area. For example, ‘It does feel like you are walking in alleys to get to the place, but not once did we feel unsafe’ or ‘the place is very convenient unfortunately there are also many homeless people sighted around the area.’

Compared with the four factors such as accuracy, communication, host and security stated above, negative reviews regarding sanitation, location and property show the high frequency with various contents. Sanitation is associated with service quality because the hosts for accommodation sharing can be unprofessional. Most complaints due to sanitation are associated with smell, cleanliness of bedding, kitchen, and bathroom, such as ‘The room is not so clean with a lot of dust, and the owner is not very friendly. Even bed sheets had bad smell, so we have to clean our own’ or ‘there was also some stinky smell every time we went back home.’ Some guests experience the confusion of how to organize trash in Korea because it is strict to separate the trash into recycling and disposal trash with special trash plastic bags, including ‘There were also no trash bags provided which was annoying because Seoul uses a specific trash bag for disposal.’

Location is a key attribute for accommodation sharing and position to the higher rank on the word frequency. Guests feel inconvenient to walk a long distance with big luggage from the station to the house, or unpleasant areas. Unlike the hotel, many houses for accommodation sharing are located in the residential area, so it might be difficult for guests to find the places for the first time. For example, ‘It's located conveniently just across Seoul station, but there were some slopes to walk pass and thus it would be a little inconvenient for elderly’ or ‘if you're looking for a place to sleep between midnight and 4:00, you're going to have problems.’ Property is covered with a large range of facilities and home appliance as well as amenities such as low ceiling, size of spaces, inappropriate heating, and cooling; especially guests who come from foreign countries have much difficulties for shower and wet bathroom floor, such as ‘the beds were extremely uncomfortable and the shower made the whole bathroom/toilet wet’, ‘It's too small for five people to share and it was old looking, it was as clean as it could be but just to old looking and a little smelly.’

These negative factors are important to improve service quality or to be informed to guests in advance if some issues are not solved or acceptable with accurate description to build trust in accommodation sharing.

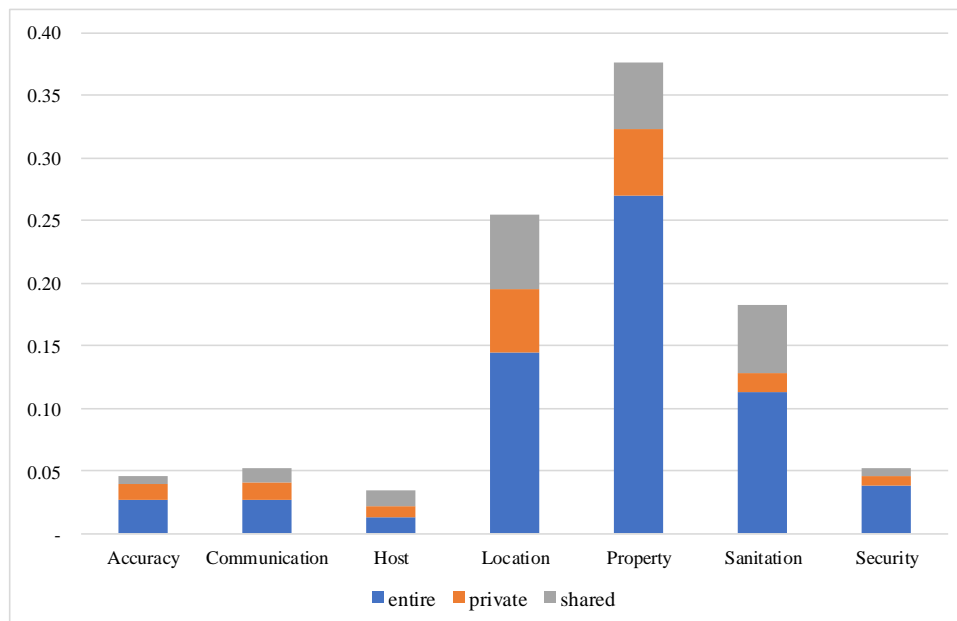
### 3.4.5. Results for Negative Guest Reviews

The 629 negative reviews are categorized into seven complaint types. In this section, this study examines whether the classified negative reviews are related to accommodation sharing types, housing types, the status of superhost or districts.

*Does policy issues matter based on accommodation sharing types?*

This study assumes that the types of negative reviews are related to the types of accommodation sharing including entire house sharing, private room sharing with or without hosts, or shared room sharing. The frequencies of the negative reviews in terms of accommodation sharing types are summarized in Figure 3.4.4.

**Figure 3.4.4. The proportion of Complaints based on Accommodation Sharing Types**



The study posits that complaint types might differ based on accommodation sharing types because the analysis of negative reviews provides policy implications and the law and regulations in many countries might differ from accommodation sharing types. Based on the data applied in this study, many guests prefer entire house sharing, while there are a number of complaints. The number of complaints about entire house sharing was much higher regarding the property, sanitation, location, and security. The results may raise concerns on regulations of entire house sharing without hosts that have caused social risks.

Further, this study conducts chi-square analysis to examine the relationship between accommodation sharing types and the types of complaints that are classified based on the results of the proportion shown in Figure 3.4.4.

**H1:** Accommodation sharing types (entire house sharing, private room sharing, or shared room sharing) are not independent of the types of complaints.

The result of Chi-square accepts H1 at  $\chi^2 = 34.198$ ,  $P < 0.01$  on Table 3.4.7. Therefore, this study finds that there is a relationship between accommodation sharing types and the types of complaints.

**Table 3.4.7. Complaints in terms of Accommodation Sharing**

Sharing Type	Complaints							$\chi^2$	P
	Accuracy	Communication	Host	Location	Property	Sanitation	Security		
Entire house	17	17	8	91	170	71	24	34.1984	0.001***
Private room	8	9	6	32	33	10	5		
Shared room	4	7	8	37	34	34	4		

\*\*\* Significant at 0.01 level

*Does policy issues matter based on the property types of accommodation sharing?*

This study also conducts the chi-square analysis by classifying residential property types such as apartments and houses because these are the major housing types for accommodation sharing in Seoul, stated in Table 4.4.1. This study posits that regulation on accommodation sharing would be specified based on housing types either house or apartment as an apartment complex in large is shared place by other residents. This study hypothesized that there are relationships between accommodation sharing types of house or apartment and complaint types.

**H2:** The housing (residential property such as apartment or houses) types are not independent of the types of complaints.

The results of chi-square reject H1 at  $\chi^2 = 5.370$ ,  $P > 0.1$  on Table 3.4.8. Therefore, this study finds that there is no relationship between the housing types of accommodation sharing and the types of complaints. This infers that the complaints from the guests are less likely based on the preference of housing types. However, based on the Japanese new law in the country for private home-sharing (i.e. minpaku) still prohibit small properties less than 85 m<sup>2</sup> such as one-room studio flat (Nikkei, 2018; Lee, 2019). Although the complaints have no relationship to housing types, it is still a critical factor in accommodation sharing business operations.

**Table 3.4.8. Complaints in terms of Property Type**

Property Type	Complaints							$\chi^2$	P
	Accuracy	Communication	Host	Location	Property	Sanitation	Security		
Apartment	14	16	10	82	135	56	18	5.370	0.497
House	7	29	6	58	60	29	6		

Note: Only include the Apartment and House among the residential property types



*Does the quality of hospitality matters based on the host qualification?*

The Airbnb awards superhost badges to hosts who have a higher average overall rating based on reviews from at least 50% of their guests with at least 10 stays and have no cancellation as well as a 90% response rate within 24 hours (Airbnb, Inc., accessed in 2018). Teubner, Dann, and Hawlitschek (2017) find that the superhost badge is a signal of the outstanding quality of hosts and could improve their trust as well as positive price factor.

**H3:** The status of being superhost is not independent of the types of complaints.

The study conducts chi-square of complaints by classifying superhost and otherwise. The result of chi-square accepts H1 at  $\chi^2 = 29.364$ ,  $P < 0.01$  in Table 3.4.9, and finds that the complaint types are related to the status of superhosts on the platform. Hosts with superhost badges deliver relatively good services and cause fewer complaints or negative reviews.

**Table 3.4.9. Complaints in terms of the Status of Superhost**

Super Host	Complaints							$\chi^2$	$P$
	Accuracy	Communication	Host	Location	Property	Sanitation	Security		
Superhost	9	9	2	53	60	10	13	29.364	0.000***
Non-supoerhost	20	24	20	107	177	105	20		

\*\*\* Significant at 0.01 level

*Does policy issues matter based on the Location of accommodation sharing?*

Location is one of the key attributes of accommodation sharing based on conceptual mapping and word frequency analysis in sections 3.4.2 and 3.4.3. The study concerns that the number of complaints in terms of location is relatively higher than other factors. The study classifies accommodation sharing into six district groups, including five districts with the highest density of accommodation sharing and others.

**H4:** The districts of accommodation sharing is not independent of the types of complaints.

The result of chi-square accepts H1 at  $\chi^2 = 61.984$ ,  $P < 0.01$  in Table 3.4.10, so this study finds that the districts of accommodation sharing are related to the types of complaints.

**Table 3.4.10. Complaints in terms of Districts in Seoul**

Districts	Complaints							$\chi^2$	$P$
	Accuracy	Communication	Host	Location	Property	Sanitation	Security		
Mapo	4	9	8	49	82	44	13	61.984	0.001***
Gangnam	4	2	0	3	9	3	3		
Yongsan	14	7	4	58	61	39	11		
Jongno	3	7	8	10	29	14	3		
Junggu	1	0	0	13	17	3	0		
Others	3	8	2	27	39	12	3		

Note: Seoul has 25 districts and classified the five the most popular districts for accommodation sharing

\*\*\* Significant at 0.01 level

From the sentiment analysis, this study finds that guests tend to write highly positive reviews. However, negative reviews might provide an opportunity to comprehend possible negative factors of accommodation sharing and to provide policy implications. The negative reviews can be classified with seven subcategories including accuracy, communication, host, location, property, sanitation, and security. The study also finds by conducting chi-square that the types of complaints are related to accommodation sharing types, the status of superhost badges and the districts where the accommodations are located, while the types of complaints are not related to housing types between apartment and house. Particularly, it indicates that the qualified hosts could provide proper hospitality with less negative reviews.

#### **IV. Study 2: Quantitative Research using Secondary Data**

This study conducts quantitative research by using accommodation sharing operational data. With secondary and quantitative data, this study examines which attributes of accommodation sharing influence on the performance as well as price and expect to find the consistent results of qualitative research in study 1. Also, this study finds policy considerations from the distribution and status of use in accommodation sharing in accordance with local and social issues.

##### **4.1. Literature Reviews: Quantitative Research on Accommodation Sharing**

Previous studies on sharing economy attempt to find why people motivate to participate in sharing economy and how it influences in the societies. Hamari, Sjöklint, and Ukkonen (2016) study the motivations of people to participate in sharing economy and Möhlmann (2015) finds that users' self-benefits are strong determinants of satisfaction of sharing economy. Guttentag, Smith, Potwarka, and Havitz (2018) find that people have stronger attractions to practical attributes than experiential attributes. While the quantitative research with primary data helps understanding accommodation sharing based on the researchers' intentions and designs, researches with secondary data such as business operation data support to measure the guests' (users) preference by choosing service attributes. Xie and Mao (2017) study the relationship between host attributes and accommodation sharing by controlling over the number of reviews, price, and product attributes such as bathrooms, bedrooms, amenities, guests, and location rating.

Several previous studies find overall impacts of accommodation attributes on guests' choices such as number booking, occupancy rate or revenues, but some other studies focus on each attribute such as price determinants or trust and reputation. Dogru and Pekin (2017) find price determinants as accommodation sharing properties such as space, quality, friendliness, freebies, commerciality, and location. Cansoy and Schor (2016) highlight the patterns of participation in Airbnb combining the demographic census data and attributes of listed Airbnb. Quattrone, Proserpio, Quercia, Capra & Musolesi (2016) attempts to find the socio-economic conditions of the areas where accommodation sharing benefits from the hospitality platform. These previous studies improve a better understanding of accommodation sharing and how accommodation sharing changes the guests' behavior or impact on existing hotel industries. Zervas, Proserpio, and Byers (2014) estimate that the increase in the number of Airbnb results in a decrease in hotel revenues.

#### 4.1.1. Consumer Behavior Model and Signaling Theory

Based on the attributes of accommodation sharing obtained from content analysis of reviews in study 1, study 2 investigates how the guests' preference for the influence of the attributes in business performance based on consumer behavior theory. Blackwell, Miniard, and Engel (2006) introduced a model of consumer behavior in how consumers make decisions for goods and services in seven stages of decision making: need recognition, search for information, pre-purchase evaluation of alternatives, purchase, consumption, post-consumption evaluation, and divestment. However, this study focuses on searching and evaluation of information related to products, because the information is restricted to the attributes of accommodation sharing as given on the platform.

According to the evaluation process, individuals consider both instrumental attributes such as pragmatic values, including usefulness, functionality and usability, and non-instrumental attributes such as hedonic values, including originality, beauty, and innovativeness (Hassenzahl, Diefenbach, & Göritz, 2011; Pohlmeier, 2012). Attributes are defined as any aspect of the product itself or its use that can be used to compare product alternatives (Grunert, 1989; Pohlmeier, 2012). Huh, Kim and Law (2009) include perceived usefulness, compatibility, peer influence, subjective norms, self-efficacy, and technical support, in order to predict behavioral intention to use hotel information systems. In the case of sharing economy, Ikkala and Lampinen (2015) examine that monetary reasons based on the network motivate individuals to involve accommodation sharing and are significantly related to non-instrumental attributes such as social interaction. Also, Paundra, Rook, Dalen, and Ketter (2017) study car sharing how individual differences in psychological ownership and instrumental car attributes such as price, parking convenience and car type affect intentions to choose shared cars.

Unlike the previous studies, this study analyzes how the guests' preferences of the instrumental attributes without affirmative attributes influence their accommodation purchasing decision such as occupancy rates, particularly by including the attributes obtained from study 1. The given attributes related to accommodation sharing service including property, price, location, host, and communication, can be appealing guests based on their needs and preference. By applying the concept of signaling theory (Spence, 1973; Connelly, Certo, Ireland, & Reutzel, 2011), this study enables to find the significant attributes which are preferred by guests of accommodation sharing. Xie and Mao (2017) measure the relationship between host quality attributes and performance of their listed accommodations based on

signaling theory by using local hosts, superhosts, service responsiveness, length of operating experience and identity verification. Deng and Ravichandran (2017) study that visual images and text-based trust influence property demands. Teubner, Hawlistschek, and Dann investigate the economic value of trust-building by price effects of reputation features based on signaling theory, including average rating score, number of ratings, Superhost status, ID verification, photos, and duration of the membership.

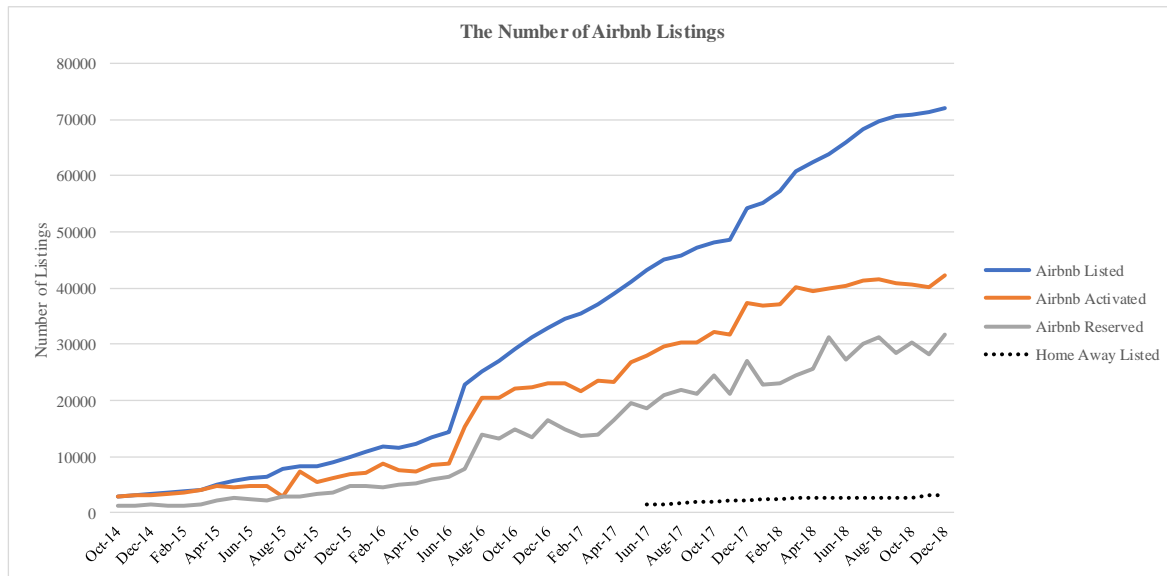
The fundamental background of study 2 is a consumer behavior model and emphasizes the stages of information searching and evaluating attributes of accommodation sharing, particularly products and services related attributes as a part of instrumental attributes. Based on the signaling theory, this study could investigate which attributes are significant to business performance in terms of occupancy rates.

## 4.2. Analysis of Airbnb in Korea: Overview

### 4.2.1. Growth Trend of Airbnb in Korea

Airbnb has started the peer-to-peer accommodation sharing service in Korea since 2014 and rapidly expands accommodation sharing business, similar to the fast growth in the global market of sharing economy. In 2018, more than 70,000 accommodation sharing has been registered in Korea, shown in Figure 4.2.1. This Airbnb historical data in Korea is provided by AirDNA from October 2014. AirDNA collects publicly available Airbnb data of various cities from the Airbnb website and provides a market analysis report (AirDNA, accessed 2018). This data presents the substantial increases in the number of listed Airbnb accommodation in five years, particularly rapid growth in 2015 and 2016. Figure 4.2.1 shows three lines with different colors; i) the blue line shows the changes of all registered accommodation on the Airbnb platform; ii) the orange line shows the changes of active accommodation to be ready for operation; iii) the grey line shows listings with at least more than one-day reserved booking. For comparison, the dotted line is another accommodation sharing business, called Home Away.

**Figure 4.2.1. The status of Airbnb Growth in Korea from 2014 to 2018**



Based on the blue line, it explains how the Airbnb is growing fast externally in each year. In other words, it means how individuals adapt to accommodation sharing easily. For instance, the year of 2015 has 199% increase from 3,325 accommodations to 9,936 accommodations; 231% increase from 9,936 to 32,918 in 2016. However, not all registered Airbnb provide the services, and approximately 70% of registered Airbnb in the year of 2016 and 2017 are activated and prepare to receive guests as well as 59% in 2018 shown on the orange line. Among registered accommodations, only 40~50% of them actually deliver the accommodation service to guests, shown on the grey line. For example, by the end of 2018, the 42,389 listings have been ready to deliver the service among the 71,970 all the registered listings and only 31,801 (44% of the registered accommodations) listings have finally provided accommodations to guests. It shows that not all registered listings would have a successful peer-to-peer business, and the grey line infers the growth trend of accommodation sharing as a new business in Korea.

#### 4.2.2. Geographical Distribution in Korea

The early stage of accommodation sharing in Korea, the most sharing accommodation is located mainly in Seoul (94% of registered accommodation in 2014) and other cities near Seoul such as Anyang, Goyang, Seongnam, and Suwon. In 2018, Airbnb accommodation sharing services become available in almost all cities in Korea, summarized in Table 4.2.1. Seoul has 26,516 registered accommodation sharing and is charged 36% of total accommodation. Jeju is the second largest accommodation sharing including 11,502 listings

(16%). Gangwon, Busan, Gyeonggi, and other provinces are followed. The aggregated number of accommodations in Seoul, Gyeonggi, Gangwon, and Jeju has 70% of the total listed accommodation and shows apparent concentrations in several cities and provinces.

Based on accommodation sharing types, Seoul has 3,700 entire houses, 4,414 private rooms and 1,181 shared rooms for accommodation sharing in 2014. The number of private room sharing was higher than other types of accommodation sharing in the early year. By increasing the total number of accommodation, entire room sharing becomes more available than the private room or shared room sharing in most of cities and provinces, except Incheon, Chungbuk, Gwangju, and Sejong. In 2018, the 41,213 entire house sharing have been registered as well as 26,796 of private room sharing and 5,226 shared room sharing. The entire house sharing is accounted for 56 percent of total registered sharing accommodation, although the entire house sharing in urban areas has been yet prohibited in Korea.

**Table 4.2.1. The Number of Airbnb Accommodation in each Province and Major Cities**

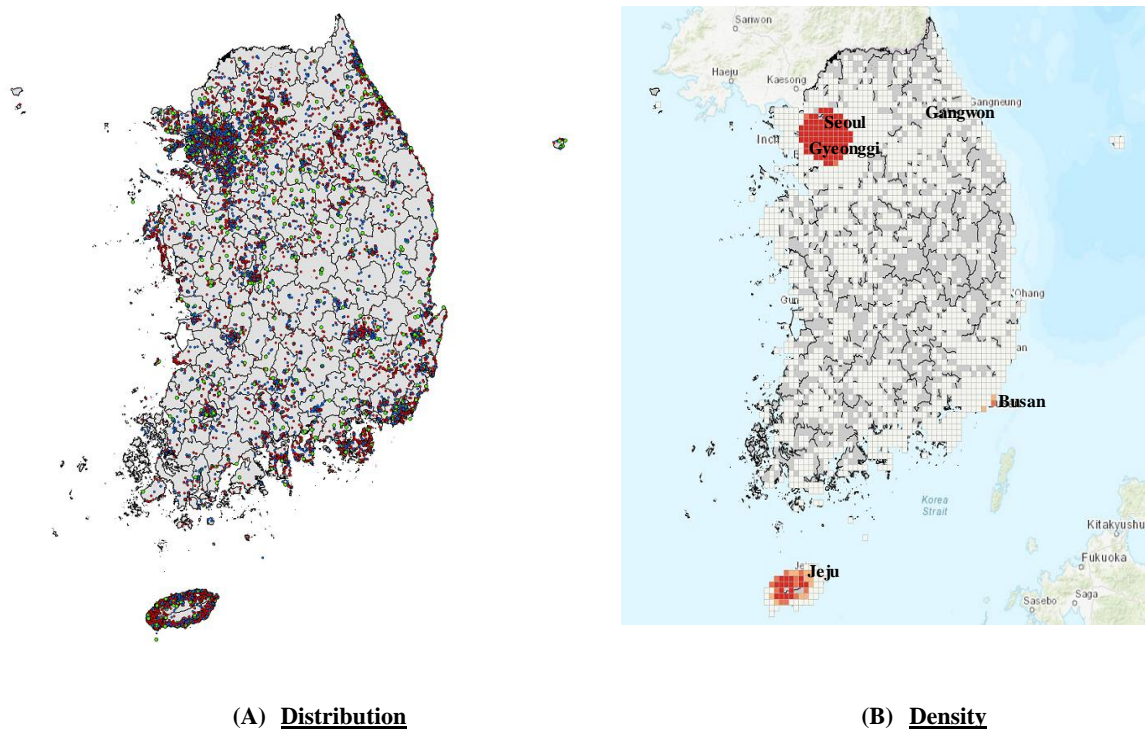
	Province	Entire houses	Private rooms	Shared rooms	Total	Percentage
1	Seoul	14,481	10,224	1,811	<b>26,516</b>	36.25%
2	Jeju	6,249	4,231	1,022	<b>11,502</b>	15.72%
3	Gangwon	4,520	2,500	573	<b>7,593</b>	10.38%
4	Busan	3,166	1,440	503	<b>5,109</b>	6.98%
5	Gyeonggi	2,950	1,846	208	<b>5,004</b>	6.84%
6	Jeonbuk	1,688	1,277	109	<b>3,074</b>	4.20%
7	Gyeongsnam	1,834	860	147	<b>2,841</b>	3.88%
8	Chungnam	1,781	518	65	<b>2,364</b>	3.23%
9	Gyeongbuk	1,062	889	238	<b>2,189</b>	2.99%
10	Jeonnam	906	688	157	<b>1,751</b>	2.39%
11	Incheon	754	748	152	<b>1,654</b>	2.26%
12	Daegu	690	300	63	<b>1,053</b>	1.44%
13	Chungbuk	307	622	55	<b>984</b>	1.35%
14	Daejeon	276	173	34	<b>483</b>	0.66%
15	Ulsan	304	148	24	<b>476</b>	0.65%
16	Gwangju	179	181	62	<b>422</b>	0.58%
17	Sejong	66	61	3	<b>130</b>	0.18%
	<b>Total</b>	<b>41,213</b>	<b>26,706</b>	<b>5,226</b>	<b>73,145</b>	<b>100.00%</b>

By applying the geographical information system with the longitude and latitude coordinates of accommodations, the geographical distribution and the density of accommodation sharing registered on the Airbnb platform can be visualized in Figure 4.2.2. The distribution map (A) in Figure 4.2.2 shows how Airbnb accommodation sharing has been distributed overall in Korea, including entire house sharing with red dots, private room sharing with blue dots and shared room sharing with green dots. The density of accommodation sharing is presented on the right map (B) by applying the optimized hot spot analysis with point features,

which are statistically significant spatial clusters of high values by ArcGIS, one of location-based analytical software.

As shown in Table 4.2.1, Seoul and major cities near Seoul in Gyeonggi province have a large number of registered accommodation sharing and these areas are colored in red on the map (B) in Figure 4.2.2. Gangwon province is positioned at the third largest province, but the map does not show any high density because the total number of accommodation sharing is spread in a large area compared to Seoul, Busan, and Jeju. The top five cities and provinces including Seoul, Jeju, Gangwon, Busan, and Gyeonggi, have approximately 76% of the total number of accommodations sharing in Korea.

**Figure 4.2.2. The Distribution and Density of Accommodation Sharing in Korea**



By comparing the volume and density of accommodation sharing supplier sides, this study determines to focus on Seoul among three candidates (Seoul, Jeju, and Busan) with high density. In the case of Jeju, the city is highly touristic areas and the small size of homestay businesses have already been operated by individuals before the Airbnb or other accommodation sharing become popular in Korea. Accommodation sharing in Busan show fast expanding, but Seoul has a larger volume and higher density. Therefore, it might be efficient for this study to focus on the registered accommodations in Seoul to evaluate the impacts of accommodation sharing in urban and large cities.



These statistics show that each city or province has a different distribution, so it might be less persuasive to regulate by unilateral laws and regulations because each local municipality government has different either negative or positive attitudes to motivate accommodation sharing in terms of the local context. For instance, touristic cities with lack of accommodation facilities might promote accommodation sharing to solve accommodation shortage and local residents can expect additional income (Guttentag & Smith, 2017), but the local governments will regulate the high density of accommodation sharing in order to prevent local gentrification or rental housing market fluctuation (Wachsmuth & Weisler, 2018).

#### 4.2.3. Geographical Distribution in Seoul

This study design to focus on analyzing accommodation sharing data in Seoul. In the year of 2018, Seoul has 26,516 listed accommodations (36% of total registered accommodation) on the Airbnb platform. Among 25 districts in Seoul, registered Airbnb accommodations are distributed in the order of Mapo (6,492 listings, 24.48%), Gangnam (3,490, 13.16%), Yongsan (3,048, 11.49%), Junggu (2,946, 11.11%), Jongno (2,197, 8.29%), Seodaemun (1,510, 5.69%), Seocho (1,202, 4.53%), Songpa (675, 2.55%), Dongdaemun (594, 2.24%) and others. However, the aggregated number of listings in the top five districts counts 68% of entire registered accommodations in Seoul, summarized in Table 4.2.2.

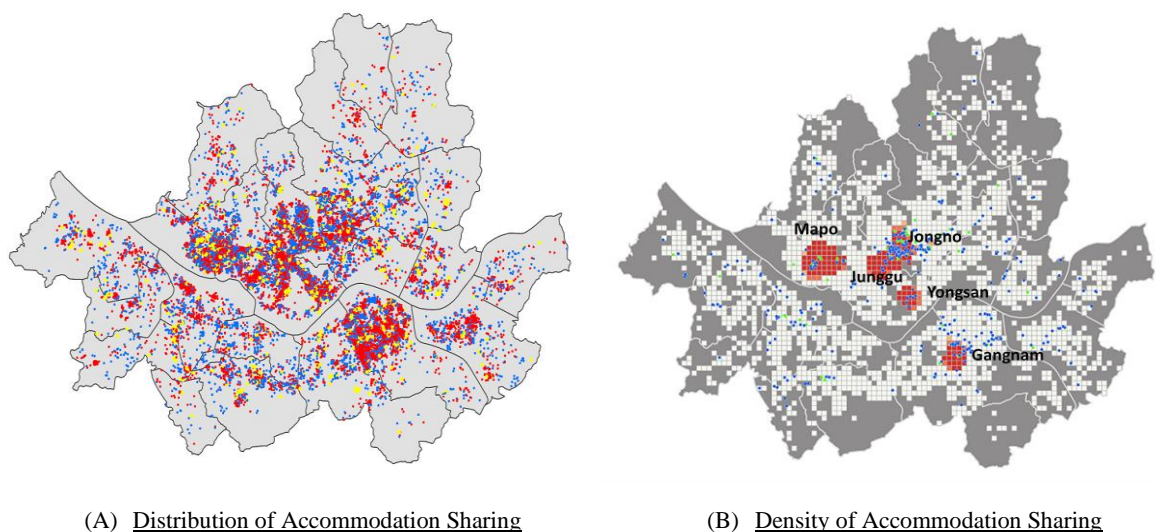
**Table 4.2.2. The Number of Accommodation in Each District in Seoul**

	District	Entire house	Private room	Shared room	Total	%
1	Mapo	3,604	2,253	635	<b>6,492</b>	<b>24.48%</b>
2	Gangnam	2,360	961	169	<b>3,490</b>	<b>13.16%</b>
3	Yongsan	1,824	995	229	<b>3,048</b>	<b>11.49%</b>
4	Junggu	1,579	1,204	163	<b>2,946</b>	<b>11.11%</b>
5	Jongno	881	1,191	125	<b>2,197</b>	<b>8.29%</b>
6	Seodaemun	635	783	92	<b>1,510</b>	<b>5.69%</b>
7	Seocho	715	430	57	<b>1,202</b>	<b>4.53%</b>
8	Songpa	402	253	20	<b>675</b>	<b>2.55%</b>
9	Dongdaemun	296	257	41	<b>594</b>	<b>2.24%</b>
10	Yeongdeungpo	344	206	22	<b>572</b>	<b>2.16%</b>
11	Gwanak	232	228	48	<b>508</b>	<b>1.92%</b>
12	Gangseo	253	180	27	<b>460</b>	<b>1.73%</b>
13	Seongbuk	167	244	33	<b>444</b>	<b>1.67%</b>
14	Dongjak	142	237	15	<b>394</b>	<b>1.49%</b>
15	Seongdong	181	175	26	<b>382</b>	<b>1.44%</b>
16	Gwangjin	180	120	34	<b>334</b>	<b>1.26%</b>
17	Eunpyeong	141	103	18	<b>262</b>	<b>0.99%</b>
18	Guro	122	94	18	<b>234</b>	<b>0.88%</b>
19	Yangcheon	109	65	6	<b>180</b>	<b>0.68%</b>
20	Gangdong	86	68	4	<b>158</b>	<b>0.60%</b>
21	Nowon	52	57	5	<b>114</b>	<b>0.43%</b>
22	Gangbuk	71	36	2	<b>109</b>	<b>0.41%</b>
23	Jungnang	49	41	16	<b>106</b>	<b>0.40%</b>
24	Dobong	34	23	4	<b>61</b>	<b>0.23%</b>
25	Gumcheon	22	20	2	<b>44</b>	<b>0.17%</b>
	<b>Total</b>	<b>14,481</b>	<b>10,224</b>	<b>1,811</b>	<b>26,516</b>	<b>100.00%</b>

Unlike other small cities, Seoul has more than one single city center, but the top five districts can be considered as a downtown area because those districts are much commercialized compared to the rest of other districts and located in relatively middle of the city along the Han River. Table 4.2.2 shows that most districts have a higher number of entire houses sharing, while four districts including Jongno, Seodamun, Seongbok, and Dongjak have more private room sharing. In the earlier year, the number of entire house sharing, and private room sharing are almost the same. By the end of 2015, the number of entire room sharing is 4,575, whereas private room sharing is 4,274 and shared room sharing is 1,087.

The distribution of each accommodation sharing type and density of each district are visually demonstrated in Figure 4.2.3 by applying GIS software. On the map (A) in Figure 4.2.3, the red dots represent entire house sharing, the blue dots represent private rooms sharing and the yellow represents shared rooms, so it shows how these accommodations are distributed over the 25 districts in Seoul. The map (B) clearly indicates five districts with a larger number and high density of accommodation sharing, including Mapo, Gangnam, Yongsan, Junggu, and Jongno.

**Figure 4.2.3. The Distribution and Density of Accommodation Sharing in Seoul**



\*. The map is simulated by the software ArcGIS

The listed 26,516 Airbnb accommodations in Seoul are originally classified into 92 house types and this study use the regrouped eight categories such as house & apartment (66%), hotel & hostel (6%), bed and breakfast (6%), guesthouse (4%), condominium (9%), loft (3%), villa (0.3%) and others (6%), summarized in Table 4.2.3. The listed types show that Airbnb is functioning as a platform provider of accommodation because the platform includes commercial types such as hotels and hostel. In categories of bed and breakfast, as well as

guesthouses, the listed accommodations are unclear to clarify between accommodation sharing and existing hospitality business, because many of them are similar to the small scale of hostels for local travelers.

Therefore, this study includes accommodation sharing with residential property types, including house, apartment, condominium and loft in Seoul; and excludes types of hotel, hostel, bed and breakfast, and guesthouse to investigate the effect of peer-to-peer accommodation.

**Table 4.2.3. The Number of Accommodations based on Property Types**

Districts	House / Apartment	Condo -minium	Loft	Villa	Hotel & Hostel	Bed & Breakf ast	Guest house	Others	Total
Mapo	4,371	690	191	5	361	350	244	280	6,492
Gangnam	2,381	340	120	8	175	83	113	270	3,490
Yongsan	2,252	260	115	21	63	140	87	110	3,048
Junggu	1,522	167	160	6	407	354	150	180	2,946
Jongno	1,145	113	54	11	341	244	129	160	2,197
Seodaemun	925	158	14	8	97	145	65	98	1,510
Seocho	905	113	26	5	30	9	27	87	1,202
Songpa	476	101	22	0	18	1	15	42	675
Dongdaemun	342	49	66	2	36	28	21	50	594
Yeongdeungpo	413	27	18	0	19	27	18	50	572
Gwanak	380	51	2	1	5	19	11	39	508
Gangseo	339	41	18	1	16	2	4	39	460
Seongbuk	287	54	6	4	38	22	7	26	444
Dongjak	234	50	2	1	30	8	20	49	394
Seongdong	279	38	2	0	37	1	12	13	382
Gwangjin	237	51	2	0	3	18	6	17	334
Eunpyeong	201	22	12	0	0	0	10	17	262
Guro	183	15	2	0	12	1	9	12	234
Yangcheon	148	16	1	0	2	1	1	11	180
Gangdong	133	14	0	0	1	3	0	7	158
Nowon	91	7	5	0	0	1	6	4	114
Gangbuk	77	11	1	0	5	1	4	10	109
Jungnang	88	10	1	1	0	2	0	4	106
Dobong	44	13	0	0	0	0	1	3	61
Gumcheon	29	10	0	0	1	1	0	3	44
Total	17,482	2,421	840	74	1,697	1,461	960	1,581	26,516
% of property	65.93%	9.13%	3.17%	0.28%	6.40%	5.51%	3.62%	5.96%	100.00%

\*. Others include barn, bungalow, cabin, camper, cottage, dorm, in-law, pension, serviced apartment, lodge, and more

### 4.3. Hypotheses Development

This quantitative study designs to examine how critical attributes of accommodation sharing such as property, value, location, host, communication influence performance and price of accommodation. Also, this study will test how the existence of other accommodation sharing, hotels, or hostels might have an impact on performance. Study 2 attempts to develop the attributes from study 1 of analyzing guests' reviews in Table 3.4.3 and to include the corresponding variables to Airbnb transactional data. Table 4.3.1 is a summary of how to develop measurable attributes of study 2, obtained from the analysis of guests' reviews.

**Table 4.3.1. Development of Measurable Attributes from Review Analysis**

<b>Study 2</b>		<b>Study 1</b>
Property	Sharing Types	Finding uniqueness of each sharing type that - Entire house: Property and home appliance - Private rooms: rooms, interaction with hosts - Shared rooms: rooms, interactions with guests and hosts ⇒ In Korea, entire house sharing is still illegal.
	Housing Types	From the guests' perspective, the negative reviews have not shown the difference between houses and apartments.
	Number of Rooms	Guests describe the size, appliance, and interiors rooms which they share. ⇒ only a number of rooms are available in Airbnb data.
	Amenities	Guests frequently mention kitchen, breakfast, wife and express difficult to access building with stairs. ⇒ Among many comments about house amenities based on the frequency in reviews, the amenities are included in study 2 and are significant on performance.
Value	Daily Rate	Guests are less likely to express their opinions about price values on the reviews. ⇒ Economic factors are an important factor to be included.
	Additional Fees	
Location	Districts	The distribution of accommodation sharing shows specific areas with high density, frequently stated 'hongdae.'
	Accessibility	Guests state convenience or difficulties to access the building with public transportation. ⇒ Subway station, bus stop, walking distance to accommodation sharing.
	Convenient Facilities	Guests express the easy access to convenient local facilities for shopping such as market, store, convenient store, café, and bakery and for touristic attractions. ⇒ additional information by using coordinates and GIS.
Host & Communication	Superhost	Interaction between hosts and guests and hosts' attitudes are critical factors of accommodation sharing.
	Multiple Listings	
	Response Time	⇒ Not only reviews, guests and hosts communicate via direct messages, but the direct messages are beyond the scope of research, but significant to measure the capability of hosts' communication.
	Response Rate	
	Instant Booking	⇒ two-way of the booking process, guests sent requests and wait for the hosts' acceptance, or instantly complete the booking process as soon as guests reserve and pay for the accommodation.
	Number of Reviews	Study 1 conducts content analysis by using reviews platform. ⇒ if the number of reviews is significant, the validity of using reviews for study 1 is improved.
Evaluation	Overall Rating	Many guests express their satisfaction and recommendation to future guests with various adjectives and adverbs on their reviews, but the modifiers are difficult to evaluate quantitatively. The overall rating can be a good alternative.

Note: Daily rate, additional fees, multiple listings, response time and rate, instant booking are less frequently mentioned on the reviews; however, the variables are included in the research model because it explains the major attributes including value, host, and communication. Also, including the attributes have benefits to measure the impacts on business performance.

First, this study aims to find which attributes might have significant impacts on performance, so this study includes the attributes which might be influential on the guests' decision and the information is available on the platform such as types of sharing and properties,

price and additional expenses, geographic information. Gunter and Önder (2018) study the impacts of several factors accommodation sharing on the performance with Airbnb data, including information such as average daily rate, distance to the center, the maximum number of guests, number of photos and several more factors on their regression model. Xie and Meo (2017) study host quality, price, reviews, and property characteristics on performance. This study includes property, value, host, location attributes and guests' rating and attempts to measure the impact on performance such as occupancy rates.

The occupancy rate is a proportion of occupied rooms to the total number of available rooms during a specified period and can be a good indicator of measuring accommodation business performance (Jimenez, 2017; Mahmoud, 2017). High occupancy rates can be understood that guests prefer to stay, and it can maximize profits of the accommodations (RoomKey PMS, 2014). In the case of accommodation sharing, the occupancy rate is calculated with the reserved days of each registered accommodation divided by available days after excluding the blocked days that the host claims not to have any guests. This study includes the occupancy rate as a dependent variable to investigate which attributes of accommodation sharing attract guests to choose the particular accommodation among other registered accommodation sharing on the platforms.

The important characteristics of accommodation sharing are unstandardized properties with different levels of accessible amenities and convenient home appliances during the stays of guests. Qiu, Fan, and Liu (2018) find that the property attributes become more significant factors to vary the probability of booking among factors that influence the better performance of Airbnb. This study hypothesizes that the property and its facilities have impacts on the business performance of accommodation sharing.

**H1 ~ H4:** The property attributes (sharing types, housing types, number of rooms, and availability of amenities) significantly influence the performance of accommodation sharing.

According to the previous study, the economic benefit is a critical factor for people to participate in sharing economy (Hamari, Sjöklint, & Ukkonen, 2016) and people expect to have the sharing economy service with lower cost with various options (Schor, 2016). Gunter & Önder (2018) stated that the hosts set their own prices for accommodation sharing and the market for sharing is a highly uncompetitive price market. For measuring the impact of value attributes on the performance of accommodation sharing and guests' preference, this study hypothesizes that the attributes related to prices of accommodation sharing have impacts on the business performance.

**H5 ~ H6:** The value attributes (average daily rate, the status of additional fees) significantly influences the performance of accommodation sharing.

This study aims to measure the impact of locational preference to the choice of guests. The description of the location is available on the profile of each accommodation, so this study hypothesizes that the attributes related to location influence the performance. Some previous studies include location data such as distance from the city center (Dogru & Pekin, 2017; Wang & Nicolau, 2017). However, the distance from the city center is not able to measure because large metropolitan cities have several commercialized city centers that are not officially defined. Therefore, this study includes information about districts, accessibility to transportation and convenient local facilities.

**H7 ~ H9:** The location attributes (districts, accessibility of transportation, locational convenience) significantly influence the performance of accommodation sharing.

In terms of the peer-to-peer sharing economy, the trust between providers such as hosts in accommodation sharing and the user such as guests become significantly important. The previous study finds that the benefits from the interactions with hosts increase satisfaction (Tussyadiah, 2016), and the host characteristics might influence in pricing and performance of accommodation sharing that hosts with more accommodations and experiences expect various pricing and receive higher reservation (Guttentag & Smith, 2017; Tussyadiah, 2016). This study aims to measure the significance of hosts attributes such as multiple listings and superhosts (Liang, Schuckert, Law, & Chen, 2017) and hosts efforts including updating photos and response toward guests as well as the reviews from the guests to their performance and how these differ the price of accommodation (Xie & Mao, 2017). The study also includes the option of instant booking because instant booking increases the convenience of accessibility to the sharing economy.

**H10 ~ H14:** The host and communication attributes (the status of superhost, the status of multiple listing, number of reviews, response time and rate, instant booking status) significantly influence the performance of accommodation sharing.

In order to measure how the evaluation by previously experienced guests influences the purchasing decision to future guests, this study hypothesizes rating on accommodation sharing influences the number of nights guests to stay at each accommodation. Airbnb requests the service evaluation of each registered accommodation to the experienced guest in terms of

six aspects including accuracy, check-in, cleanliness, communication, location, and values. The ratings are shown on the platform with the overall rating.

**H15:** The rating on accommodation sharing by experienced guests significantly influences the performance of accommodation sharing.

Second, this study also aims to investigate price determinants of accommodation sharing because many small suppliers in the sharing economy provide accommodation with no unique prevailing equilibrium market price (Gunter & Önder, 2018). Several studies attempt to find the price determinants of sharing economy. Wang and Nicolau (2017) finds the relationship between pricing and the determinants of five categories, including host attributes, site and property attributes, amenities and services, rental rules, and online review ratings, with 25 independent variables in the case of Airbnb. Dongru and Pekin (2017) also examine the price determinants of Airbnb properties such as space, quality, commerciality, friendless, freebies and location factors against the nightly published rate of Airbnb listings. This study will apply the attributes, including property attributes, location, host and communication.

**H16 ~ H18:** The property attributes (house types, number of rooms, amenity) significantly influence the price of accommodation sharing.

**H19 ~ H21:** The location attributes (districts, accessibility of transportation, and other locational convenience) significantly influence the price of accommodation sharing.

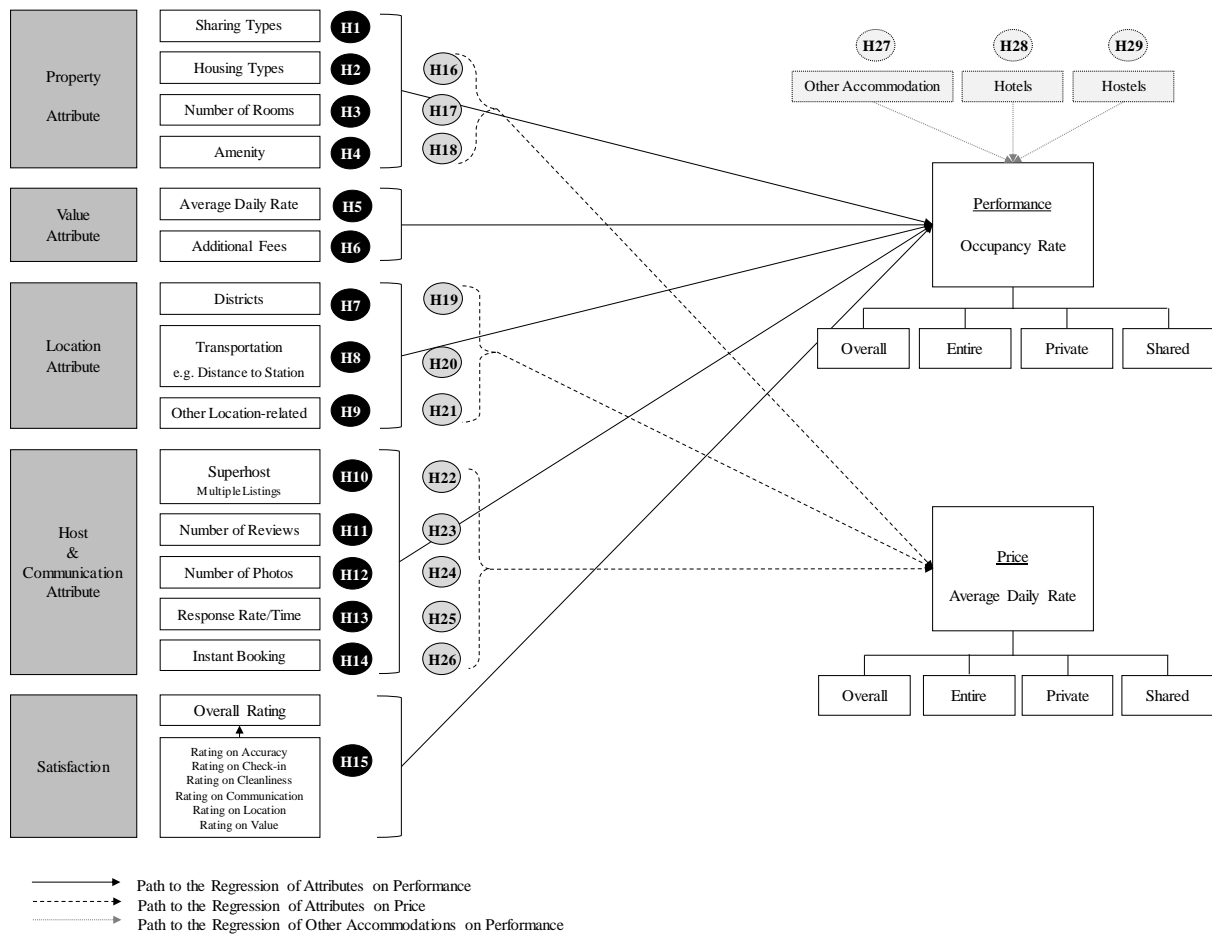
**H22 ~ H26:** The host and communication attributes (the status of superhost, number of reviews, number of photos, response time and rate, instant booking status) significantly influence the price of accommodation sharing.

Third, this study aims to examine the influences of other accommodation sharing at a certain distance or distance to other hospitality such as hotels or hostels. The previous studies measure how the increase in accommodation sharing impacts on existing hotel business. Zervas, Proserpio, and Byers (2014) find that a 1% increase in Airbnb listing results in a 0.05% decrease in quarterly hotel revenues. In the early stage of accommodation sharing, Choi, Jung, Rye, Kim, and Yoon (2015) finds that the impact of Airbnb listings has fewer effects. This study hypothesizes that the existence of a number of neighboring accommodation sharing and hotels has an impact on the occupancy rate of accommodation sharing.

**H27 ~ H29:** The existence of other accommodation sharing, hotels, and hostels significantly influences the performance of accommodation sharing.

This study investigates the impacts of the listed attributes on performance and price value based on each accommodation sharing type because this study assumes that types of sharing, including entire houses, private rooms, and shared rooms, would have different influences on guests' preference. The study extends the scope of the study to measure the impact of existence and closeness of other accommodation on the performance of individual accommodation sharing. The listed of hypotheses are demonstrated in Figure 4.3.1.

**Figure 4.3.1. Framework for Impacts of Accommodation Sharing Attributes on Performance and Price**



## 4.4. Research Methodology

### 4.4.1. Research Design

By conducting the content analysis by applying for guests' reviews, study 1 explores aspects of accommodation sharing that the experienced guests feel strong impressions in terms of property, hosts, and other services related to accommodation sharing. However, the outcomes of analyzing reviews are not sufficient to investigate which characteristics of accommodation sharing attracts guests to choose the accommodations. Study 2 aims to find



which attributes are preferred by guests and to measure the impacts of the occupancy rate by using Airbnb transactional data between hosts and guests. This study also investigates the factors to determine the price of accommodation sharing because the advantage of sharing economy is to provide various alternatives by matching guests' needs and preferences with a wide range of prices. Study 2 adds to examine the impacts of other registered accommodation sharing and traditional accommodation businesses such as hotels that are located at a certain distance.

In order to find the relationship between attributes of accommodation sharing and the performance, this study constructs linear regression analyses in the form of ordinary least square (OLS) (Choi, Jung, Ryu, Kim, & Yoon, 2015; Dogru & Pekin, 2017; Mattila & O'Neill, 2003; Quattrone, Proserpio, Quercia, Capra, & Musolesi, 2016; Teubner, Hawlitschek, & Dann, 2017).

The regression model of the form is

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$$

Where  $Y$  is the dependent variable to measure performance with Occupancy Rate and Average Daily Rate,  $i$  denotes for individual registered accommodation sharing,  $\beta$ : coefficients of each attribute,  $X$ : the vectors of independent variables related to property, value, location, hosts and communication,  $\varepsilon$ : error terms (refer to Figure 4.3.1).

This study model develops four models for accommodation sharing types as entire houses, private rooms, shared rooms (Model 2~4), and accommodation sharing as a whole (Model 1) because of legal issues for entire house sharing and different guests' preferences of each type of accommodation sharing.

#### 4.4.2. Description of the Data

Study 2 uses cross-sectional data of Airbnb in Seoul from January 1 to December 31 in 2018, provided by AirDNA. The total number of listed accommodations in Seoul are 26,516 registered accommodations. However, this study only includes the listed accommodations with an occupancy rate greater than zero, which means accommodation has at least one reservation, so the total number of observations for study 2 is 17,065 registered accommodations. Also, the data has been reclassified in regard to the types of property, numbers of rooms, districts of accommodations and others.

### *Properties Attributes*

The platform provides property information on the platform such as a number of rooms, property types (house, apartment, condominium, lofts), sharing types (entire house, private room, and shared rooms), availability to access amenities (kitchen, breakfast, wifi, computer). Among the lists of amenities on the Airbnb platform, this study chooses the amenities mentioned from the guests' reviews in study 1. For example, guests stated their satisfaction and attitudes for a cultural experience with breakfast and they express their complaints of difficulties to carry heavy luggage due to many stairs. This study investigates how this property and its facilities might have an impact on the performance of accommodation and its price of sharing.

The original data consists of the entire house (11,441), private (4,836) and shared room (768) with 94 types of property. The types of property are classified with four residential housing types including apartments (9,072), house (5,097), condominium (2,103) and loft (793) after excluding commercial types such as hotels, hostels, bed and breakfast, and guest houses. The properties have different available numbers of rooms for sharing including studio types without a separate room (1,997), one room (10,379), two rooms (2,943), three rooms (1,354), four rooms (264) and more than four rooms (128). Also, the data provides long lists of provided amenities, but this model includes commonly stated amenities at the guests' reviews from study 1 and the status of provided amenities are recoded as dummies (0: not provided, 1: provided).

**Table 4.4.1. The Summary of Attributes related to Property**

		Entire Home		Private Room		Shared Room	
		number	%	number	%	number	%
Housing types	Apartment	6,916	60.34%	1,964	40.61%	192	25.00%
	house	2,395	20.90%	2,222	45.95%	480	62.50%
	Condominium	1,376	12.01%	635	13.13%	92	11.98%
	Loft	774	6.75%	15	0.31%	4	0.52%
Number of Room	Studio types	1,723	15.03%	274	5.67%	0	0.00%
	one	5,359	46.76%	4252	87.92%	768	100.00%
	two	2,713	23.67%	230	4.76%	0	0.00%
	three	1,306	11.40%	48	0.99%	0	0.00%
	four	250	2.18%	14	0.29%	0	0.00%
	more than four	110	0.96%	18	0.37%	0	0.00%
Amenities (1: provided)	Kitchen	11,091	96.77%	4,278	88.46%	706	91.93%
	Wireless Internet	11,174	97.50%	4,705	99.38%	751	97.85%
	Breakfast	661	5.77%	1,537	31.78%	295	38.41%
	Laptop Friendly	9,767	85.22%	3,540	73.20%	498	64.84%
	Elevators	6,474	56.49%	1,438	29.74%	152	19.79%

\*. The percentages are a proportion of the total number of accommodation in each sharing types

### *Value Attributes*

The data provides information related to the price and expenses of the accommodations, including the average daily rate in the US dollar and additional fees such as deposit, cleaning charge, and extra guest fee. The average daily rate is 90.63 dollars for entire rooms sharing, 43.22 dollars for private room sharing, and 27 dollars for shared rooms. Instead of currency, this study includes dummies for charging the fees as 1, including the security deposit (6,908, 40.48%), cleaning fee (12,463, 73.03%) and extra guest fee (11,864, 69.52%).

### *Location Attributes*

The data set provides location related information such as a district and coordinate information per each accommodation. Among 26 districts in Seoul, only five districts have more than 74% of registered accommodation sharing: Mapo (4,698, 27.53%), Gangnam (2,347, 13.75%), Yongsan (13.14%), Junggu (1,601, 9.38%), Jongno (1,075, 6.30%) and other 21 districts (5,101, 29.89%). However, the property profile on the platform provides detailed descriptive information about the location. Also, the word frequency shows that the guests concern significantly about the location from study 1.

**Table 4.4.2. The Distribution of Accommodation Sharing in Districts**

		Entire Home		Private Room		Shared Room	
		number	%	number	%	number	%
District	Mapo	3,114	27.17%	1,282	26.51%	302	39.32%
	Gangnam	1,913	16.69%	369	7.63%	65	8.46%
	Yongsan	1,478	12.90%	655	13.54%	110	14.32%
	Junggu	1,268	11.06%	290	6.00%	43	5.60%
	Jongno	629	5.49%	393	8.13%	53	6.90%
	Others	3,059	26.69%	1,847	38.19%	195	25.39%
	Total	11,461	100.00%	4,836	100.00%	768	100.00%

This study extends locational data based on coordinated by combining with transportation information such as subways and buses as well as convenient facilities in the communities. In case of distance to bus or subway station, this study uses the coordinate information of subway station and bus stop, provided by the Seoul Metropolitan Government that are most recently updated data in 2017 for the subway (20 lines, 929 stations) and 2018 for the bus (11,018 stops), accessed in 2019. Also, this study includes accessibility and availability of convenient facilities such as a restaurant (829 sites), shopping site (278 sites), touristic spots (540 sites) that are promptly provided by the Korea Tourism Organization and the National Spatial Data Infrastructure Portal, and the information is accessed on January 2019. The distance and number of other accommodations can be measure from Airbnb listings and

the addresses of hotels (341 registered) and hostels (69 registered) which are most recently updated in 2018 and provided by the Seoul Metropolitan Government.

The coordinate information is presented on the shapefiles. The nearest distance from the accommodations to the target places in the meter unit and the number of places within 1km can be measured by ArcGIS, one of GIS software packages (GIS: geographic information system). For example, the distance from the accommodation sharing to the nearest subway station is calculated in the meter, or the number of touristic sites from the accommodation sharing within 1km is counted. This study includes the distance to subway stations, bus stop, café, and convenience store, and the number of restaurants, shopping sites, and touristic sites because this location related information has been frequently mentioned on the guest's reviews.

#### *Host and Communication-related Attributes*

According to host and communication, the status of superhost, multiple listing, number of reviews, number of photos, response rate and time, and instant booking are provided from the Airbnb platform. Among registered accommodation sharing, 4,144 accommodations (24.33%) are superhost, and 11,078 accommodations (64.92%) the book instantly via platforms. The average number of reviews and photos is 22.04 and 26.52 respectively. The average response rate and response time are 94.90 percentage and 90.28 minutes.

#### *Guest Satisfaction*

According to the service evaluation to experienced guests by Airbnb, the rating is shown with a five-star rating on the platform in terms of overall rating, accuracy, check-in, communication, cleanliness, and value. However, the data provided by AirDNA have been transformed to 10 point scale for subcategories and 100 full scales for overall rating. Based on the provided data set, the average ratings are accuracy (9.57), check-in (9.76), cleanliness (9.30), communication (9.74), location (9.52), and value (9.40). The overall rating is provided in 93.32 on full scales.

#### *Guests' Choice and Accommodation Sharing Performance: Occupancy Rate*

Among the registered accommodation sharing, Study 2 only deals with the occupancy rate greater than zero, which means the accommodation has at least more than one reservation during the available booking days. The average occupancy rate is 56.69% for all sharing types, 63.03% for entire houses, 45.36 % for private rooms, and 33.40% for shared rooms. The proposed homestay in urban areas is legally permitted within 180 days in Korea. The average

reserved days are 103 for all types, 118 days for entire house sharing, 74 days for private room and 57 days for shared rooms, but there are 3,885 registered accommodations with more than 180 reservation days in 2018.

The variables for this study are summarized in Table 4.4.3.

**Table 4.4.3. The Summary of Descriptive Statistics**

No.	Variables	Observation*	Mean	Std. Dev.	Min	Max
<b><i>Property Attributes</i></b>						
1	Listing Types	17,065	1.373	0.569	0	3
	Private Room Sharing	17,065	0.283	0.451	0	1
	Shared Room Sharing	17,065	0.045	0.207	0	1
2	Housing Types	17,065	1.685	0.861	1	4
	House	17,065	0.298	0.458	0	1
	Condominium	17,065	0.123	0.329	0	1
	Loft	17,065	0.046	0.211	0	1
3	Number of Bedrooms	17,065	1.291	0.884	0	5
	One Room	17,065	0.608	0.488	0	1
	Two Rooms	17,065	0.172	0.378	0	1
	Three Rooms	17,065	0.079	0.270	0	1
	Four Rooms	17,065	0.015	0.123	0	1
	More than Four Rooms	17,065	0.008	0.086	0	1
4	Amenities					
	Kitchen	16,995	0.946	0.226	0	1
	Wireless Internet	16,995	0.979	0.145	0	1
	Breakfast	16,995	0.147	0.354	0	1
	Laptop Friendly	16,995	0.809	0.393	0	1
	Elevator	16,995	0.474	0.499	0	1
<b><i>Value Attributes</i></b>						
5	Average Nightly Rate	17,065	73.827	66.267	10	1,334.95
6	Other Expense					
	Deposit	17,065	0.405	0.491	0	1
	Cleaning Fee	17,065	0.730	0.444	0	1
	Extra Guest Fee	17,065	0.695	0.460	0	1
<b><i>Locational Attributes</i></b>						
7	Districts	17,065	15.284	6.091	1	25
	Gangnam	17,065	0.137	0.344	0	1
	Yongsan	17,065	0.131	0.338	0	1
	Junggu	17,065	0.094	0.298	0	1
	Jongno	17,065	0.063	0.243	0	1
	Others	17,065	0.299	0.458	0	1
8	Transportation					
	Distance to Subway	17,065	498.25	367.599	2.689	4,886.717
	Distance to Bus stop	17,065	145.38	87.404	1.261	875.046
9	Other Location-related					
	Distance to Café	17,065	228.144	194.538	2.035	2,367.158
	Distance to Conv. Store	17,065	219.405	182.281	0.580	1,977.564
	No. Restaurants in 1km	17,065	14.106	17.255	0	126
	No. Shopping site in 1km	17,065	6.445	9.135	0	53
	No. Touristic sites in 1km	17,065	5.818	6.79	0	44
<b><i>Host and Communication-related Attributes</i></b>						
10	Superhost	17,035	0.243	0.429	0	1
	Multiple Listing	17,065	0.792	0.406	0	1
11	Number of Reviews	17,065	22.042	31.536	0	296
12	Number of Photos	17,003	26.523	17.944	1	201
13	Response Rate	16,733	94.904	16.252	0	100

	Response Time	14,631	90.288	272.228	0.01	1,440
14	Instant Booking	17,065	0.649	0.477	0	1
<b>Experienced Guests Evaluation</b>						
15	Rating on Overall	13,811	93.323	8.272	20	100
	Rating on Accuracy	13,809	9.572	0.82	2	10
	Rating on Check-in	13,807	9.76	0.651	2	10
	Rating on Communicate	13,810	9.737	0.702	2	10
	Rating on Cleanliness	13,810	9.301	0.967	2	10
	Rating on Value	13,806	9.402	0.869	2	10
<b>Comparison to Competitors</b>						
16	Number of Airbnb in 1km	17,065	1,254.434	1,469.830	1	4,618
	Number of Hotels in 1km	17,065	5.697	7.672	0	49
	Number of Hostels in 1km	17,065	1.577	2.253	0	13
	Distance to Nearest Hotel	17,065	623.282	532.256	1.025	5,584.038
	Distance to Nearest Hostel	17,065	1,306.191	1,241.766	3.931	1,1107.92
<b>Performance</b>						
17	Occupancy Rate	17,065	0.567	0.278	0.032	1

\*. includes accommodation sharing with housing types (apartment, house, condominium, loft) and with occupancy rate (>0)

## 4.5. Analysis of Study 2

### 4.5.1. Analysis of Attributes on Performance (Occupancy Rate)

This study develops hypotheses for sharing types and property types (H1~H4), value (H5~H6), location (H7~H9), host and communication (H10~H14), and overall rating (H15) and their impacts on occupancy rates. Each major attribute includes detailed factors based in Figure 4.3.1 and the results of the analysis summarized in Table 4.5.1.

Before analyzing the multiple regression, this study preliminarily conducts four-way ANOVA to examine whether this categorical information such as accommodation sharing types (H1), housing types (H2), number of rooms (H3) and districts (H7) are significantly related to the occupancy rate. The results show that the difference in occupancy rate in terms of these variables are significant at the 0.01 level with  $F=212.28$  ( $r\text{-square} = 0.157$ ). Therefore, this study includes these variables in the regression analysis with dummy transformation.

The aggregated model (1) includes all the listed attributes and the model (2) is restricted to entire house sharing, and the model (3) to private room sharing and the model (4) to shared room sharing, because this study assumes that the impact of the attributes on the occupancy rate might be different in terms of accommodation sharing types. Also, the comparison of sharing types provides sophisticated policy implications. Under the current laws on homestays and regulations related to accommodation and hospitality, the entire sharing in Seoul, as well as many other cities in Korea, is prohibited, except in the small township such as ‘Eup’ or ‘Meyoen’ based on different legal backgrounds.

**Table 4.5.1. The Results of Multivariate Regression of Performance (Occupancy Rate)**

Independent variable → Dependent Variable : Occupancy Rate	Standard Coefficient $\beta$ (t-value-Sig)			
	(1) Aggregated	(2) Entire House	(3) Private Room	(4) Shared Room
Sharing Types				
Private room	-0.192 (-17.9***)			
Shared room	-0.169 (-19.66***)			
Housing Types				
House	-0.026 (-2.82***)	-0.029 (-2.62***)	-0.011 (-0.59)	-0.02 (-0.38)
Condominium	0.03 (4.07***)	0.03 (3.36***)	0.032 (1.95*)	0.097 (1.97*)
Loft	0.015 (2.47**)	0.014 (1.78*)	0.027 (1.29)	0.057 (1.01)
Number of Rooms				
One Room	0 (0.01)	-0.002 (-0.17)	0.019 (0.83)	
Two Rooms	-0.017 (-1.51)	-0.025 (-1.76*)	0.028 (1.24)	
Third Rooms	0.016 (1.4)	0.016 (1.03)	0.015 (0.77)	
Four Rooms	0.041 (4.03***)	0.048 (3.5***)	0.043 (1.75*)	
More than Four rooms	0.055 (4.83***)	0.08 (5.42***)	-0.019 (-0.87)	
Amenity				
Kitchen	0.023 (2.97***)	0.034 (3.25***)	0.007 (0.44)	0.075 (2.17**)
Wireless Internet	0.026 (2.94***)	0.033 (2.97***)	0.009 (0.53)	-0.02 (-0.4)
Breakfast	-0.085 (-10.07***)	-0.051 (-5.05***)	-0.133 (-8.48***)	0.003 (0.08)
Laptop Friendly	0.054 (6.6***)	0.045 (4.3***)	0.091 (5.65***)	-0.028 (-0.73)
Elevator	0.027 (2.91***)	0.037 (3.18***)	-0.023 (-1.14)	0.08 (1.7*)
Value				
Average Daily Rate	-0.236 (-10.41***)	-0.262 (-9.14***)	-0.211 (-6.47***)	-0.14 (-3.03***)
Additional Fees				
Security Deposit	-0.01 (-1.3)	-0.011 (-1.1)	-0.004 (-0.27)	-0.018 (-0.34)
Cleaning Fee	0.107 (11.25***)	0.086 (7.44***)	0.122 (7.31***)	0.131 (2.75***)
Extra Guest Fee	-0.05 (-6.55***)	-0.034 (-3.5***)	-0.058 (-3.67***)	-0.255 (-5.31***)
District				
Gangnam	0.000 (0.04)	0.004 (0.31)	-0.028 (-1.61)	-0.043 (-0.98)
Yongsan	-0.033 (-4.16***)	-0.041 (-4.01***)	-0.023 (-1.33)	0.036 (0.69)
Junggu	-0.01 (-0.99)	-0.007 (-0.5)	-0.014 (-0.78)	0.03 (0.65)
Jongno	-0.036 (-3.62***)	-0.033 (-2.65***)	-0.059 (-2.62***)	-0.068 (-1.28)
Others	-0.062 (-6.48***)	-0.064 (-5.35***)	-0.07 (-3.17***)	-0.013 (-0.25)
Location				
Nearest Subway Station	--0.041 (-4.36***)	-0.061 (-5.11***)	-0.014 (-0.78)	0.12 (1.85*)
Nearest Bus stop	0.011 (1.4)	0.011 (1.18)	0.02 (1.21)	0 (0)
Nearest Café	-0.039 (-4.26***)	-0.05 (-4.35***)	-0.022 (-1.19)	0 (0)
Nearest Convenience store	-0.003 (-0.31)	-0.009 (-0.78)	0.011 (0.57)	-0.063 (-1.16)
No. Restaurant in 1km	-0.056 (-3.84***)	-0.03 (-1.5)	-0.094 (-3.27***)	-0.405 (-3.61***)
No. Shopping in 1km	0.038 (2.21**)	-0.003 (-0.13)	0.113 (3.95***)	0.257 (2.46**)
No. tour sites in 1km	0.049 (3.03***)	0.053 (2.46**)	0.056 (1.73*)	0.128 (1.66*)
Host & Communication				
Superhost	0.08 (11.11***)	0.071 (7.95***)	0.13 (8.1***)	-0.038 (-0.9)
Multiple Listings	-0.03 (-3.8***)	-0.051 (-5.17***)	0.022 (1.25)	-0.03 (-0.6)
Number of Reviews	0.245 (34.38***)	0.26 (29.96***)	0.256 (15.24***)	0.311 (8.08***)
Number of Photos	0.052 (6.43***)	0.057 (5.58***)	0.023 (1.38)	0.152 (4.44***)
Response Rate	0.066 (6.17***)	0.083 (5.79***)	0.051 (2.51**)	0.047 (0.76)
Response Time	-0.055 (-4.95***)	-0.075 (-4.88***)	-0.021 (-1.02)	-0.044 (-0.8)
Instant Booking	0.147 (18.27***)	0.151 (14.62***)	0.141 (8.56***)	0.149 (3.29***)
Overall Rating	0.063 (6.92***)	0.079 (6.21***)	0.035 (2.02**)	0.027 (0.79)
Number of observation	12,203	8,500	3,241	462
F statistic	232.75	108.22	37.42	19.85
R <sup>2</sup>	0.4119	0.3528	0.2921	0.4872

\*\*\* Significant at 0.01 level (2-tailed), Robust Standard Error applied

\*\* Significant at 0.05 level (2-tailed), Robust Standard Error applied

\* Significant at 0.1 level (2-tailed), Robust Standard Error applied

### *Analysis of Property Attributes*

Accommodation sharing types (H1a~H1b) are significant at  $\alpha = 0.01$  level in the model (1), the result shows that private room sharing (H1a) and shared room sharing (H1b) significantly decrease the occupancy rate of accommodation sharing, compared to the entire house sharing as a base group. The mean of the occupancy rate of entire sharing is 63%, while the means of private room sharing is 45% and shared room sharing is only 33%. It means that guests have a strong preference for entire house sharing.

This model includes four housing types including apartment (base group), house, condominium, loft. Among the housing types, the house (H2a) and condominium (H2b) are significant at  $\alpha = 0.01$  level and the loft (H2c) is significant at  $\alpha = 0.05$  level at the model (1). It means the house has negative influences in the occupancy rate in comparison with sharing in apartments while sharing in condominium and loft have relatively positive influenced. The results find that property types are significant to the occupancy rate. However, many lofts, small apartments, and condominiums with one room for short-term rentals are prohibited in Korea.

Like model (1), entire house sharing in houses (H2a) have a negative impact, but entire house sharing in condominiums (H2b) and loft (H2c) have positive impacts on the occupancy rate, compared to apartment type, shown on the model (2). Private rooms sharing and shared room sharing on the model (3) and (4) shows that only condominium is significant at  $\alpha = 0.1$ . It shows that the guests who prefer to stay at entire house sharing are concerned more with housing type. The result supports the finding from the section 3.4.3 that the guests with entire house sharing mention much more house or apartment on their reviews while the guests with private and shared rooms mentioned rooms rather than the property itself.

According to the number of rooms, the study assumes that accommodation sharing provides the benefits for travelers with families and companions to stay at the same property with several rooms. The study finds that the number of rooms from one to three rooms compared to studio types is insignificant, but the properties with more than three rooms (H3d and H3e) are significant at  $\alpha = 0.01$ . It indicates that guests prefer independent units with travel companions prefer to stay at the property with various rooms, but the number of properties with more than three rooms is only 392 registered accommodations (2.3%), particularly in the case of entire room sharing. The types of private rooms and shared rooms are not significant because guests are concerned about the rooms they stay with the existence of the host.



The study includes the status of amenities such as kitchen, internet, breakfast, laptop computer and elevators (H4a~H4e), which are mentioned frequently on the guests' reviews. The availability of these amenities is significant at  $\alpha = 0.01$  in the model (1) and (2). The private room sharing shows only the availability of breakfast and computers are significant in the model (3). Unexpectedly, the study finds that the availability of breakfast has a significantly negative impact on the occupancy rate. The mean of the occupancy rate of accommodations without breakfast is 59% (14,502 accommodations), while the mean of the occupancy rate of accommodations with breakfast is 43% (2,493 accommodations). It could be explained that the small number of accommodation provides breakfast, and guests might choose regardless of breakfast availability. However, providing breakfast is no long attraction for guests although the current laws on homestays for foreigners allow the accommodation service with breakfast. This finding indicates that some qualifications for accommodation should ease to provide flexibility to hosts and their services.

#### *Analysis of Value Attributes*

The study estimates the effects of the average daily rate on occupancy rate and the average daily rate (H5) is significant at  $\alpha = 0.01$ . This study finds that price is a critical factor for guests to choose their accommodation. From the qualitative study in study 1, guests have not been frequently mentioned about the value attributes on the reviews, but this quantitative study finds the impact of price factor on occupancy rate is significant and provides an implication that the guests consider price factor significantly on their decision to choose the accommodations.

This study also tests whether the existence of additional charges such as security deposit, cleaning fee, and extra guest fees might differ the occupancy rate. The results show that the cleaning fee (H6b) is positively significant and the extra guest fee (H6c) is negatively significant at  $\alpha = 0.01$  in all model (1) ~ (4). Accommodation sharing with entire houses claims the sperate cleaning fee is 9,906 listings (86% of entire house sharing) as well as private room sharing (2,383, 49% of private room sharing) and shared room sharing (174, 23% of shared room sharing). The means of occupancy rate with cleaning fee is 62% and it is much higher than the mean without cleaning fee, 42%. It can be presumed that guests might expect neat and organized accommodations in spite of separately charged cleaning fees and the cleanliness (i.e. sanitation) is the second-largest cluster on the conceptual map of guests' reviews in the section 3.4.2 (Figure 3.4.1 and Table 3.4.3). The extra guest fee (H6c) is negatively significant at  $\alpha =$

0.01 in the model (1) ~ (4) and it explains that guests aware of the capacity of accommodation and they are unwilling to pay the extra guest fee if they can manage to stay together. The security deposit is insignificant. It indicates that guests would not be concerned about paying security deposits in advance because the amount of money will be returned if any unexcused cancellation and damages of properties.

#### *Analysis of Locational Attributes*

According to districts where registered accommodation sharing is located, accommodations in Yongsan (H7b), Jongno (H7d) and others (H7e) are significant at  $\alpha = 0.01$  and it indicates that accommodations located in Yongsan, Jongno, and other districts are less preferred than accommodations in Mapo. In the case of private room sharing, only Jongno and other districts are negatively significant in the model (3) and the districts of shared rooms are insignificant in the model (4). It is related to the number of accommodation sharing in each type of sharing and districts, shown in Table 4.5.2. The density of accommodation sharing in each district and the occupancy rates provides the implication that each municipality should have localized regulation and promotion strategies based on the density and business performance.

**Table 4.5.2. The Summary of Number of Accommodation and Occupancy Rate**

	Entire House		Private Rooms		Shared Rooms		Total	
	No.	%	No.	%	No.	%	No.	%
<b>Mapo</b>	3,114	68.04%	1,282	49.77%	302	39.71%	<b>4,698</b>	<b>61.23%</b>
<b>Gangnam</b>	1,913	58.74%	369	42.91%	65	26.11%	<b>2,347</b>	<b>55.34%</b>
<b>Yongsan</b>	1,478	60.78%	655	49.70%	110	28.95%	<b>2,243</b>	<b>55.98%</b>
<b>Jonggu</b>	1,268	67.87%	290	49.09%	43	41.73%	<b>1,601</b>	<b>63.76%</b>
<b>Jongno</b>	629	63.02%	393	42.83%	53	23.47%	<b>1,075</b>	<b>53.69%</b>
<b>Others</b>	3,059	59.71%	1,847	41.21%	195	29.45%	<b>5,101</b>	<b>51.85%</b>
<b>Total</b>	<b>11,461</b>	<b>63.03%</b>	<b>4,837</b>	<b>45.37%</b>	<b>768</b>	<b>33.40%</b>	<b>17,065</b>	<b>56.69%</b>

\* Others include 20 districts with a comparably smaller number of accommodations in Seoul, see Table 4.2.2.

The accessibility to accommodation sharing, the distance to the nearest subway station (H8a) is significant at  $\alpha=0.01$  in the model (1) and (2) and  $\alpha=0.1$  in the model (4), while the distance to the nearest bus stop (H8b) is insignificant. It explains that guests prefer to access easily to subway. This study also includes the locational information about café and convenience stores because the guests frequently mentioned in their review about their perceived convenience from easy accesses. However, the results show that the locations near café (H8c) are negatively significant in the case of entire house sharing and the distance to convenience stores (H8d) is insignificant. It means that the easy access to these facilities provide convenience, but do not affect guests' choices. The number of restaurants within 1km

(H8e) is negatively significant in the model (1), (3) and (4). It shows that guests less prefer to stay near areas of many restaurants because study 1 finds that guests mention negative reviews about crowded and noisy areas for nightlife and the smell of food. However, the number of shopping sites (H8f) and touristic sites are significant. The results posit that guests prefer accommodation sharing with easy accessibility and more available facilities such as shopping and touristic sites, but they tend to avoid staying near eatery areas with a higher number of restaurants and cafes.

#### *Analysis of Host & Communication Attributes*

The host characteristics and communication are critical factors to build trust in the P2P sharing economy. This study includes the status of superhost (H10a), the status of multiple accommodation hosting (H10b), number of reviews (H11) and photos (H12), response rate (H13a) and response time (H13b), as well as the possibility of instant booking (H14). All these listed factors are significant at  $\alpha = 0.01$  in the model (1) and the model (2). However, private rooms sharing in the model (3), super host, a number of reviews, and instant booking are significant at  $\alpha = 0.01$  and response rate is significant  $\alpha = 0.05$ . The shared room sharing in the model (3) shows the significance of a number of reviews and photos and instant booking only.

The findings also provide some implications that the status of being superhost and receiving more number of reviews become signals of trust-building on peer-to-peer transactions (Teubner, Hawlitschek, & Dann, 2017). Particularly, the number of reviews shows far significant with the large coefficient and it means that accommodations with a large number of reviews might attract to be chosen. It indicates that the number of reviews and the contents on the reviews influence guests' decisions and the result also supports the appropriateness of qualitative research by conducting a content analysis of reviews to figure out the characteristics of accommodation sharing from the reviews in study 1.

#### *Analysis of Overall Rating*

The overall rating which is evaluated the accommodation by the experienced guests (H15) is significant at  $\alpha = 0.01$ . As far as the platform provides the rating information, it would influence the guests' choice and differ the occupancy rate. Instead of including all the subcategories of evaluation, this study contains overall rating but conduct the separate regression of overall rating on the accuracy, communication, check-in, cleanliness, and value

in order to show which factor experienced guests improve the overall satisfaction at the following section.

#### 4.5.2. Analysis of Guests' Rating on Six Subcategories

After guests' staying, Airbnb sends the online survey via e-mail to all experienced guests and requests to evaluate the services in terms of six categories including accuracy, check-in, communication, location, sanitation (i.e. cleanliness) and value. The aggregated result for each accommodation displays on the property profile, so future guests might refer to the ratings on how already experienced guests evaluate hospitality. This study applies multiple regression to measure which attributes of accommodation sharing service influence in overall service evaluation after their experience of the accommodation.

The study finds the models significant at 0.01 level with  $F(6, 13,798) = 1,441.75$  ( $r\text{-square} = 0.7479$ ). Table 4.5.3 presents the results of the regression of overall rating on the rating of accuracy, check, communication, cleanliness, location, and value are all strongly significant at  $\alpha = 0.01$ .

**Table 4.5.3. Summary of Regression of Overall Rating on Six Subcategories of Rating**

Variable (Independent → Dependent)	Standardized Coefficient ( <i>t</i> -value-Sig)
Rating on Accuracy → Overall Rating (H15)	0.196 (11.64 ***)
Rating on Check-in → Overall Rating (H15)	0.042 (3.19 ***)
Rating on Communication → Overall Rating (H15)	0.112 (7.91 ***)
Rating on Cleanliness → Overall Rating (H15)	0.310 (22.56 ***)
Rating on Location → Overall Rating (H15)	0.044 (4.71 ***)
Rating on Value → Overall Rating (H15)	0.331 (19.46 ***)

\*\*\* Significant at 0.01 level (2-tailed), Robust Standard Error applied

According to the regression analysis of overall rating on the listed six categories, sanitation (i.e. cleanliness) and value are the most significant factors with high standard efficient. In terms of sanitation, it is consistent with findings from the regression of occupancy rate on the cleaning fee in Table 4.5.1 and the qualitative research in Figure 3.4.1 and Table 3.4.3. The guests highly value the quality of cleanliness even if they are charged additional cleaning fees. Although guests rarely mention price and words related to value attributes on their reviews, this study finds that price factors are strongly significant.

Location is significant with a relatively smaller coefficient than other attributes such as cleanliness, value, accuracy, and communication. It might be inferred that guests have difficulties to find the place at the first visit although the description of locations is explained on the property profiles. While study 1 finds that location is one of major reasons for negative

reviews, but the results in Table 4.5.3 show that guests concerned relatively less about locational attributes than other factors such as price, information accuracy, and cleanliness.

#### 4.5.3. Analysis of Attributes on Price of Accommodation Sharing

This study aims to find which determinants significantly influence the average daily rate of accommodation sharing. In order to compare the outcome from the regression analysis of performance (occupancy rate), the analysis of price determinants applies the same lists of independent variables including property, location, host and communication attributes, except accommodation sharing types and value attributes, because entire house sharing would be obviously more expensive than other types. The model (1) deals with all accommodation types as the aggregated model, the model (2) for entire house sharing, the model (3) for private room sharing; the model (4) for shared room sharing.

This study develops hypotheses for house types (H16), the number of rooms (H17), amenities (H18), district (H19), transportation (H20), location-related (H21), the status of super host (H22), number of reviews (H23), number of photos (H24), response rate and time (H25) and the status of instant booking (H26) and their impact on average nightly rate of sharing each accommodation.

**Table 4.5.4. The Results of Multivariate Regression of Price (Average Daily Rate)**

Independent variable → Dependent Variable : Average Daily Rate	Standard Coefficient $\beta$ (t-value-Sig)			
	(1) Aggregated	(2) Entire House	(3) Private Room	(4) Shared Room
Sharing Types				
Private room	-0.192 (-25.11***)			
Shared room	-0.129 (-23.66***)			
Housing Types				
House	0.024 (2.96***)	0.01 (1)	0.057 (2.55**)	0.006 (0.13)
Condominium	-0.016 (-2.82***)	-0.018 (-2.65***)	-0.011 (-0.75)	-0.05 (-1.01)
Loft	-0.008 (-1.47)	-0.012 (-2.09**)	0.043 (1.62)	-0.061 (-2.42**)
Number of Rooms				
One Room	0.038 (5.32***)	0.027 (3.57***)	0.089 (5.58***)	
Two Rooms	0.218 (23.33***)	0.239 (22.23***)	0.173 (6.51***)	
Third Rooms	0.341 (32.59***)	0.381 (32.49***)	0.095 (3***)	
Four Rooms	0.281 (21.25***)	0.313 (21.68***)	0.149 (2.37**)	
More than Four rooms	0.323 (10.79***)	0.385 (11.73***)	0.08 (1.41)	
Amenity				
Kitchen	-0.005 (-0.82)	0.004 (0.48)	-0.035 (-2.29**)	0.004 (0.12)
Wireless Internet	0.006 (0.82)	0.012 (1.33)	-0.046 (-1.91*)	0.024 (0.75)
Breakfast	0.027 (3.63***)	0.042 (4.01***)	0.066 (3.73***)	-0.011 (-0.26)
Laptop Friendly	0.003 (0.49)	0.012 (1.25)	-0.041 (-2.54**)	0.055 (1.2)
Elevator	0.097 (11.15***)	0.112 (10.62***)	0.071 (3.16***)	0.111 (1.62)
District				
Gangnam	0.105 (10.9***)	0.13 (10.82***)	0.054 (2.7***)	0.136 (2.4**)
Yongsan	0.012 (1.43)	0.018 (1.68*)	-0.008 (-0.44)	0.065 (0.64)
Junggu	-0.004 (-0.41)	-0.004 (-0.33)	-0.016 (-0.83)	0.016 (0.24)
Jongno	0.042 (3.2***)	0.049 (2.88***)	0.029 (1.05)	0.271 (2.43**)
Others	-0.077 (-10.26***)	-0.07 (-7.39***)	-0.149 (-6.46***)	-0.01 (-0.16)
Location				
Nearest Subway Station	0.027 (2.39**)	0.031 (2.16**)	0.045 (1.56)	-0.042 (-0.32)
Nearest Bus stop	-0.013 (-1.78*)	-0.017 (-1.9*)	0.002 (0.11)	-0.124 (-1.87*)
Nearest Café	-0.006 (-0.61)	-0.009 (-0.71)	-0.007 (-0.39)	0.204 (1.03)
Nearest Convenience store	0.01 (1.15)	0.033 (2.76***)	-0.045 (-2.3**)	-0.009 (-0.17)
No. Restaurant in 1km	-0.034 (-2.03**)	-0.049 (-2.25**)	-0.043 (-1.21)	-0.324 (-2.37**)
No. Shopping in 1km	0.046 (2.37**)	0.071 (2.7***)	-0.013 (-0.47)	0.136 (1.08)
No. tour sites in 1km	0.067 (3.49***)	0.069 (2.81***)	0.144 (3.55***)	0.106 (0.66)
Host & Communication				
Superhost	0.013 (1.85*)	0.022 (2.45**)	-0.011 (-0.57)	-0.017 (-0.33)
Multiple Listings	0.018 (2.39**)	0.02 (2.04**)	0.036 (2.7***)	-0.155 (-1.57)
Number of Reviews	-0.053 (-8.04***)	-0.044 (-5.62***)	-0.122 (-6.39***)	-0.054 (-1.09)
Number of Photos	0.062 (6.35***)	0.048 (4.64***)	0.165 (3.6***)	0.061 (1.31)
Response Rate	-0.045 (-3.5***)	-0.056 (-3.2***)	-0.027 (-1.66*)	0.042 (0.91)
Response Time	0.007 (0.55)	0.019 (0.99)	-0.016 (-1.06)	-0.057 (-0.88)
Instant Booking	-0.023 (-3.08***)	-0.03 (-3.09***)	-0.012 (-0.66)	0.019 (0.39)
Overall Rating	0.014 (1.43)	0.013 (0.94)	0.01 (0.45)	0.036 (1.12)
Number of observation	12,203	8,500	3,241	462
F statistic	193.07	103.00	17.54	2.98
R <sup>2</sup>	0.4515	0.4127	0.164	0.1775

\*\*\* Significant at 0.01 level (2-tailed), Robust Standard Error applied

\*\* Significant at 0.05 level (2-tailed), Robust Standard Error applied

\* Significant at 0.1 level (2-tailed), Robust Standard Error applied

### *Analysis of Property Attributes*

In terms of housing types, sharing in houses (H16a), condominium (H16b) and loft (H16c) tend to have a lower price than the base group of apartment. In the case of entire houses in the model (1), the type of properties between apartments and houses is insignificant. The types of condominium and loft negatively affect average daily rates at  $\alpha = 0.01$  and at  $\alpha = 0.05$ , respectively. In the case of private rooms sharing in the model (3), sharing in houses is

positively significant at  $\alpha = 0.01$ . In the case of shared rooms in the model (4), only sharing in lofts negatively affects the daily rate at  $\alpha = 0.05$ . According to the number of rooms, the properties with a larger number of rooms cost a higher price. In the case of shared rooms, it is only related to one room with various guests, while the case of private rooms is related to hosts' existence and guests concern the rooms where they stay found from study 1. The significance of the number of rooms in the model (2), hosts for private room sharing set a higher price of they provide large properties with more number of rooms, while guests of the private room sharing do not consider the number of rooms provided by hosts but consider the rooms where they stay. Table 4.5.1 shows that the impact of the number of rooms on the occupancy rate is insignificant for private room sharing. The providing breakfast significantly affects the daily average rate at  $\alpha = 0.01$  and causes an increasing daily rate but lower the occupancy rate in Table 4.5.4. The availability of elevators is positively significant at  $\alpha = 0.01$  in the case of the entire house and private room sharing.

#### *Analysis of Location Attributes*

The price and the districts of each accommodation sharing are highly related to real estate and housing markets. The outcome shows that accommodation in Gangnam (H19a) clearly has a higher price than Mapo (base group). Apart from five districts with a high density of accommodation sharing, the other districts have a lower price setting. For instance, in the case of entire house sharing in apartments, the mean of average daily rates in Mapo is 85.37, Gangnam is 114.56, Yongsan is 91.40, Junggu is 96.80, Jongno is 79.80 and others are 69.11. In the case of the private room sharing in apartments, the mean of the average daily rate in Mapo is 39.62, Gangnam is 57.87, Yongsan is 39.98, Junggu is 47.15, Jongno is 37.86 and others are 38.04. For both the entire house and private room sharing, sharing in Gangnam is distinctively expensive, because the price of the housing market is more expensive in Gangnam than in other districts (The Seoul Institute, 2012; Kim, 2015). It provides implication that the price of accommodation sharing is highly related to the price of housing and real estate.

According to other locational information, the location near subway (H20a) positively affect the price to stay at  $\alpha = 0.05$  in the model (1) and (2), but the distance to the nearest bus stop (H20b) negatively affect the price at  $\alpha = 0.1$  in the model (1), the model (2) and the model (4). It shows that the convenience to access the subway attracts guests, but the distance to the near the bus stops is not preferred by guests and negative factors for price-setting. The areas with numbers of restaurants (H21c) are negatively significant at  $\alpha = 0.05$ , in the model (1), model (2) and the model (4). The number of shopping sites within 1km (H21d) in the model

(1) and (2) significantly affect and the number of touristic sites within 1km (H21e) significantly affects in the model (1) ~ (3). The study finds that hosts establish higher prices for their accommodations which have easy accessibility to accommodation via subway and are located close to convenient facilities such as shopping and touristic sites.

#### *Analysis of Host & Communication Attributes*

The status of superhosts (H22a) positively affects the daily rate at  $\alpha = 0.1$  in the model (1) and  $\alpha = 0.05$  in the model (2). It means that the superhost causes a higher price in entire house sharing. The previous study also finds that the superhost status receives good reviews and ratings (Liang, Schuckert, Law, & Chen, 2017). It makes guests tend to stay more at the accommodations with superhot. The superhosts status and the number of photos provides economic values with price premium (Teubner, Hawlitschek, & Dann, 2017). The dummy variable of hosts with multiple listings (H22b) positively affect daily rate at  $\alpha = 0.5$  in the model (1) and the model (2) and at  $\alpha = 0.01$  in the model (3). It explains that the hosts with multiple listing would operate accommodation with business purposes and they set a higher price for the entire house and private room sharing. The number of reviews (H23) and response rate (H25a) are negatively significance at  $\alpha = 0.01$  in the model (1) ~ (3). It indicates that hosts with frequent and prompt communication tend to establish low daily rates, but accommodation sharing with a large number of reviews and prompt responses have a higher occupancy rate shown in Table 4.5.1. The number of photos (H24) is significant at  $\alpha = 0.01$ , and it infers that more photos of accommodation show the confidence of property quality and higher probability to attracts guests, so host put the higher price.

#### 4.5.4. Impacts of other accommodation sharing, hotel, and hostel on Performance

This study also evaluates how other accommodation around the accommodation sharing may have an influence on their performance. This study conducts regression of occupancy rate on the number of other registered accommodation sharing (H27), the number of hotels in 1km (H28a), the distance to the nearest hotel (H28b), the number of hostels in 1km (H29a) and the distance to the nearest hostel (H29b). This study finds that the number of other accommodation sharing within 1km (H27) is significant at  $\alpha = 0.01$ . For entire house sharing, the number of hotels within 1km (H28a) is significant at  $\alpha = 0.01$  and has a negative influence, whereas the private and shared room sharing has no impacts. The accommodation sharing near the number of hotels within 1km (H28a) or in the close distance (H28b) has a tendency for negative impacts on accommodation sharing. Particularly, the distance to the near hotel and



hostel has a negative impact on their occupancy rate among all accommodation types. Interestingly, the number of hostels (H29a) is positively significant for entire house sharing, while the distance to the nearest hostel (H29b) for private room sharing is negatively significant at  $\alpha = 0.01$ . The results of the model shown in Table 4.5.5 without control other variables indicate that the higher number of other registered accommodation sharing within a short distance is positively related to the occupancy rate of the accommodation sharing and can lead to cluster effects. Also, the distance and the number of hotels in a short distance shows the probable competition between entire house sharing and hotels. From the previous study, the increase in the number of accommodation sharing makes a decrease in the business profit to small and medium hotels (Zervas, Proserpio, & Byers, 2014).

**Table 4.5.5. The Results of Regression of Performance on the other accommodations**

Independent variable → Dependent Variable : Occupancy Rate	Standard Coefficient $\beta$ (t-value-Sig)			
	(1) Baseline	(2) Entire	(3) Private	(4) Shared
No. Other Airbnb in 1km	0.105 (12.13***)	0.114 (11.07***)	0.063 (3.78***)	0.294 (6.51***)
No. Hotel in 1km	0.014 (1.23)	-0.042 (-3.14***)	0.004 (0.17)	0.001 (0.02)
No. Hostel in 1km	0.046 (3.98***)	0.121 (8.95***)	0.017 (0.74)	0.056 (0.86)
Distance to Nearest Hotel	-0.106 (-11.02***)	-0.074 (-6.21***)	-0.068 (-3.76***)	-0.093 (-2.09**)
Distance to Nearest Hostel	-0.026 (-2.44**)	0.011 (0.83)	-0.053 (-2.63***)	0.064 (1.21)
Number of observation	17,065	11,461	4,836	768
F statistic	148.57	91.30	22.92	17.04
R <sup>2</sup>	0.0439	0.0372	0.0237	0.1003

※ this regression analysis above is conducted without control variables.

After controlling other variables from the main regression analysis from Table 4.5.1, the numbers of other registered accommodation sharing in 1km significantly affect the occupancy rate in the case of the aggregated accommodation sharing, sharing types of entire houses and shared rooms. However, the number and distance of hotels and hostels are not significant in the case of sharing types of entire houses and shared rooms. It indicates the business performance of accommodation sharing is somewhat related to the numbers and the distance to the nearest hotel and hostel but has not yet measured the significant impacts shown in Table 4.5.6.

**Table 4.5.6. Regression of Performance on the other accommodations by controlling other variables**

Independent variable → Dependent Variable : Occupancy Rate	Standard Coefficient $\beta$ ( <i>t</i> -value-Sig)			
	(1) Aggregated	(2) Entire House	(3) Private Room	(4) Shared Room
No. Other Airbnb in 1km	0.049 (4.1***)	0.063 (4.02***)	0.012 (0.5)	0.135 (2.32**)
No. Hotel in 1km	-0.005 (-0.33)	-0.012 (-0.6)	0.011 (0.35)	0.078 (1.02)
No. Hostel in 1km	0.008 (0.56)	-0.009 (-0.52)	0.075 (2.41**)	0.112 (1.49)
Distance to Nearest Hotel	-0.012 (-1.13)	-0.011 (-0.86)	0.01 (0.46)	-0.004 (-0.06)
Distance to Nearest Hostel	-0.032 (-2.63***)	-0.001 (-0.06)	-0.114 (-4.65***)	0.112 (1.08)
Sharing Types				
Private room	-0.188 (-17.58***)			
Shared room	-0.168 (-19.51***)			
Housing Types				
House	-0.028 (-3***)	-0.029 (-2.62***)	-0.017 (-0.9)	-0.005 (-0.1)
Condominium	0.03 (4.06***)	0.031 (3.44***)	0.028 (1.69*)	0.105 (2.16**)
Loft	0.014 (2.28**)	0.014 (1.74*)	0.028 (1.36)	0.055 (1.15)
Number of Rooms				
One Room	-0.001 (-0.05)	-0.004 (-0.28)	0.023 (1.04)	
Two Rooms	-0.015 (-1.37)	-0.025 (-1.73*)	0.029 (1.28)	
Third Rooms	0.019 (1.66*)	0.018 (1.16)	0.019 (0.97)	
Four Rooms	0.042 (4.11***)	0.048 (3.51***)	0.042 (1.67*)	
More than Four rooms	0.055 (4.85***)	0.082 (5.49***)	-0.023 (-1.02)	
Amenity				
Kitchen	0.024 (3.02***)	0.033 (3.17***)	0.009 (0.59)	0.07 (2.25**)
Wireless Internet	0.025 (2.79***)	0.032 (2.89***)	0.007 (0.4)	-0.015 (-0.33)
Breakfast	-0.084 (-9.97***)	-0.05 (-4.95***)	-0.13 (-8.3***)	-0.008 (-0.21)
Laptop Friendly	0.052 (6.45***)	0.045 (4.26***)	0.086 (5.36***)	-0.032 (-0.8)
Elevator	0.031 (3.3***)	0.042 (3.62***)	-0.019 (-0.93)	0.095 (2.03**)
Value				
Average Daily Rate	-0.238 (-10.4***)	-0.266 (-9.14***)	-0.208 (-6.1***)	-0.131 (-3.14***)
Additional Fees				
Security Deposit	-0.01 (-1.31)	-0.009 (-0.96)	-0.004 (-0.28)	-0.005 (-0.1)
Cleaning Fee	0.105 (11.12***)	0.084 (7.19***)	0.121 (7.32***)	0.126 (2.65***)
Extra Guest Fee	-0.049 (-6.45***)	-0.034 (-3.56***)	-0.052 (-3.29***)	-0.234 (-4.94***)
District				
Gangnam	0.022 (2.07**)	0.034 (2.39**)	-0.015 (-0.77)	-0.028 (-0.53)
Yongsan	0.004 (0.37)	-0.015 (-1.17)	0.053 (2.46**)	0.077 (0.78)
Junggu	0.022 (1.74*)	0.037 (2.18**)	-0.019 (-0.78)	0.021 (0.34)
Jongno	-0.008 (-0.68)	-0.003 (-0.17)	-0.032 (-1.18)	0.008 (0.12)
Others	-0.024 (-2.1**)	-0.027 (-1.84*)	-0.024 (-0.97)	0.015 (0.24)
Location				
Nearest Subway Station	-0.037 (-3.93***)	-0.059 (-4.93***)	-0.01 (-0.52)	0.098 (1.46)
Nearest Bus stop	0.005 (0.64)	0.006 (0.64)	0.016 (0.98)	-0.014 (-0.31)
Nearest Café	-0.028 (-2.99***)	-0.042 (-3.65***)	-0.002 (-0.12)	0.001 (0.02)
Nearest Convenience store	0.009 (0.93)	-0.003 (-0.26)	0.034 (1.74*)	-0.064 (-1.11)
No. Restaurant in 1km	-0.048 (-3.12***)	-0.019 (-0.94)	-0.091 (-3.14***)	-0.514 (-4.19***)
No. Shopping in 1km	0.022 (1.12)	-0.007 (-0.28)	0.074 (2.15**)	0.224 (2.19**)
No. tour sites in 1km	0.03 (1.78*)	0.038 (1.73*)	0.006 (0.17)	0.105 (1.26)
Host & Communication				
Superhost	0.08 (11.12***)	0.071 (7.95***)	0.133 (8.29***)	-0.037 (-0.87)
Multiple Listings	-0.036 (-4.51***)	-0.055 (-5.54***)	0.009 (0.52)	-0.032 (-0.65)
Number of Reviews	0.246 (34.41***)	0.26 (29.87***)	0.261 (15.42***)	0.314 (8.23***)
Number of Photos	0.051 (6.33***)	0.057 (5.63***)	0.022 (1.32)	0.145 (4.21***)
Response Rate	0.066 (6.15***)	0.083 (5.82***)	0.051 (2.54**)	0.039 (0.62)
Response Time	-0.055 (-4.93***)	-0.075 (-4.88***)	-0.021 (-1.04)	-0.046 (-0.79)
Instant Booking	0.144 (17.89***)	0.149 (14.32***)	0.135 (8.23***)	0.153 (3.37***)
Overall Rating	0.063 (6.89***)	0.078 (6.18***)	0.034 (1.94*)	0.024 (0.75)
Number of observation	12,203	8,500	3,241	462
F statistic	207.92	96.18	34.32	18.47
R <sup>2</sup>	0.4142	0.3545	0.3027	0.4948

\*\*\* Significant at 0.01 level (2-tailed), Robust Standard Error applied

\*\* Significant at 0.05 level (2-tailed), Robust Standard Error applied

\* Significant at 0.1 level (2-tailed), Robust Standard Error applied

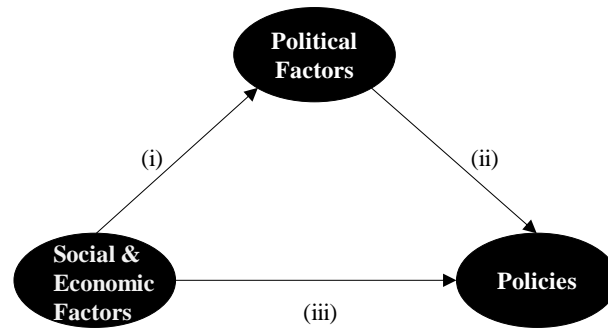
## **V. Study 3: Quantitative Research using Primary Data**

This study includes individuals' perceptions of public policies by using primary data, obtained via online surveys. This study 2 investigates how negative and positive factors obtained from studies 1 and 2 significantly influence the perceived necessity of policy reactions through their attitudes toward accommodation sharing. This study aims to provide critical messages to policymakers in which policy instruments can be effectively delivered to citizens and improve the reliability of accommodation sharing.

### **5.1. Literature Reviews: Policy Reaction based on Policy Make Process**

This study investigates whether various positive and negative factors determine the overall attitudes of individuals and whether the attitudes influence policy reactions. According to the attitude, Allport (1935) describes the attitudes are mental and neutral states of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to the related objects and situation. The attitudes can be driven by self-related concerns, and this self-view may cause changes in their attitudes to align or deviate from positive and negative groups (Wood, 2000). The self-determination theory can explain that the level of self-determined motivation and their attitudes influences their choice of actions (O'Hara, 2017; Cherry, 2019). Therefore, the proposed positive and negative factors of accommodation sharing determine the individuals' attitudes toward accommodation sharing by applying the self-determination theory. Moreover, the level of positive or negative attitudes might influence their perceived needs of policy reactions.

With traditional views of policy determinants studies, political, social and economic factors influence policymaking. In 1982, Gordon Adams stated the iron triangle to describe the policymaking based on the relationship among congress, bureaucracy, and interest groups and it may replace political factors, social and economic factors, and policies in this study, shown in Figure 5.1.1. This study assumes social and economic factors would impact on policies directly (iii) or indirectly through political systems (i) and (ii). In the case of accommodation in this study, the perceived social, economic or environmental factors by individuals can motivate political actions. For instance, the increasing business opportunities of accommodation sharing in the tourism industries make politician supports legalization and acceleration of accommodation sharing, but the complaints of residents in the communities and risks of gentrification push them to establish a certain level of regulations. Also, these factors may directly influence government regulations.



**Figure 5.1.1 Policy Determinants Studies and its System**

Source: (Namkoong, 2008; Lewis-Beck, 1977)

This study continues to investigate the individuals' perception of policy necessity by applying the process of policy. Various scholars study the process of policymaking. Lasswell (1971) firstly formulates and includes knowledge in the process. Anderson (2003) also suggests the conceptual framework for each stage of the policy process from identifying problems and government agenda, preparing alternatives to solve the problem, adapting and implanting a policy, and evaluate the effects of the policies. Jones (1984) proposes eleven steps of the policymaking process and assumes that the changes of participants in the policy may need to start from the new policy. Jones' model helps to understand the policy process over time flow. There are other models for policymaking, and the models attempt to generalizing the policymaking process, but the policy making process is required to be modified to utilize in this study of accommodation sharing.

**Table 5.1.1. Policy Making Process by various scholars**

<b>Lasswell (1971)</b>	<b>Anderson (2003)</b>	<b>Jones (1984)</b>
Intelligence Promotion Prescription Invocation Application Termination Appraisal	Identification Formulation Adoption Implementation Evaluation	Perception/Definition Aggregation Organization Presentation Agenda Setting Formulation Legitimation Budgeting Implementation Evaluation Adjustment/Termination

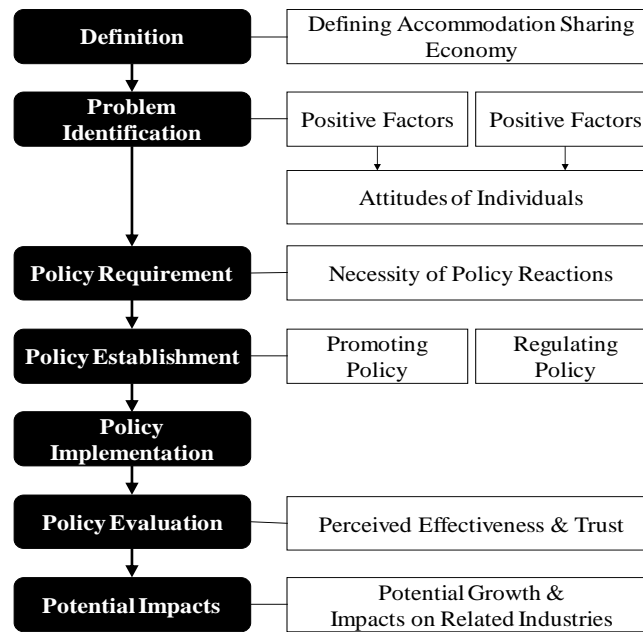
In Korea, the current laws for homestays should be revised for including accommodation sharing as legal forms of hospitality service and be established appropriate policies and regulations. This study applies the policy making procedure because accommodation sharing business is rapidly expanded, some current laws have conflicts against accommodation sharing, and policies and regulations are required to secure to use

accommodation sharing for both hosts and guests, and to minimize negative impacts on traditional accommodation businesses. Based on the policy making procedure, this study attempts to investigate how individuals perceive the necessity of policies and regulations.

The procedure of policymaking is required to modify based on individual perceptions of policy reactions. The proposed model for this study starts by defining accommodation sharing as a new business trend. According to the definition, individuals recognize transactions of accommodation sharing and the expected benefits and concerns. The perceived positive and negative attributes change the overall attitudes toward accommodation sharing. After recognizing the problems or issues motivates individuals to form policy reactions. Based on the needs of policy, the government prepares various policy instruments. Policy instruments can be classified based on the types of resources such as information, authority, treasure, formal organization (Hood, 1986); direct or indirect tools in terms of activity such as direct government, social regulation, economic regulation, contracting, grant, direct loan, loan guarantee, insurance, tax, and more (Salamon, 2002); types of coercion including distributive, regulative, constituent and redistributive policies (Lowi, 1972). However, this study divides the instruments into two groups based on the purpose, such as promoting advantages and regulating disadvantages.

There are a few previous studies on land planning of affordable housing markets by conducting spatial analysis in terms of distributions and density of accommodation sharing or theoretical analyses on laws on customer protections. Lack of studies on policies based on individual perception, this study investigates individual perception and policy reactions by applying the concept of the policy making process because the sharing economy highlights the peer participation and individuals such as hosts and guests in accommodation sharing should aware and understand about laws and regulations. The proposed positive and negative aspects from studies 1 and 2 as well as previous studies change attitudes toward accommodation sharing and motivate the government to establish various policies and implements. In Korea, the policies have not been established yet, so this study surveys the perceived effectiveness of each policy instrument and the improvement of trusts, instead of evaluating the direct impacts of each policy instrument. This study demonstrates the proposed policy procedure in Figure 5.1.2.

**Figure 5.1.2. Proposed Policy Procedure and the Case of Accommodation Sharing**



Based on the proposed policy procedure above, this study aims to ask perceptions of each step to citizens how they think about the positive or negative factors from accommodation sharing, their overall attitudes, their perception of policy requirements, expected effectiveness of policy instruments and finally the future of accommodation sharing.

## 5.2. Hypotheses Development

The purpose of study 3 is to investigate how the perceived positive and negative aspects of accommodation sharing increase the perceived necessity of policy reactions via attitudes. The proposed positive and negative factors have been extracted from studies 1 and 2 using qualitative and quantitative secondary data such as reviews and transactional information of Airbnb. Some of the variables such as price or additional fees from previous researches. Table 5.2.1 summaries how perceived positive and negative factors are developed by finding from studies 1 and 2 and proposed policy reactions from study 4.

**Table 5.2.1. Development of Measurable Attributes from studies 1, 2 & 4**

Study 3	Study 1 & 2	Study 4
<b>Economic Factors</b>	Guests expect a lower price to stay. The regression analysis shows that the increase in price tends to lower the occupancy rate.	<p>The lower price might have negative impacts on existing accommodation businesses, so the government proposes to provide financial support.</p> <p>The additional income for hosts is related to tax issues.</p>

<b>Social Factors</b>	<p>The reviews show the guests with private room sharing have more interaction with hosts and guests.</p> <p>Superhosts and better communication with high response rates and shorter response times are positively significant.</p>	The laws on accelerating sharing economy in 63 municipalities in Korea intend to promote the sharing economy and sharing culture in the communities by maximizing the utilities of resources and communication with local residents.
<b>Cultural Factors</b>	The reviews mention the experiences of tours related to cultural experience, and different housing is part of the experience, such as staying traditional houses.	Accommodation sharing in Korea is a type of homestay. Homestays provide cultural experiences by providing food and accommodations, especially traditional breakfast.
<b>Community Benefit</b>	<p>Guests mention their experience of using local markets, shops, café and more.</p> <p>⇒ It infers that the inflow of guests in the community foster local business.</p>	n.a.
<b>Safety &amp; Security</b>	One of the risk factors from negative reviews. For example, guests mention that they feel insecure while walking in the areas at night. Also, without hosts' existence, they face embarrassed problems related to heating or water systems.	The government provides guidelines but requires the importance of self-regulation, because the laws and regulations of homestays are not the same as other hospitality businesses such as hotels. For instance, for fire protection, homestay should prepare fire detectors and fire extinguishers and check on inspection during the registration.
<b>Sanitation</b>	<p>Sanitation is one of the major factors of accommodation sharing on the reviews and negative reviews.</p> <p>The impact of price on performance, the cleaning fee positively affects performance, and it means guests expect clean accommodations despite paying additional fees.</p>	<p>In Korea, accommodation sharing such as homestays has not applied Public Health Control Act.</p> <p>Based on guidelines, hosts have a responsibility to maintain a reasonable condition of cleanliness and hygiene.</p>
<b>Information Asymmetry</b>	Guests fully depend on the description on the platform, so they negatively experienced when the information is different from the information such as description and photos on the platform. (e.g. direction, distance to accommodation)	<p>Governments mandate that the platform should update ID verification and operate registered accommodations.</p> <p>Also, the government requests transactional data and hosts information.</p> <p>In the case of unregistered accommodations, the government imposes high penalties.</p>
<b>Inconvenience related to Property</b>	<p>Location is also an important factor in accommodation sharing because most houses are located in residential areas.</p> <p>Guests concerns housing types, the available facilities. There is a number of complaints about property and locations.</p>	<p>In Korea, entire house sharing is not permitted under the laws on homestays under the Tourism Act, and one-room types such as officetel are prohibited under the Building Act.</p> <p>In various counties, multiple dwellings such as apartment are strictly regulated (prohibit multiple dwellings class A in New York, required separate entrances for guests in Portugal)</p>
<b>Community Disadvantage</b>	n.a.	<p>In order to minimize the adverse effect on the community such complaints from neighbors, increasing rentals in the local housing market and gentrification, so appropriate laws and regulations are required.</p> <p>(e.g. 'two strikes and you're out' policy in Australia and 'good neighbor' rule in Vancouver)</p>
<b>Promoting policies</b>	n.a.	Based on local ordinances in Korea, governments publicize various sharing

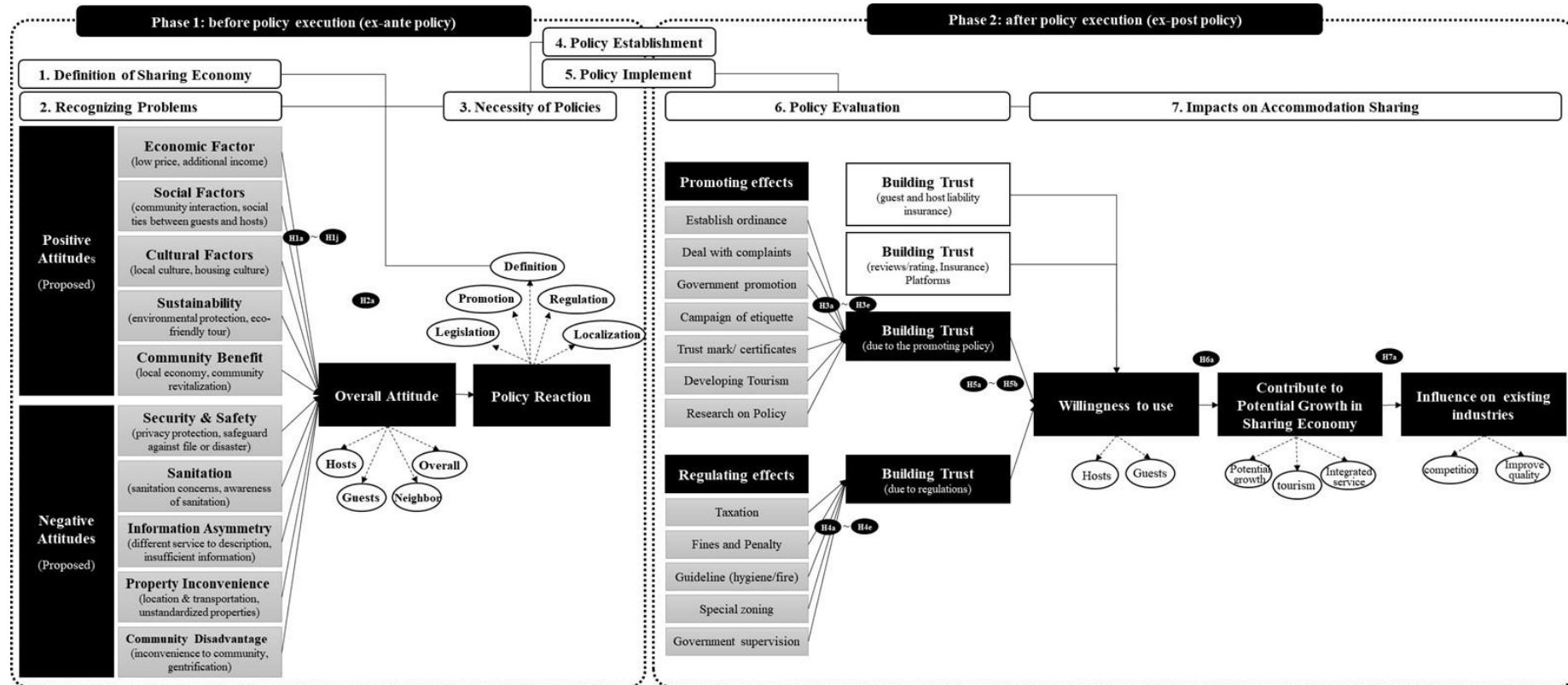
		activities and can operate the supporting center and committee to help and supervise sharing activities.
<b>Regulation policies</b>	n.a.	There are many laws and regulations in order to protect existing business, local housing and community cultures, such as imposing tax and penalties, or special zoning.
<b>Potential growth and Impact on existing business</b>	The number of registered accommodation sharing on the platform shows dramatic increases. (3,325 in 2015 to 71,970 accommodations in 2018) The increasing number of entire house sharing compete with hotels and the shared room and private room sharing compete with the nearest hotel and hostels.	In order to minimize damages to the existing accommodation business, the government in Korea proposes administrative supports to small sizes of accommodation businesses such as tax exemption for employee income.

Note: Study 3 includes sustainable factors and community benefits and disadvantages based on the definition of sharing economy in the research model. Policy reaction and trust-building and willingness to use are included to measure the impacts due to accommodation sharing based on the proposed model shown in Figure 5.2.1.

The design of study 3 is followed by the procedures of policymaking. This study 3 designs with two phases. Phase 1 focuses on identifying issues and policy reactions. The phase 1 examines how the proposed positive and negative aspects of accommodation sharing influence overall attitudes of individuals and how their attitudes influence the necessity of policy reaction. Phase 2 mainly discusses established policies and the expected impacts, so the phase 2 measures how the perceived effectiveness of policy instruments affects the trust-building and continue to examine the impact of trusts on willingness to use, the impact of willingness to use on potential growth and the impact on existing industries (Figure 5.2.1).



Figure 5.2.1. Framework for Relationship of Positive & Negative Factors, Attitudes, Policies, Trust-Building of Accommodation Sharing



### 5.2.1. Phase 1: Hypotheses on perceptions before policy execution

Many studies attempt to measure how individuals have own feelings or attitudes toward the sharing economy. Kim, Yoon, and Hangjun (2015) study that how reputation, social presence, benevolence, social benefit, economic benefit, and epistemic benefit might motivate people to participate in sharing economy. In the case of accommodation sharing, Guttentag, Smith, Potwarka, and Havitz (2018) study how factors including interaction, home benefit, novelty, sharing an economy, and local authenticity motivate guests to choose Airbnb. Ivanova (2017) categorizes stimulating factors and limiting factors of the sharing economy, particularly the collaborative consumption. Camilleri and Neuhofer (2017) stated that positive elements lead to value co-creation, but negative elements can cause co-destruction. This study includes both expected positive and negative factors to investigate the overall attitudes of individuals toward accommodation sharing because positive factors may facilitate the sharing economy, but negative factors may threaten the sharing economy.

#### *The Effects of Positive Factors on Overall Attitudes*

The positive factors for study 3 including economic, social, and cultural factors are developed from the findings of review analysis and the analysis of attributes on business performance of accommodation sharing. Also, study 3 includes sustainable factors as a key characteristic of sharing economy by improving the usages of idle assets and service. The study includes community benefits because this study emphasizes the roles of community when defining the sharing economy.

The sharing economy would be expected to provide significant economic benefits to users. Bivens (2019) stated that, for the guests' perspective, many travelers expect to have lower cost accommodations and for the host perspective, hosts expect extra income from own properties to live or owns. With the needs from both demand and supply, accommodation sharing platform such as Airbnb provides relatively lower-priced accommodation. Guttentag, Smith, Potwarka, and Havitz (2018) find that the lower cost is the most significant motivating factor to decide the accommodation. Therefore, accommodation sharing expects an economic benefit to both guests and hosts. The study attempts to measure how economic factors may influence overall attitudes toward accommodation sharing.

**H1a:** The perceived economic factors (price, additional income) affect overall attitudes toward accommodation sharing.

Accommodation sharing has the opportunity to communicate with hosts and to meet neighbors who live at the next door. These interactions provide a chance of socialization, such as meeting new people, building relationships, and becoming a part of the community (Tussyadiah, 2016). Many studies find that accommodation sharing would provide opportunities for travelers to interact with hosts and local people during their staying (Guttentag, Smith, Potwarka, & Havitz, 2018; Heinrichs, 2013; Kim, Yoon, & Hangjun, 2015; Paulauskaite, Powell, Coca-Stefaniak, & Morrison, 2019). Furthermore, the platform facilitates a socially connected relationship between hosts and guests (Lampinen & Cheshire, 2016; Schor & Attwood-Charles, 2017) and it eventually builds an online community. For instance, hosts and guests update their profiles and write many comments about their experience. Often the guests become hosts, and the hosts may be future guests. Therefore, this study includes social factors and measures how social factors may influence overall attitudes toward accommodation sharing.

**H1b:** The perceived social factors (interaction with local residents, social ties between guests and hosts) affect overall attitudes toward accommodation sharing.

Travelers expect unique experiences in authentic settings because the guests are willing to have the enjoyment of cultural traits in the local community (Tussyadiah & Pesonen, 2016). Finley (2013) addresses that the experience of local culture could be one of the major reasons to choose accommodation sharing over comparable hotels. To access home-made meal, or guided tours by local people can be the part of the purchase of cultural commodities, and the cultural consumption is highly associated with participation in local culture (O' Regan & Choe, 2017). Airbnb advertises that guests can experience unique local housing experience. For example, guests can stay a night at the old mansion with French windows in Paris or experience the traditional house with floor heating in Korea, so-called Ondol in Hanok. Therefore, this study focuses on the experience of local culture and local housing culture and the impacts on overall attitudes.

**H1c:** The perceived cultural factors (local culture, local housing culture) affect overall attitudes toward accommodation sharing.

Facilitating the use of idle assets is one of the substantial advantages of the sharing economy. Hamari, Sjöklint, & Ukkonen (2016) find that sustainability significantly affects attitudes but not directly affect behavioral intention. The use of idle assets at a lower price is sufficient to attract people in the sharing economy and brings a strong perception of sustainability of the sharing economy (Tussyadiah, 2016). Airbnb (2019) states that they have

4.5 million guests check-in at eco-friendly listings on the platform. Based on the internal data of Airbnb, Airbnb provides chances for guests to access eco-friendly travel. Therefore, this study hypothesizes that the sustainable factor affects the overall attitudes.

**H1d:** The perceived sustainability (usage of the idle resource, eco-friendly tourism) affect overall attitudes toward accommodation sharing.

This study proposes that accommodation sharing may foster the local economy and revitalize the community due to the increased floating population of accommodation sharing. Levendis and Dicle (2016) estimate the significant economic impact in terms of three effects, including i) direct effects of spending on rent, food and beverages, transportation and others, ii) indirect effects of increasing purchase to meet the increasing demands, and iii) induced effects for local income repeatedly responding inside local community. For instance, the guests eat at the local restaurants or buy things from the local vendors. Hosts and local vendors can generate additional income and spent more within the communities. Accommodation sharing strongly ties between local businesses (Birinci, Berezina, & Cobanoglu, 2018). Therefore, this study examines that the perceived community benefit may influence the overall attitudes toward accommodation sharing.

**H1e:** The perceived community benefit (local economy, community regeneration) affect overall attitudes toward accommodation sharing.

#### *The Effects of Negative Factors on Overall Attitudes*

The negative factors are developed from the negative review analysis. The negative reviews are classified with accuracy, communication, host, location, property, sanitation, and security. Study 3 includes the proposed negative factors including safety and security, sanitation, information asymmetry, property-related inconvenience, and community disadvantages. In particular, as community benefit for positive factors, the expected community disadvantages are included for negative factors of accommodation sharing.

Birinci, Berezina, and Cobanoglu (2018) find that people have strong concerns about safety and security risk of accommodation sharing, compared to hotel services. Schor (2016) also mentions that the sharing economy has a chance of dealing with unsafe products. For example, a family from New Zealand experienced that they were secretly filming with a hidden camera by the Airbnb host in Ireland in 2019 (Rogan, 2019; Mettler, 2019). Guests may be exposed to the risks of violence or accidents such as fire or disaster. Among 120,691 Airbnb hosts in 16 U.S. cities, 80 % of Airbnb hosts have smoke detectors, 57.5% have Carbon

Monoxide detectors, 42% have fire extinguishers, and 36% have first-aid kits (Kennedy, Jones, & Gielen, 2019). Safety deficiency-related issues make people are concerned with the safety and security of accommodation sharing, and the necessity of regulations. Therefore, this study includes the safety and security factors and test how to affect the overall attitudes of individuals.

**H1f:** The perception of security and safety (privacy invasion, risks of violence, fire or disaster) affects overall attitudes toward accommodation sharing.

Sanitation is an important attribute to evaluate the accommodation because sanitation and hygiene are highly related to the service quality of hospitality service (Zemke, Neal, Shoemaker, & Kirsch, 2015). Cleanliness is one of the factors of service evaluations to experienced guests after their stays at the Airbnb accommodations via platforms. Bridges and Vásquez (2018) show that 15% of all complaints are related to cleanliness as well as 48% related to discomfort and 21% related to communication. This study also analyzes the negative reviews and sanitation is the third-largest complaint among seven factors, including security, property, location, host, communication, accuracy, and sanitation. These studies show how the inappropriate cleanliness may cause a negative impression of accommodation sharing, so this study also includes sanitation to measure the impacts on overall attitudes.

**H1g:** The perception of sanitation (concerns, awareness of hygiene, and cleanliness) affects overall attitudes toward accommodation sharing.

The sharing economy had issues of information asymmetry due to insufficient information or a discrepancy between the online description and actual service. Mavlanova, Benbunan-Fich, and Koufaris (2012) state that E-business faces to the information asymmetry because buyers cannot physically check the quality of products before purchasing and be difficult to access trustworthy sellers based on the communication via the platform. According to accommodation sharing, Finley (2013) identifies the risk that photos, descriptions, and locations of the accommodations on the platform might be inaccurately presented, compared with actual service. Information related to product attributes such as location, or space and host attributes such as appearance, or reputation may affect guests' purchasing decision making (Ert, Fleischer, & Magen, 2015). Therefore, this study examines how the risk of incorrect or insufficient information influences the overall attitudes of people toward accommodation sharing.

**H1h:** The perception of information asymmetry (incorrect or insufficient information) affects overall attitudes toward accommodation sharing.

The risk of product performance means that the purchased product might not meet the expectation level (Birinci, Berezina, & Cobanoglu, 2018). Such risk may be caused by the lack of hospitality standards of the P2P accommodation sharing services (Finley, 2013). The analysis of reviews shows that the majority of complaints are related to inconvenience to access property and locations. Many of the accommodations are located in residential areas with fewer tourist infrastructures such as public transportation, parking, or waste disposal (Ki & Lee, 2019). The awareness of expected inconvenience due to location and transportation can differentiate the attitudes of guests. Also, guests might face challenges to compare available accommodation because accommodation sharing provides different housing types and amenities at different rates of accommodations. This study examines whether the inconvenience may change the overall attitudes.

**H1i:** The perceived inconvenience of property (inconvenient location and transportation, unstandardized property) affects overall attitudes toward accommodation sharing.

The influx of many tourists into residential communities might cause inconveniences such as noise and traffic congestion and these communities may face a rise in rental fees for long term residence. In Barcelona, Martín Martín, Guaita Martínez, and Salinas Fernández (2018) find the evidence that local community struggle problems due to the increasing number of tourists, such as lack of of rentals, the disrupted traditional lifestyle, noises and insecurity, drug and alcohol consumption, more waste generation, environmental deterioration, or overuse of resources. Yrigoy (2016) explains that the average Airbnb price is much higher rental price in the non-touristic rental market of Palma's old quarter in Spain. The problems of the local housing market may result in gentrification for local residents to leave the area. Wachsmuth & Weisler (2018) provide evidence that short-term rentals are implicated in tourism led-gentrification, without redevelopment in the communities by conducting spatial analysis in New York. This study includes community disadvantages such as complaints due to inconvenience to local residents and gentrification. While this study measure how the perceived community benefit as a positive factor of accommodation sharing (H1e) affect individuals' attitude toward accommodation sharing, this study also investigates how the perceived disadvantages in the local communities might have an impact on the overall attitudes toward accommodation sharing (H1j).

**H1j:** The perceived community disadvantage (complaints, gentrification) affects overall attitudes toward accommodation sharing.

### *The Effects of Overall Attitudes on the Necessity of Policy Reactions*

This study questions how the attitudes of individuals increase the perceived necessity of policy reactions by considering both expected negative and positive factors of accommodation sharing. In the study of alcohol policy in Norway, Saglie (1996) discusses that social and cultural changes shape new attitudes among local politicians and citizens with a mixture of protest and support, and these public opinion leads partly policy-shaping and partly shaped by policy. Particularly, regarding vacation rentals platforms, Martín Martín, Guaita Martínez, and Salinas Fernández (2018) analyze that the attitude of the citizens towards tourism and direction for public policies would become worse due to the perception of negative impacts of accommodation sharing, so public policies are required in order to protect local communities, as well as boosting tourism business.

This study discusses that accommodation sharing causes social, cultural, and business changes. The changes affect individuals' perceptions to support or oppose accommodation sharing. The public opinions based on individuals' perceptions motivate policy implementation to maximize the benefits of accommodation sharing and minimize harms to society. Kim (2017) states that the sharing economy could show stable growth based on the institutional framework by controlling the risk factors and contribute to generating social benefits. Therefore, this study includes both promoting and regulating policies. For instance, the Japanese government expects Japan's regional revitalization by promoting tourism, including private house-sharing service (i.e. minpaku) but prepares regulations to secure safety and hygienes of private house-sharing and to prevent nuisance to neighbors (Shinohara, 2018).

**H2:** The attitudes affect the perceived necessity of policy reactions of accommodation sharing.

#### 5.2.2. Phase 2: Hypotheses on expected policy effects after policy execution

This study measures the perceived effectiveness of proposed policy instruments related to promoting and regulating policies. It also discusses how the effectiveness improves trust-building by the policy instruments. According to the classification of policy instruments, this study applies two categories with promotion and regulation. The promoting policies include the enactment of the relevant promoting ordinance, operating a dedicated team to deal with inquiries or complaints, campaigns for hosts and guests' etiquette, trust mark or certificates, the introduction of tourism-related products in unpopular area and policies based on research. The regulation policy includes taxation, fines and penalty, establishment and compliance of safety guidelines, special rules for overheated areas and government controls

for registration or compliance with the guidelines. Based on the promoting and regulating policies, this study mainly focuses on how policies might contribute to trust-building because trusts are the core of the key essence of sharing economy. Based on the survey by Korea Institute for Industrial Economics and Trade (KIET), the study finds that the most significant reason for not participating in sharing economy is a lack of trust (Park, Kim, Ko, Lee, & Lee, 2016). Therefore, this study investigates which policy instruments are more effective to improve trust in accommodation sharing.

### *The Effects of Promoting Policy on the Trust Building*

Appropriate legislation ensures the legal certainty of the sharing economy and provides guidelines for promoting. The legislation should contain characteristics of P2P service providers, which substantially differ from traditional providers because the sharing economy and its platforms cannot comply with the existing regulatory framework (Katz, 2015). In the case of accommodation sharing in Korea, many of the registered accommodations on the platforms are placed into the grey area under the current laws. Hotel industries claim that a large portion of accommodation sharing is illegal transactions under the regulations on homestays. Without a proper legal background, service users and providers become confused and lose their confidence in participating in the various types of sharing economy. Therefore, the legislation clarifies the legality of sharing economy and provides legal backgrounds for governments to support the sharing economy startups as innovative growth engine industries. Kim (2017) also emphasizes the institutional framework to support the stable growth of the sharing economy. This study includes the individual perception of enacting a local ordinance to promote the sharing economy and develops a hypothesis that the perceived effectiveness of legislation influences trust-building.

**H3a:** The perceived effectiveness of the ordinance affects the trust-building of accommodation sharing.

Introducing dedicated teams or departments for a new business or social issue is a policy instrument to show the competence of government policy initiatives. The city of San Francisco establishes the office of short-term rentals. The office helps to deal with inquiries or reported public complaints about short term rentals. Also, in New York, the office of special enforcement provides information about short-term rentals for hosts, guests, and neighbors on the website. Japanese government opens the portal website for private lodging and help hosts, guests, platforms, and administrators of accommodation sharing. These government efforts



might stabilize accommodation sharing in the society and decrease the risks of illegal transactions. This study hypothesizes that how individuals perceive the effectiveness of having a dedicated team in the government and the perceived effectiveness may affect the trust-building of accommodation sharing.

**H3b:** The perceived effectiveness of having a dedicated team to deal with inquiries and complaints affects the trust-building of accommodation sharing.

Governmental public relations would improve the trust in policies, rather than introducing specific brands or companies of sharing economy business. Publicizing sharing economy promotes the purpose of sharing activities, the economic benefits, and social values and also helps stabilize the legal terms of the sharing economy. For instance, the Seoul Metropolitan Government addresses a sharing city in 2012, holds several conferences on the sharing economy, and provides information and lists of sharing economy startups on the website, 'Sharehub,' and publishes casebooks. This governmental PR attracts citizens to participate in the sharing economy. Kang (2017), a researcher in the Gyeonggi Research Institute, also suggests improving perceptions of citizens, public officers, and business operators by strengthening the functions of public relations. Therefore, this study examines how the effective government's publicizing would affect the trust-building of accommodation sharing.

**H3c:** The perceived effectiveness of government publicizing affects the trust-building of accommodation sharing.

The sharing economy among peers provides idle resources without transferring ownership, but with temporary accessibility. However, the unpleasant situations are often reported in the media, such as hosts without proper services or guests with careless uses. Although most sharing activities are the transactions between individuals, campaigns for etiquette might foster the spirits and manner of sharing and decrease damages or conflicts. Governments have already adopted many campaigns such as anti-smoking, personal hygiene, and safe driving, so campaigns for respectful behaviors of sharing service to other individuals would be required. In the case of bike-sharing, local governments ask the public etiquette to users of bike-sharing 'ttaleung-i.' This study examines the relationship between the effectiveness of government campaigns and the improvement of trust in accommodation sharing among peers.

**H3d:** The perceived effectiveness of government campaigns for hosts and guests' etiquettes affects the trust-building of accommodation sharing.

The trust marks or certificates can be one of the governments' methods to build trust in accommodation sharing. The city of Seoul designates the lists of sharing enterprises or organizations on the website, 'Sharehub.' In Japan, the Sharing Economy Association Japan (SEAJ) provides an official sharing economy trust mark to certified sharing services by applying the model formulated by the Cabinet Secretariat IT Strategy Office. The trust mark or certificate by governments or accredited institutions enable individuals to access reliable sharing service. This study questions how trust marks or certificates become trustworthy to citizens and link to the impact on trust-building of accommodation sharing.

**H3e:** The perceived effectiveness of trust marks or certificates by the government or the accredited institutions affects the trust-building of accommodation sharing.

Governments become enthusiastic about developing regional businesses. For an example of business cooperation between a local government and Airbnb, the city of Samcheok in Korea has MOU to develop global tourism content (Kim, 2019). Airbnb could contribute to improving accessibility for travelers to unpopular places among guests. The government could facilitate the local tourism business by utilizing natural tourist attractions and local infrastructures. Also, local governments initiate integrated services to combine various sharing services such as public transportation, accommodation sharing, and bike-sharing. People expect that government initiative programs might be more reliable. Therefore, this study measures how effective tourism products by government initiatives may improve the trusts in accommodation sharing.

**H3f:** The perceived effectiveness of developing tourism-related products in unpopular areas by local governments affects the trust-building of accommodation sharing.

Research data or outcomes may help to comprehend benefits or disadvantages for both existing industries and startups for the sharing economy. When mobility startups such as Uber or Tada and taxi driver associates have severe conflicts, both parties insist on their damages without accurate data. The hotel industry claims that the increasing number of accommodation sharing threaten their business. In the case of accommodation sharing, some city governments include the law clause for platform providers have a responsibility to provide information including the name of the hosts, the business registration numbers and their transactions of accommodations, and other related information. In order to establish proper policies, governments should monitor business trends based on data and conduct various data-driven researches. Kang (2017) proposes that the government needs to develop a performance

evaluation index and support social and environmental impacts of sharing economy for government policymaking to accelerate the sharing economy in society.

**H3g:** The perceived effectiveness of implementing policies based on research results affects the trust-building of accommodation sharing.

#### *The Effects of Regulating Policy on the Trust Building*

Each local government has different taxation on online P2P transactions. Some governments apply a certain flat tax rate on incomes from accommodation sharing. In San Francisco, the city government imposes a 14% transient occupancy tax. However, in Madrid and Barcelona, the local governments impose a tax on total earning after subtracting relevant expenses, so income from accommodation sharing would be added to total earning. Based on the localized tax schemes, the issue is whether transactions among peers might be required to impose the same tax rate as professional accommodation industries such as hotels (Miller, 2015). This study investigates how individuals consider that appropriate taxation might effectively regulate accommodation sharing and how effective taxation could improve trust in accommodation sharing.

**H4a:** The perceived effectiveness of tax policy with proper rate affects the trust-building of accommodation sharing.

As the tax policy can control registered accommodation sharing, the fines and penalties can restrict illegal transactions of accommodation sharing. The local government aims to ban nonregistered accommodation sharing or excessive service operations beyond permitted day limits. Also, governments try to protect the local housing market for long-term residents in the community. Wachsmuth and Weisler (2018) find from the spatial analysis on Airbnb activity in New York City that housing markets have already been significantly impacted by short-term rentals and even increasing numbers of short-term rentals to Airbnb may induce gentrification (Wachsmuth & Weisler, 2018). Williams & Horodnic (2017) mention that direct controls such as fines and penalties increase the cost of illegal operation to be caught or risks of detection. Therefore, this study plans to investigate how individuals might evaluate imposing fine and penalty for the perception of non-transparent accommodation sharing and how imposing penalties might improve the trust-building of accommodation sharing.

**H4b:** The perceived effectiveness of policies on fines and penalties affect the trust-building of accommodation sharing.

Like other online transactions, the sharing economy also provides limited information about the condition of the products or services, so consumers have less chance to inspect or protect against the risks (Katz, 2015). On behalf of customers, the government should prepare a guideline to protect the consumer and to guarantee a certain level of quality. For efficient compliance of guidelines, platform providers become efficient and important partners (Cohen & Sundararajan, 2015), because the guideline can be utilized on digital platforms. Instead of government regulatory authorities, the platforms carry out voluntary self-regulation. However, sharing economy with technological advance would not subject to deregulation or no regulation. Still, the common features of consumer protection such as health, safety, and financial concerns should be secured by the cooperation with platform providers and governments based on concrete guidelines.

**H4c:** The perceived effectiveness of policies on establishing and complying safety guidelines affects the trust-building of accommodation sharing.

The high density of accommodation sharing in the community might cause a shortage of long-term rental housing, so governments seek for solutions to control the increasing number of accommodation sharing and to stabilize the housing markets. The penetration of Airbnb operation in Seoul may cause housing problems in terms of housing affordability as well as the living environments of residents in the area with a large number of Airbnb, by analyzing local characteristics and conducting in-depth interviews with residents. (Ki & Lee, 2019; Kim, Kim, & Lee, 2018). The studies have not calculated the actual impacts of gentrification due to accommodation sharing, but these studies find that the distribution of accommodation sharing is uneven and strongly influences the housing market and residential environment. Kim, Kim, and Lee (2018) suggest the role of government and policy implementation to restrict rising rental fees in tourist areas.

Some cities like London, Madrid, and Paris apply special zoning regulations. In England, only the city of London have specific limits on the number of days for accommodation sharing, and the seven boroughs in London including Camden, Hammersmith, Haringey, Islington, Lewisham, Waltham Forest, Westminster have tougher legislation to prevent illegal short-term rentals (Lynn & Allen, 2017). Zoning policy can be applied in the overheated areas of accommodation sharing, where the residential environment is required. By applying special zoning policy, hosts might avoid excessive competition, guests might provide reliable accommodations in legalized residential areas, and neighborhoods might relax the rental market.

**H4d:** The perceived effectiveness of regulating overheated areas affects the trust-building of accommodation sharing.

The platform with technological advance enables to relocate or share the regulatory responsibility to participating parties other than the governments, so Cohen and Sundararajan (2015) state that self-regulation for the sharing economy functions properly based on refutational concerns, data transparency, and cooperation with various self-regulatory entities such as homeowners association. However, Katz (2015) states that self-regulate would not adequately safeguard consumer, so regulatory authorities and legislators have begun to find the balanced regulation. This study concerns how individuals evaluate government control and supervision, and the perceived effectiveness of government controls improve trust in accommodation sharing.

**H4e:** the perceived effectiveness of government controls affects the trust-building of accommodation sharing.

#### *The Effects of Trust Building on the Willingness of Use*

Trust is a key factor for the successful sharing economy, and trust influences the intention to use goods and services in sharing economy (Hawlitschek, Teubner, & Weinhardt, 2016). Liang, Choi, and Joppe (2018) measure that perceived trusts for both guests and hosts positively influence to repurchasing intentions, rather than switching intentions. Mittendorf (2016) measures that the trust in Airbnb as a platform and the trust in renters significantly affect intentions to offer accommodation sharing on the platform and to accept booking requests. However, this study intends to find the relationship between trusts building by government policies and individuals' willingness to use accommodation sharing.

**H5a:** the trust-building by promoting policies affects the willingness to use accommodation sharing.

**H5b:** the trust-building by regulating policies affects the willingness to use accommodation sharing.

#### *The Effects of the Willingness to Use on the Potential Growth*

The sharing economy shows rapid growth and expects potential growth. Statista estimates that the global market size of the sharing economy increases to 335 billion U.S. dollars by 2025, from only 15 billion U.S. dollars in 2014 (Mazareanu, 2019). Also, the research by PWC (2015) shows that 72% of Americans are willing to become potential consumers of sharing economy near the future. Therefore, this study also measures how the

willingness to use accommodation sharing will influence the expected market growth based on the expectation of individuals to potential market growth of accommodation sharing, compared to the increasing trends.

**H6:** the willingness to use affects the potential growth in accommodation sharing.

### *The Effects of the Potential Growth on the Related Existing Industry*

The sharing economy becomes competitive treats for existing industries by utilizing idle capacity and lowering transaction costs via online platforms (Kathan, Matzler, & Veider, 2016; Henten & Windekilde, 2016). Zervas, Proserpio, and Byers (2014) estimate that a 1% increase in Airbnb listings causes a 0.05% decrease in quarterly hostel revenues. In Korea, Kim, Lee, and Hwang (2016) estimate that a 10% increase in Airbnb listing shows a 0.16% decrease in hotel revenues. Choi, Jung, Ryu, Kim, and Yoon (2015) find that the number of Airbnb listings is not strongly related to the hotel revenue in the early stage of Airbnb in Korea, and the increasing number of overseas travelers might relax the negative impact on the hotel revenue. However, this study examines how individuals are aware of the competition between accommodation sharing and traditional hotel industries.

**H7:** the potential growth in accommodation sharing affects the impact on the related existing industries.

## 5.3. Research Methodology

### 5.3.1. Data Collection

Study 3 collects the data via survey and the survey is proposed to investigate the opinions of individuals about accommodation sharing. The survey questions are constructed based on the research designs (Figure 5.2.1) and consist of 93 questions in terms of proposed negative and positive factors, perceived necessity to policy reaction, trust-building, and potential growth of accommodation sharing, as well as 5 demographic questions including gender, age group, income bracket, education, and occupation. The types of questions are designed with five-point Likert scales from 1 to 5, 1 being strongly disagreed while experience being strongly agreed. The description of survey data is following in section 5.3.2. The survey questionnaire has been pre-tested twice with small groups with twenty individuals for each trial via Qualtrics, an online survey platform, and feedback about survey questions such as wording, the scale of response, number of questions, and proper instruction to performing surveys.

The modified version of the survey has been randomly distributed online with the assistance of a well-known survey agency in Korea. The survey was distributed to respondents

who have experience of accommodation sharing and who do not have experience of accommodation sharing. The total number of observations is 415 responses. The completed responses consist of 49.88% of males and 50.12 % of females. 24.82 % of respondents are between ages of 20-29 years; 24.09% are between ages of 30-39 years; 24.82 % are between ages the age of 40-49 years; 29.15 % are above 50 years. The educational background of the respondents is 16.39 % of high school graduates, 9.6% respondents with a two-year associate degree, 62.41% with a bachelor's degree, 9.4% with Master's degree, and 2.1% with the Ph.D. degree.

**Table 5.3.1. Demographic Characteristics of Respondents**

	Characteristics	Number	%
<b>Gender</b>	Male	207	49.88
	Female	208	50.12
<b>Marriage</b>	Married	185	44.58
	Not married	230	55.42
<b>Age</b>	21 years old ~ 24 years old	32	7.71
	25 years old ~ 29 years old	59	14.22
	30 years old ~ 34 years old	44	10.6
	35 years old ~ 39 years old	56	13.49
	40 years old ~ 44 years old	47	11.33
	45 years old ~ 49 years old	56	13.49
	50 years old ~ 54 years old	51	12.29
	55 years old ~ 59 years old	45	10.84
	60 years old ~ 63 years old	25	6.02
<b>Education</b>	Middle school graduate or below	0	0
	High school graduate	68	16.39
	2-year associated degree or enrolled	40	9.64
	Bachelor's degree or enrolled	259	62.41
	Master's degree or enrolled	39	9.4
	Ph.D. or enrolled	9	2.17
<b>Income</b>	Below KRW 10,000,000	24	5.78
	More or equal to KRW 10,000,000 ~ below KRW 20,000,000	24	5.78
	More or equal to KRW 20,000,000 ~ below KRW 30,000,000	44	10.6
	More or equal to KRW 30,000,000 ~ below KRW 40,000,000	65	15.66
	More or equal to KRW 40,000,000 ~ below KRW 50,000,000	60	14.46
	More or equal to KRW 50,000,000 ~ below KRW 60,000,000	61	14.7
	More or equal to KRW 60,000,000 ~ below KRW 70,000,000	47	11.33
	More or equal to KRW 70,000,000	90	21.69
<b>Occupation</b>	Agriculture, fishing, forestry	2	0.48
	Self-employed	31	7.47
	Sales/ service staff	25	6.02
	Skilled worker	10	2.41
	General work positions	9	2.17
	Office/ technical job	176	42.41
	Management	18	4.34
	Professional	30	7.23
	Housewife	49	11.81
	Student	32	7.71
	Unemployment	30	7.23
	Retire	1	0.24
	Other	2	0.48
<b>Total</b>		<b>415</b>	<b>100</b>

### 5.3.2. Description of the Data via Survey

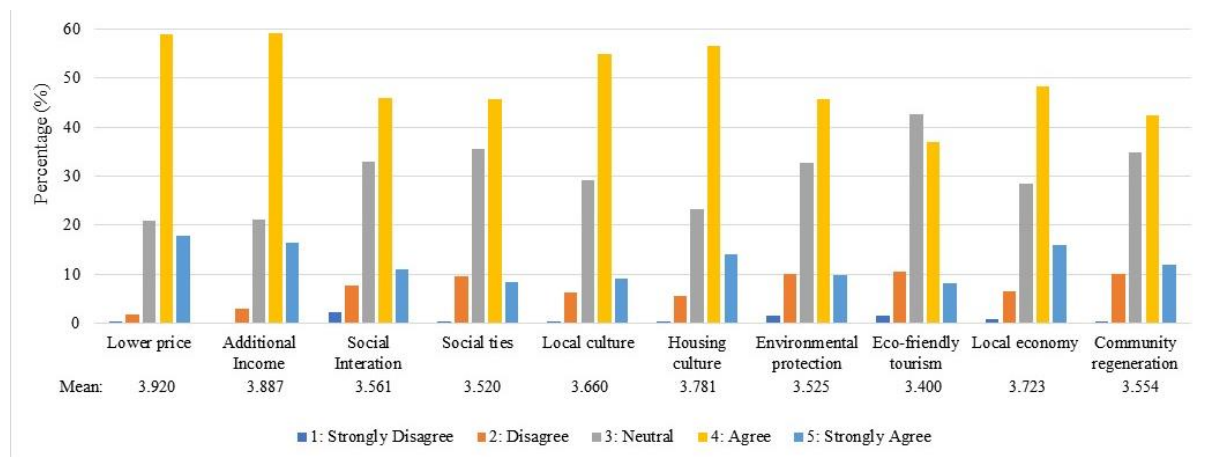
#### *Measurement of Positive and Negative Factors of Accommodation Sharing*

The survey includes both positive and negative factors of accommodation sharing. For positive factors, the questionnaire includes the following attributes: i) lower prices for guests to stay and additional income for hosts for economic factors; ii) social interactions with local residents and social ties between guests and hosts for social factors; iii) experiences in local cultures and housing cultures for cultural factors; iv) environment protection by using idle assets and availability to eco-friendly tourism for sustainable factors; v) local economy and community regeneration for community benefits.

For negative factors of accommodation sharing, the following items are investigated: i) privacy invasion and lack of preparation in any embarrassing situations for security and safety; ii) concerns about hygiene and insufficient awareness of the importance of sanitation; iii) different information compared to actual service and insufficiently provided information for information asymmetry; iv) the limited accessibility due to location and transportation in residential areas, and unstandardized accommodation services for property-related inconvenience; v) inconvenience to neighbors and other related problems such as gentrification for community disadvantages.

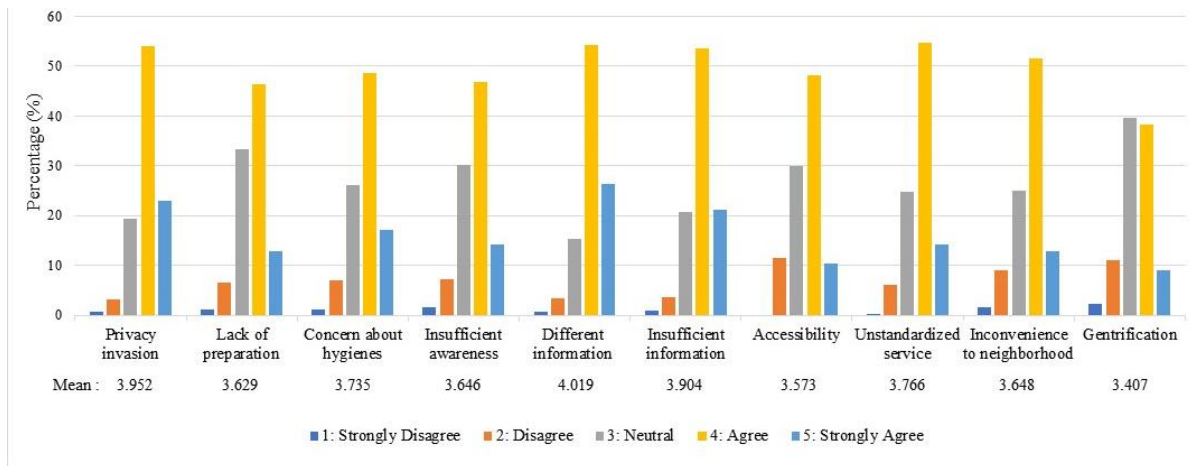
The distributions of individual perceptions in terms of positive and negative factors are shown in Figure 5.3.1 and Figure 5.3.2 with means of each attributes respectively.

**Figure 5.3.1. The Distribution of Individual Perceptions in terms of Positive Factors**





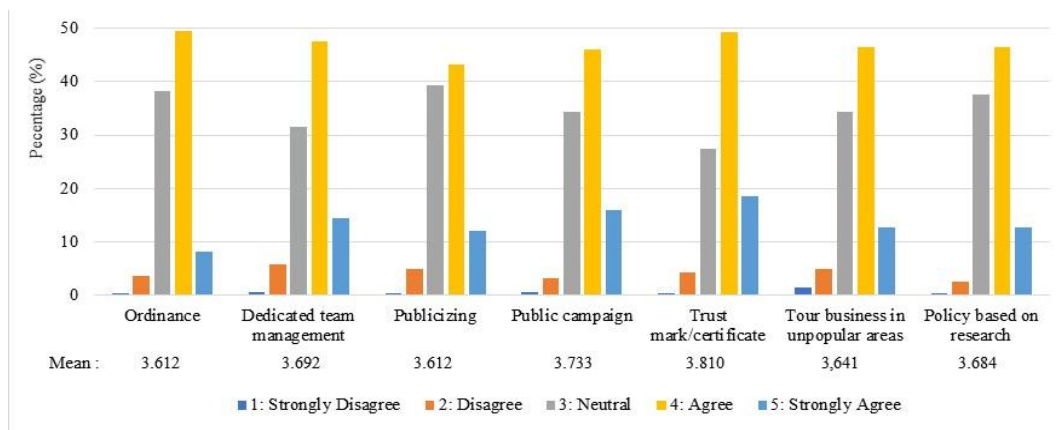
**Figure 5.3.2. The Distribution of Individual Perceptions in terms of Negative Factors**



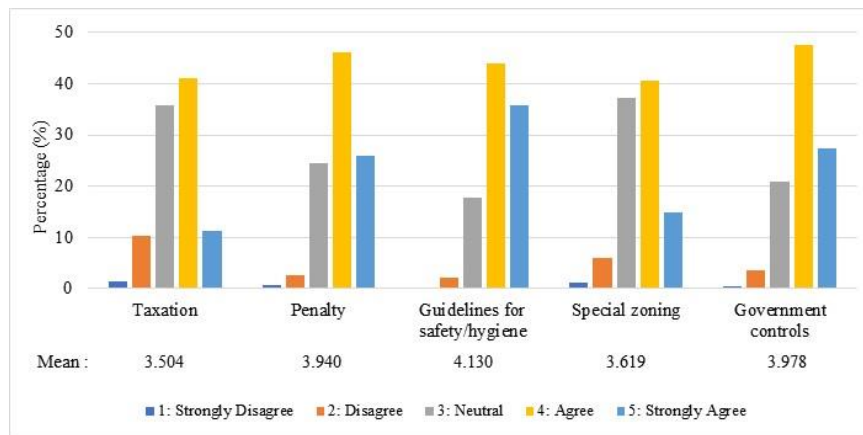
### *Measurement of Individual Attitudes and Perception of Policy Reactions*

This study measures attitudes toward accommodation sharing based on the perspectives of guests, hosts, neighbors, and overall perception. In order to investigate the relationship between the attitudes and the perceived necessity of policy reacts, the questionnaire includes definition, legislation, promoting policies, regulating policies and localized policies. In order to measure promoting policies, the questionnaire items including establishing ordinances for accelerating accommodation sharing, operating dedicated teams to deals with inquiries and complaints, publicizing, conducting public campaigns for fostering accommodation sharing etiquette, issuing trust marks or certificates, initiating tour business in unpopular areas, and preparing policies based on researches are provided. In order to measure regulating policies, the questionnaire including taxation, penalties, the guideline of hygiene and safety, special zoning for overheated areas, and government controls for non-transparent transactions are provided. The perceived effectiveness of promoting and regulation policies are shown in Figure 5.3.3 for promotion and Figure 5.3.4 for regulation.

**Figure 5.3.3. The Distribution of Individual Perceptions in terms of Promoting Policies**



**Figure 5.3.4. The Distribution of Individual Perceptions in terms of Regulating Policies**



### *Measurement of Remaining Variables*

The study continues to measure trust-building, willingness to use accommodation sharing, potential impacts on the market and existing business. This study mainly focuses on promoting and regulating policies to improve trust in accommodation sharing. Also, this study includes ratings and reviews on the platforms, insurance by platforms, and available insurances for guests and hosts. The willingness to use accommodation sharing is measured based on the perspectives of both guests and hosts. In order to investigate the potential growth of accommodation sharing, the survey includes the expected growth in sharing economy, tourism, and new integrated business. In order to measure impacts on existing markets, competition against existing business, and changes in service quality are measured.

**Table 5.3.2. The Summary of Descriptive Statistics**

No.	Variables	Obs	Mean	Std. Dev.	Min	Max
<b>Positive Factors</b>						
1	Economic Attribute					
	Lower price	415	3.920	0.703	1	5
	Additional income	415	3.887	0.708	1	5
	Social Attribute					
	Social interaction	415	3.561	0.868	1	5
	Social ties	415	3.520	0.801	1	5
	Cultural Attribute					
	Local culture	415	3.660	0.750	1	5
	Housing culture	415	3.781	0.769	1	5
	Sustainable Attribute					
	Environmental protection	415	3.525	0.859	1	5
	Eco-friendly tourism	415	3.400	0.839	1	5
	Community Benefit					
	Local economy	415	3.723	0.833	1	5
	Community regeneration	415	3.554	0.849	1	5
<b>Negative Factors</b>						
2	Safety & Security Attribute					
	Privacy invasion	415	3.952	0.782	1	5
	Lack of preparation	415	3.629	0.832	1	5

	Sanitation Attribute					
	Concern about hygienes	415	3.735	0.867	1	5
	Insufficient awareness	415	3.646	0.872	1	5
	Information Asymmetry Attribute					
	Different information	415	4.019	0.786	1	5
	Insufficient information	415	3.904	0.802	1	5
	Property-related Inconvenience					
	Accessibility	415	3.573	0.828	2	5
	Unstandardized service	415	3.766	0.774	1	5
	Community Disadvantage					
	Inconvenience to neighborhood	415	3.648	0.875	1	5
	Gentrification	415	3.407	0.879	1	5
<b><i>Policy Reactions</i></b>						
3	Necessity of definition	415	3.954	0.752	1	5
	Necessity of legislation	415	4.130	0.779	1	5
	Necessity of promoting policy	415	3.728	0.834	1	5
	Necessity of regulating policy	415	3.848	0.798	1	5
	Necessity of localized policy	415	3.940	0.725	1	5
<b><i>Effectiveness of Policy Instrument</i></b>						
4	Promoting Policy related					
	Ordinance	415	3.612	0.710	1	5
	Dedicated team management	415	3.692	0.814	1	5
	Publicizing	415	3.612	0.781	1	5
	Public campaign	415	3.733	0.788	1	5
	Trust mark/certificate	415	3.810	0.802	1	5
	Tour business in unpopular areas	415	3.641	0.822	1	5
	Policy based on research	415	3.684	0.745	1	5
	Regulating Policy related					
	Taxation	415	3.504	0.879	1	5
	Penalty	415	3.94	0.822	1	5
	Guidelines for safety/hygiene	415	4.13	0.794	1	5
	Special zoning	415	3.619	0.854	1	5
	Government controls	415	3.978	0.821	1	5
<b><i>Trust Building</i></b>						
5	Trust by promoting policy	415	3.841	0.807	1	5
	Trust by regulating policy	415	3.839	0.802	1	5
	Trust by reviews and rating system	415	3.819	0.807	1	5
	Trust by trust mark/certificate	415	3.843	0.803	1	5
	Trust by platform insurance	415	4.002	0.737	2	5
	Trust by guests and hosts' insurance	415	3.827	0.767	1	5
<b><i>Attitudes and Willingness to use</i></b>						
6	Attitudes					
	Overall attitudes	415	3.304	0.851	1	5
	Guest attitudes	415	3.393	0.809	1	5
	Host attitudes	415	3.027	0.918	1	5
	Neighbor attitudes	415	3.169	0.849	1	5
	Willingness					
	To be guests	415	3.282	1.036	1	5
	To be hosts	415	2.629	1.160	1	5
<b><i>Impact to market</i></b>						
7	Potential Growth					
	Growth in sharing economy	415	3.436	0.840	1	5
	Growth in tourism	415	3.523	0.845	1	5
	Growth with integrated service	415	3.694	0.790	1	5
	Impact on existing business					
	Competition	415	3.61	0.832	1	5
	Service quality	415	3.631	0.838	1	5
<b><i>Scope of the Sharing Economy</i></b>						
8	P2P sharing economy	415	3.547	0.800	1	5
	B2C sharing economy	415	3.480	0.853	1	5

	G2C sharing economy	415	3.704	0.769	2	5
<b>General</b>						
9	Main Characteristics	415	2.730	1.081	1	5
	Guest Experience (1: experienced)	415	1.667	0.472	1	2
	Host Experience (1: experienced)	415	1.916	0.278	1	2
	Sharing Types	415	1.427	0.555	1	3
	Reason for participation	415	2.301	1.377	1	5
	Reason of unwillingness to be guests	415	1.880	1.072	1	5
	Reason of unwillingness to be hosts	415	2.210	1.434	1	6
	Awareness of legality	415	1.708	0.455	1	2
	Sharing service by hotel chain	415	1.653	0.477	1	2

### 5.3.3. Analytical Method

Study 3 applies mainly structural equational modeling (SEM) because SEM provides the benefit to measure multiple and reciprocal relations simultaneously in the model by combining factor analysis, path analysis, and regression analysis. The study uses the SEM builder in STATA to construct research models. The study defines latent variables via confirmatory factor analysis of measurement models and examines causal relations with path analysis of the structural models. This study also follows the process of SEM from the conceptualization and path diagram, data collection, model specification, model estimation, evaluation of model fit, model modification to interpretation (Bae, 2008; Hoyle, 1995), in order to make a model to find based on convergency and content validity with a good model fit.

In the case of SEM, the results mainly consist of structural and measurement model estimates. Shown on the measurement model estimates, the confirmatory factor analysis (CFA) supports the latent variable structural model with relations between factor (latent variables) and indicator (observed variables). Among the types of path analysis such as recursive models and nonrecursive models, this study applies a nonrecursive model with multiple regression; however, the path models contain only observed variables (Kline, 1998; McDonald & Ho, 2002). The regression part of the latent variable SEM is presented in the structural model estimates because SEM is designed for the analysis of the relationship between latent variables, but SEM enables to estimate the value of individual subjects (Nachtigall, Kroehne, Funke, & Steyer, 2003).

Therefore, this study applies the multiple indicators of multiple cause models (MIMIC model) because the study requires to include both latent and observed variables in the path model. MIMIC model enables that multiple indicators reflect the underlying latent variables and factors. It means that the multiple causes (observed predictors) affect latent variables or factors (Kline, 1998; O'Reilly, 2019), so the factors become both effect and cause indicators.

## 5.4. Analysis of Study 3

### 5.4.1. Findings on Individuals' Perception of Accommodation Sharing

This study investigates how people understand sharing economy and accommodation sharing via survey. The sharing economy is defined with various concepts such as collaborative consumption, on-demand economy, platform economy, and others, so this study asks respondents to choose the main character of sharing economy. The result of the survey shows that people consider the sharing economy as transaction to use idle assets with other people (192 responses, 46.27%), a type of rental service (94 responses, 22.65%), online mediating service (61 responses, 14.70%), temporary access of goods and services (36 responses, 8.67%) and transactions among peers (32 responses, 7.71%). It means that the majority of people perceive the fundamental spirits of sharing idle assets with the key essence of technology, but still sharing economy and rental business is challenging to split the concepts clearly.

Among 415 all survey responses, 138 participants (33.25%) have experiences to stay at accommodation sharing, but only 35 participants (8.45%) have experienced to host guests. This study finds that individuals with 20s and 30s with higher income groups in marital status have a higher opportunity to have experience of using accommodation sharing. Based on the logit regression analysis (shown in Appendix F), the results show that the age dummies of 20 and 30 years old are significant at the level 0.01 and 0.05 respectively compared to guests with age of 40s, the income group above annual salary above KRW 50,000,000 are positively significant at the level of 0.05 and with marital status at 0.05. However, the types of occupation and level of education are not related to guests' experience of accommodation sharing.

The main reason why people choose accommodation sharing and the result shows economic benefit (40.96%), the experience of culture (20.96%), social interaction (19.04%), local economy (12.05%) and sustainability (6.99%). The economic benefit, social interaction, and cultural experience are significant for both experienced and non-experienced individuals, but individuals without experience tend to have less awareness of sustainability compared to other reasons, summarized in Table 5.4.1. Related to the experience of accommodation, the result of Chi-square shows that the main reasons to choose accommodation sharing are related to experience at  $\chi^2 = 3.6268$ ,  $P < 0.01$ , and especially for individuals without the experience of accommodation sharing expects more economic benefits.

**Table 5.4.1. Main Reasons to Choose Accommodation Sharing**

Percentage (%)	All	Individual with experience		Individual without experience	
Economic benefit	40.96	56	40.59	114	41.16
Social interaction	19.04	26	18.84	53	19.13
Experience of local culture	20.96	28	20.29	59	21.30
Awareness of sustainability	6.99	14	10.14	15	5.42
Fostering local economy	12.05	14	10.14	36	12.99
Sum	100.00	138	100.00	277	100.00

This study also examines why people avoid the use of accommodation sharing with both guests and hosts' perspectives. From the guests' viewpoint, individuals are concerned with security issues related to risks of privacy invasion, violence, or other accidents (52.52%), insufficient or inaccurate information (21.69%), sanitation and cleanliness (17.11%), location and facilities (7.23%) and inconvenience to local residents (1.45%). These concerns of accommodation sharing for guests' perspectives are significantly related to the experience of guests and preference of sharing types at  $\chi^2 = 11.3833$ ,  $P < 0.05$  for sharing experience and  $\chi^2 = 16.4617$ ,  $P < 0.01$  for sharing types. The guests with experience and preference for entire house sharing are concern highly with security and safety.

Also, from the hosts' viewpoint, they are concerned with the inconvenience to share with other people (42.41%), possibility to destroy properties (29.4%), expected complaints and objections from neighbors (9.39%), legal issues in Korea (9.16%), impression from negative media (7.23%), and insufficient economic benefit (2.41%). The unwillingness to become hosts is significantly related to the experience of guests at  $\chi^2 = 28.9873$ ,  $P < 0.01$  and preference for sharing types at  $\chi^2 = 19.1023$ ,  $P < 0.01$ . The distribution shows that individuals without the experience of staying accommodation sharing and preference to entire house sharing are concerned more with a feeling of inconvenience to share their properties with other people.

When asked which type of accommodation sharing is preferred, the majority of respondents prefer entire house sharing (60.45%) to private room sharing (36.39%) and shared room types of sharing (3.13%). However, the types of sharing are related to legal issues. Related to legality, only 30% of respondents aware that accommodation sharing can be illegal in each city or country. In Korea, the entire house sharing for a short period is illegal. Currently, the types of accommodation sharing are not required to register as business entities such as hotels, hostels, or motels, but similar types of accommodation sharing are homestays in Korea. This finding emphasizes that the government should clarify the legal definition of accommodation sharing and provide clear direction to use accommodations for both guests and hosts in order to prevent people from staying illegal accommodation sharing unintentionally.

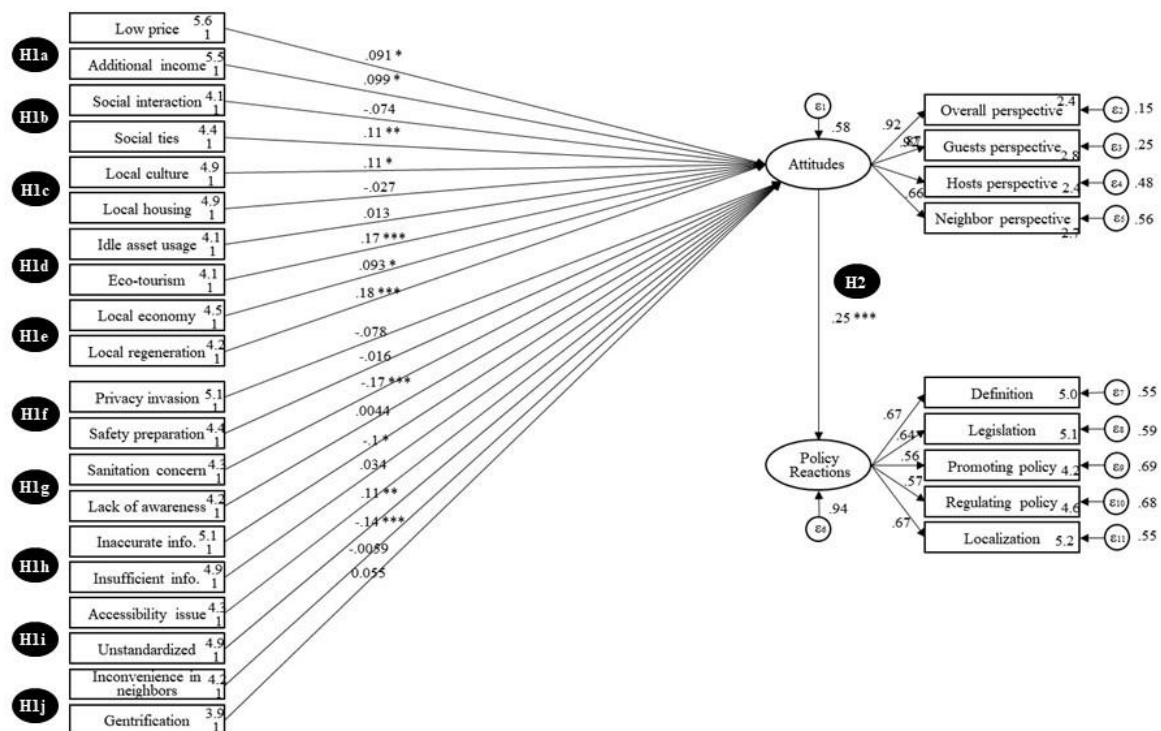
#### 5.4.2. Analysis of Factors of Accommodation Sharing on Attitude and Policy

Study 3 intends to measure individuals' perception of positive and negative factors to policy reaction through attitudes in phase 1 and the trust-building with effective policy instruments to the potential growth of accommodation sharing in phase 2. Phase 1 and 2 are divided between policy execution. The research design is presented in Figure 5.2.1.

Phase 1 in Study 3 includes five positive factors including economic, social, cultural, sustainable factors and community benefits, and another five negative factors including security and safety, sanitation, information asymmetry, inconvenience related to property, and community disadvantage. Each factor is measured by two variables. For instance, economic factors include lower price to stay for guests and additional income for hosts. The factor of attitudes is measured in terms of perspectives of guests, hosts, neighbors and overall perception.

The model in Figure 5.4.1 provides a good model fit with RMSEA smaller than 0.08 ( $\chi^2(186) = 565.464$ ,  $P < 0.01$ ; RMSEA= 0.070; CFI=0.800; TLI=0.767). The results of SEM are presented in the following Figure 5.4.1 and Table 5.4.2.

**Figure 5.4.1. The Structural Equation Model and Estimates of Phase 1**



**Table 5.4.2. The Summary of Structural and Measurement Model Estimates for Phase 1**

	Std.Coeff.	Std.Err	z-value	P-value	Sig.
<b>Structural Model Estimates</b>					
Lower price → Attitudes	0.091	0.054	1.69	0.090	*
Additional income → Attitudes	0.099	0.052	1.90	0.057	*
Social interact → Attitudes	-0.074	0.054	-1.37	0.170	
Social ties → Attitudes	0.114	0.055	2.08	0.038	**
Local Culture → Attitudes	0.108	0.056	1.92	0.054	*
Housing Culture → Attitudes	-0.027	0.053	-0.50	0.614	
Environmental protection → Attitudes	0.013	0.059	0.23	0.821	
Eco-friendly tourism → Attitudes	0.174	0.058	3.00	0.003	***
Local economy → Attitudes	0.093	0.053	1.74	0.081	*
Regeneration → Attitudes	0.176	0.053	3.30	0.001	***
Privacy invasion → Attitudes	-0.078	0.055	-1.43	0.152	
Lack of preparation → Attitudes	-0.016	0.050	-0.33	0.741	
Concern about hygienes → Attitudes	-0.167	0.061	-2.73	0.006	***
Insufficient awareness → Attitudes	0.004	0.058	0.08	0.940	
Different information → Attitudes	-0.103	0.059	-1.75	0.080	*
Insufficient information → Attitudes	0.034	0.059	0.59	0.558	
Accessibility → Attitudes	0.106	0.049	2.18	0.029	**
Unstandardized service → Attitudes	-0.140	0.051	-2.73	0.006	***
Inconvenience to neighborhood → Attitudes	-0.006	0.049	-0.12	0.903	
Gentrification → Attitudes	-0.055	0.047	-1.17	0.242	
Attitudes → Policy Reaction	0.253	0.057	4.43	0.000	***
<b>Measurement Model Estimates</b>					
Attitudes → overall_attitude	0.921	0.013	72.10	0.000	
Attitudes → guest_attitude	0.867	0.015	56.13	0.000	
Attitudes → host_attitude	0.724	0.026	28.21	0.000	
Attitudes → neighbor_attitude	0.662	0.030	22.23	0.000	
Policy Reactions → Necessity of definition	0.671	0.038	17.84	0.000	
Policy Reactions → Necessity of legislation	0.644	0.039	16.70	0.000	
Policy Reactions → Necessity of promoting policy	0.561	0.043	13.07	0.000	
Policy Reactions → Necessity of regulating policy	0.566	0.042	13.44	0.000	
Policy Reactions → Necessity of localized policy	0.667	0.038	17.71	0.000	

Note:  $\chi^2(186) = 565.464$ ,  $P < 0.01$ ; RMSEA = 0.070; CFI=0.800; TLI=0.767

According to positive factors, both lower price and additional income for economic factors (H1a) significantly affect the attitudes at  $\alpha = 0.1$ . In terms of social factors (H1b), social interaction is not significant, but social ties are accepted and positively significant at  $\alpha = 0.05$ . It means that individuals have less value to interact with local people in the communities where the guests stay, but social ties between hosts and guests via online improve positive attitudes. The social factors have different effects among people with or without the experience of staying accommodation sharing and the preference between entire houses and private rooms. The two-way Multivariate Analysis of Variance (MANOVA) shows a significant difference in social factors based on the status of experience,  $F(2,398) = 2.39$ ,  $P < 0.1$ ; Wilk's lambda = 0.9881, and the following t-test results confirms that both social interactions and social ties are related to the status of experience. The mean of the experienced group is higher than the means of the group without experience. It indicates that people who have experience of accommodation



sharing have a better impression of social interaction between guests and hosts and with local residents.

For the cultural factor (H1c), local culture significantly affects the attitudes at  $\alpha = 0.1$ , but local housing culture is not significant. It means that individuals experience local culture and feel the atmosphere during their stays in the local community, but less likely have cultural impressions of housing types in the residential area. However, this study would not distinguish the housing type between traditional and modern housing and the survey dedicates to Korean, so the result that housing culture does not affect individuals' attitudes toward accommodation sharing. Because housing is a part of traveling, staying P2P accommodation sharing in the residential areas is expected to provide cultural benefit to people who stay traditional housing types or to foreign travelers to recognize the cultural differences of housing in Korea. In addition, based on the MANOVA, the cultural factors are related to the status of experience at  $F(2,398) = 2.66$ ,  $P < 0.1$ ; Wilk's lambda = 0.9868. It shows that people who have the experience to use accommodation sharing have a higher perception of cultural experience.

According to sustainable factors (H1d), available eco-tourism significantly affects attitudes at  $\alpha = 0.01$ , while the environmental protection due to the usage of idle assets does not significantly affect attitudes. This study indicates that individuals may not differentiate the feeling of contribution to sustainability to stay at between P2P accommodation or hotels; however, they perceive accommodation sharing can provide better opportunities to access eco-friendly tourism highly related to local communities. Also, MANOVA finds that the perception of sustainability factors including environmental protections to use of idle assets and accessible eco-friendly tourism is significantly related to individual preference for sharing at  $F(2,398) = 4.01$ ,  $P < 0.05$ ; Wilk's lambda = 0.983. Based on the following t-tests, the group of people to prefer private room sharing have a higher perception of sustainability.

In terms of community benefit, this study defines the community as an important player in sharing economy. The results show that community benefits (H1d) significantly affect attitudes in terms of the local economy at  $\alpha = 0.1$ , and in terms of the community regeneration at  $\alpha = 0.01$ , due to the increasing number of floating population by accommodation sharing in the residential areas. Although social interactions with local residents have no influence on attitudes, people perceived accommodation sharing contributes to the local economy and community regeneration. Also, this study finds that the community benefits are significantly related to the status of experience at  $F(2,398) = 4.48$ ,  $P < 0.05$ ; Wilk's lambda = 0.978 and preference between entire house or private rooms at  $F(2,398) = 3.97$ ,  $P < 0.05$ ; Wilk's lambda = 0.9804. By conducting a follow-up t-test, the means are different. The group of people with

experience and preference for private rooms sharing have higher means. The findings indicate that people with experiences and preferences for private rooms have more probability of contributing local benefit with interactions with local residents and hosts in the areas, which is the same as the purpose of homestays.

Results on negative factors as follows, regarding safety and security (H1f), both privacy invasion and lack of preparation for guests facing unexpected situations do not significantly affect attitudes, although the guests have some negative reviews in terms of security and safety. This study interprets that people are seriously concerned with the problems when they face risks of safety and security directly. Despite the insignificance to attitudes, this study includes that the results of MANOVA show that the security and safety factors are significantly related to the status of experience at  $F(2,398) = 2.54, P < 0.1$ ; Wilk's lambda = 0.9874 and preference of sharing types between entire house and private room at  $F(2,398) = 10.68, P < 0.01$ ; Wilk's lambda = 0.949. The following t-test finds that the risk of privacy evasion is related to both guests' experience and sharing types. The mean of people without guests' experience and the mean of people with a strong preference for entire housing sharing are higher means of privacy evasion. Therefore, the hosts, platform and governments put efforts to show the safety and security for people who are concerned with the risk before using accommodation sharing and the regulation should prevent violence of security and safety in advance with well-establish guidelines by hosts and platforms.

In terms of sanitation(H1g), the concerns about sanitation affect attitudes at  $\alpha = 0.01$ , but a different level of awareness of hygiene is not significant. Negative reviews from study 1 show that the experienced guests are strongly concerned with sanitation and study 2 indicates the importance of sanitation based on the relationship between cleaning fees and occupancy rate. Guests expect clean accommodations regardless of charging additional cleaning fees. However, people do not think that the level of hosts' awareness about hygiene and cleanliness for accommodation sharing are not significantly different between guest and hosts. In Korea, accommodation sharing, particularly the types of homestays, is not applied to the Public Health Laws, so the hosts have the responsibility to maintain the quality of sanitation. Also, this study finds that the sanitation is significantly related to experience of guests and sharing types between entire house and private rooms, at  $F(2,398) = 4.31, P < 0.05$ ; Wilk's lambda = 0.9797 for the guests' experience and  $F(2,398) = 7.00, P < 0.01$ ; Wilk's lambda = 0.966. Following the t-test, guests without experience and guests with a preference for entire house sharing have higher means in terms of sanitation factors. The more reliable information and evaluation

improve the confidence of people who have not yet experienced and the government and platform provide guidelines for hosts to maintain the quality of sanitation.

According to information asymmetry (H1h), the discrepancy of information affects attitude and is negatively significant at  $\alpha = 0.1$ , but the amount of information provided to guests does not significantly affect. It means that people have negative attitudes if the information on the platform is not accurate to describe the actual service they experience, but the amount of information via platforms is sufficient and the information easily filtered based on the guests' preference. This study also investigates how information asymmetry is related to the experience and sharing types. This study finds that the perceived information asymmetry is significantly related to the status of guests' experience at  $F(2,398) = 2.33$ ,  $P < 0.1$ ; Wilk's lambda = 0.9884 and is also significantly related to the sharing types at  $F(2,398) = 6.96$ ,  $P < 0.01$ ; Wilk's lambda = 0.9662. Based on the following t-test, the mean of the accuracy in the group of people without experience is higher than the means of people with experience. The means of accuracy and sufficiency are higher in the group of people who prefer to stay at entire house sharing. It shows quite consistent results that guests with entire house sharing have concerns more attributes of accommodation sharing such as property, price, hosts, accessibility, and convenience than people who use private rooms or shared rooms.

According to property (H1i), the perceived inconvenience of unstandardized properties to compare accommodation sharing with other accommodations significantly affect attitudes toward accommodation sharing at  $\alpha = 0.01$ , and the perceived inconvenience of accessibility to accommodations in residential areas positively affect the attitudes at  $\alpha = 0.05$ . Unlike hotels, accommodation sharing provides unstandardized hospitality such as different sizes of rooms with various amenities. Individuals face difficulties to compare accommodations based on their preferences. Also, the study hypothesizes that inconvenience of accessibility to accommodation sharing might negatively affect attitudes because the majority of accommodation sharing are located in residential areas. The study finds that the accessibility to accommodation sharing positively affects the attitudes regardless of the location in residential areas. This study indicates that guests choose accommodation sharing because they can stay away from crowded areas and stay at a relatively low price in residential areas. Also, the MANOVA results show that the accessibility and unstandardized service are significantly related to guests' experiences at  $F(2,398) = 4.52$ ,  $P < 0.05$ ; Wilk's lambda = 0.9778. Based on the following t-test, the mean of people without experience to use accommodation sharing have a higher mean than the means of people with experience  $\alpha = 0.05$ .

People without experience have more worries to select accommodation and face difficulties to compare accommodations.

As this study investigates the impact of community benefits on attitudes for positive factors, this study also includes perceived community disadvantages. This study finds that the perceived community disadvantages (Hij) do not affect attitudes. While people perceive community benefits significantly influence attitudes toward accommodation, this study finds that they have fewer concerns about community disadvantages such as the possible inconvenience of local residents such as noise, traffic congestion or gentrification.

The outcomes are summarized that price and additional incomes for economic factors, social ties via online community for social factors, experiences of local culture for cultural factors, accessible eco-friendly tourism for sustainable factors, and local economy and regeneration for community benefits are significantly influential for positive attitudes to accommodation sharing. According to negative aspects, only concerns of hygienes for sanitation, information discrepancy for information asymmetry, unstandardized service for property-related inconvenience negatively influence on attitudes.

Table 5.4.3 shows the comparison between SEM estimates based on maximum likelihood and regression analysis based on the least square, and the results show a similar pattern with the same directions but for a different level of significance.

**Table 5.4.3. Comparison between SEM and Regression Analysis of Positive and Negative Factors**

Dependent Variable: Attitude	SEM Std.Coeff. (z-value-Sig.)	Regression Std.Coeff. (t-value-Sig.)	Latent variables	Regression Std.Coeff. (t-value-Sig.)
Lower price	0.091 (1.69 *)	0.092 (1.75 *)	Economic	0.102 (2.025 **)
Additional income	0.099 (1.90 *)	0.092 (1.78 *)		
Social interact	-0.074 (-1.37)	-0.071 (-1.34)	Social	0.080 (1.491)
Social ties	0.114 (2.08 **)	0.106 (1.94 *)		
Local Culture	0.108 (1.92 *)	0.103 (1.85 *)	Cultural	0.028 (0.507)
Housing Culture	-0.027 (-0.50)	-0.029 (-0.56)		
Environmental protection	0.013 (0.23)	0.006 (0.11)	Sustainable	0.217 (4.143 ***)
Eco-friendly tourism	0.174 (3.00 ***)	0.166 (2.87 ***)		
Local economy	0.093 (1.74 *)	0.081 (1.54)	Community -	0.232 (4.552 ***)
Regeneration	0.176 (3.30 ***)	0.171 (3.22 ***)	benefit	
Privacy invasion	-0.078 (-1.43)	-0.085 (-1.59)	Safety and	-0.064 (-1.187)
Lack of preparation	-0.016 (-0.33)	-0.022 (-0.44)	security	
Concern about hygienes	-0.167 (-2.73 ***)	-0.156 (-2.57 **)	Sanitation	-0.162 (-3.12***)
Insufficient awareness	0.004 (0.08)	0.007 (0.13)		
Different information	-0.103 (-1.75 *)	-0.097 (-1.67 *)	Information	-0.107 (-1.979**)
Insufficient information	0.034 (0.59)	0.031 (0.53)	asymmetry	
Accessibility	0.106 (2.18 **)	0.103 (2.13 **)	Inconvenience	-0.001 (-0.015)
Unstandardized service	-0.140 (-2.73 ***)	-0.139 (-2.74 ***)	of properties	
Inconvenience to neighbor	-0.006 (-0.12)	0.000 (0.01)	Community -	-0.051 (-1.066)
Gentrification	-0.055 (-1.17)	-0.049 (-1.05)	disadvantage	

Note: SEM is assumed maximum likelihood and Regression based on least square methods for estimates.

This study finds that the perceived attitudes toward accommodation sharing affect the perceived necessity of policy reactions at  $\alpha = 0.01$ , after estimating the influence of positive and negative factors on attitudes toward accommodation sharing. It means that individuals with positive attitudes have more perceived necessities of policy reactions including well-established definitions, laws, and regulations, promoting and regulating policies and localization. The MONOVA shows that the attitudes with perspectives of guests, hosts, neighbors and overall are related to both guests' experiences at  $F(4,396) = 14.52$ ,  $P < 0.01$ ; Wilk's lambda = 0.8721, and the preference of entire houses and private rooms at  $F(4,396) = 5.06$ ,  $P < 0.01$ ; Wilk's lambda = 0.9514. The mean comparison indicates that attitudes are higher in the groups of people with experience and with a preference for private rooms sharing.

The study finds that the perceived necessity of policy reactions in terms of establishment of definition, legislation, promoting and regulating policies, and localization are related to the preference of sharing types including entire house and private room sharing at  $F(5,395) = 3.38$ ,  $P < 0.01$ ; Wilk's lambda = 0.9590. Based on the t-test results, this study finds that the necessity of establishing definition, laws and promoting policies are significantly related to the preference of sharing types at  $\alpha = 0.01$ , and the people with preference for entire house sharing have higher mean of the necessity of establishment of definition and laws, but the people with preference for private room sharing have higher means of necessity of promoting policies. It infers that the laws should be clearly stated the legal terms of accommodation sharing. Although entire house sharing is illegal under the laws on homestays, currently both entire and private room sharing are available on the platforms. Based on clear definition and legislation, people can access legalized accommodation sharing transactions. The people with a preference for private room sharing perceive that promoting policies are necessary, so it would be good to promote the benefits of private room sharing and motivate people to easily access accommodation sharing and sharing trends. The private room sharing tends to meet the purpose of sharing economy in the community. The MANOVA and t-test show that people with a preference for private room sharing have a higher perception of sustainability and community benefit.

The MANOVA and following t-tests indicate that people who experience accommodation sharing perceive more significantly positive factors such as social interactions with local residents, social ties between guests and hosts, housing cultures, improving the local economy and regenerating communities than people who do not experience accommodation sharing. However, people who do not experience accommodation sharing perceive most of the negative factors such as invasion, sanitation, information asymmetry, and unstandardized

services. The findings emphasize the importance of promoting policies including publicizing, campaigns, and trust marks because the promoting policy helps to understand more about accommodation sharing and decreases the worries and bad images of accommodation sharing.

According to sharing types, people who prefer entire house sharing perceive more negative factors including privacy invasion, sanitation, information asymmetry, while others who prefer private room sharing perceive the positive factors of sustainability and community benefits with interaction. Therefore, the policy reactions also show that people who prefer entire house sharing perceive the necessity of legislation of accommodation sharing, but people who prefer private room sharing perceive the promoting policies. Private room sharing supports the purpose of homestays that the government promotes sharing culture by interactions and chances to contribute local economy. This is summarized in Table 5.4.4.

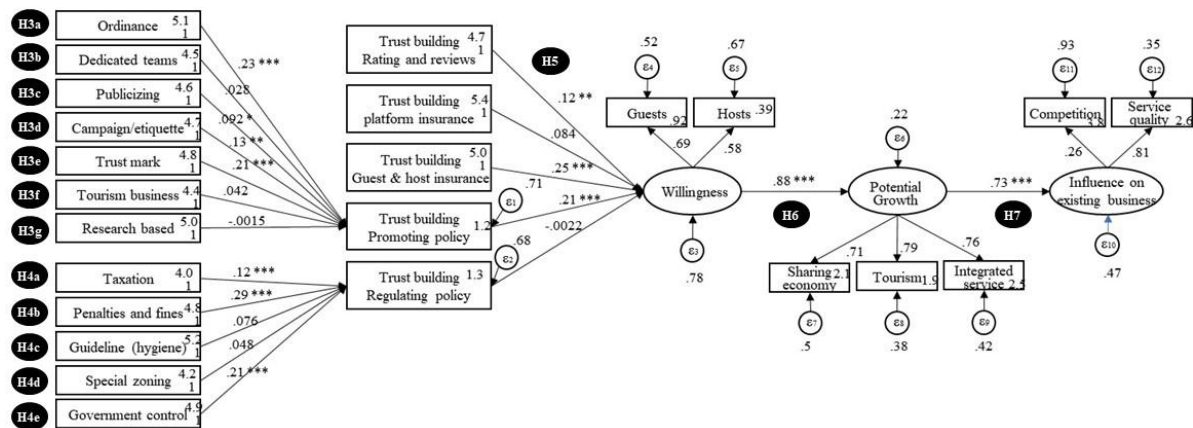
**Table 5.4.4. Summary of MANOVA and t-test for Phase 1**

Variables	With experience	Without experience	Entire house sharing	Private room sharing
Lower price	Not related			
Additional income				
Social interaction	**		Not related	
Social ties	**			
Local Culture	Not related			
Housing Culture	**		Not related	
Environmental protection	Not related			***
Eco-friendly tourism				***
Local economy	***			**
Regeneration	***			***
Privacy invasion		***	***	
Lack of preparation	Not related			
Concern about hygiene		***	***	
Insufficient awareness		*	**	
Different information		***	***	
Insufficient information	Not related		***	
Accessibility	Not related			
Unstandardized service		**	Not related	
Inconvenience to neighborhood	Not related			
Gentrification				
Necessity of legislation	Not related		**	
Necessity of promoting policy	Not related			**
Necessity of regulating policy	Not related			
Necessity of localized policy				

### 5.4.3. Analysis of Policy Instruments on Trust-building and Business Growth

Phase 2 investigates the relationship between perceived effectiveness of policy instruments, trust-building, willingness to use, potential growth in markets and the impact on existing business. The model in Figure 5.4.2 provides a good model fit with RMSEA smaller than 0.08 ( $\chi^2(145) = 489.543$ ,  $P < 0.01$ ; RMSEA = 0.076, CFI=0.775; TLI=0.734). The results of SEM are presented in the following Figure 5.4.2 and Table 5.4.5.

**Figure 5.4.2. Structural Equation Model and Estimates of Phase 2**



**Table 5.4.5. Summary of Structural and Measurement Model Estimates of Phase 2**

	Std.Coeff.	Std.Err	z-value	P-value	Sig.
<b>Structural Model Estimates</b>					
Ordinance → Trust by promoting policy	0.226	0.049	4.59	0.000	***
Dedicated team → Trust by promoting policy	0.028	0.051	0.53	0.593	
Publicizing → Trust by promoting policy	0.092	0.051	1.78	0.075	*
Public campaign → Trust by promoting policy	0.132	0.052	2.52	0.012	**
Trust mark → Trust by promoting policy	0.214	0.050	4.27	0.000	***
Tour business → Trust by promoting policy	0.042	0.052	0.82	0.415	
Based on research → Trust by promoting policy	-0.002	0.054	-0.03	0.977	
Taxation → Trust by regulating policy	0.122	0.046	2.64	0.008	***
Penalty → Trust by regulating policy	0.293	0.051	5.79	0.000	***
Guidelines → Trust by regulating policy	0.076	0.052	1.47	0.143	
Special zoning → Trust by regulating policy	0.048	0.045	1.07	0.286	
Government controls → Trust by regulating policy	0.209	0.050	4.17	0.000	***
Trust by promoting policy → Willingness	0.209	0.061	3.45	0.001	***
Trust by regulating policy → Willingness	-0.002	0.062	-0.04	0.972	
Trust by reviews and rating system → Willingness	0.125	0.056	2.23	0.025	**
Trust by platform insurance → Willingness	0.084	0.066	1.26	0.206	
Trust by guests & hosts' insurance → Willingness	0.252	0.064	3.93	0.000	***
Willingness → Potential Growth	0.883	0.054	16.42	0.000	***
Potential Growth → Existing business	0.729	0.095	7.66	0.000	***
<b>Measurement Model Estimates</b>					
Willingness → Willingness to be guests	0.690	0.050	13.75	0.000	
Willingness → Willingness to be hosts	0.576	0.051	11.32	0.000	
Potential Growth → Sharing economy	0.709	0.030	23.75	0.000	
Potential Growth → Tourism	0.789	0.025	31.22	0.000	

Potential Growth → Integrated service	0.763	0.027	28.52	0.000	
Existing business → Complicits	0.256	0.055	4.64	0.000	
Existing business → Service quality	0.809	0.102	7.91	0.000	

Note:  $\chi^2(145) = 489.543$ ,  $P < 0.01$ ; RMSEA = 0.076; CFI=0.775; TLI=0.734

The promoting policies significantly affect trust-building with ordinance (H3a) at  $\alpha = 0.01$ , publicizing (H3c) at  $\alpha = 0.05$ , public campaign (H3d) at  $\alpha = 0.05$  and trust mark (H3e) at  $\alpha = 0.01$ . The legalized accommodation sharing provides reliable hospitality to guests and local ordinance and governments' publicizing promote accommodation sharing and government policy programs, but individuals might have many inquiries and complaints about accommodation sharing if each city and country can establish different localized laws and regulations based on local context. Although people perceive that having a dedicated team (H3b) does not significantly improve trust in accommodation sharing, the teams would help to stabilize legal transactions and help guests to use easily accommodation sharing by clarifying inquiries or compromising upon complaints from the neighbors.

The government initiatives of developing tourism in unpopular areas (H3f) do not also affect trust-building, but many governments cooperate with accommodation platforms in order to develop local tourism businesses and explore attractive local touristic resources. For instance, during Pyeongchang Olympic Games, governments establish special zoning to allow accommodation sharing as a type of homestay for both Koreans and foreigners. The occupancy rate of accommodation sharing such as Airbnb has been a 260% increase in Pyeongchang area since the Olympic games (Ahn, 2018; Sohn, 2019). In the depopulated areas, the tourism business in connection with accommodation sharing could be a good opportunity to provide business opportunities to local communities.

The study finds that the policies based on research (H3g) also do not affect trust-building. However, people perceive the necessity of localization and the localized policies should be established by considering the local situations. The researches can provide a better understanding of the local market and the research results can be reflected in local policies to improve the effectiveness and efficiency of policy implication and local business.

Table 5.4.6 shows the comparison of estimates between SEM and regression analysis. The result shows the consistent direction and the significance level. Based on the standardized coefficient indicates that people perceive the ordinance and trust marks are the most effective promoting policies, compared to others.



**Table 5.4.6. Comparison between SEM and Regression Analysis of Promoting Policies**

	SEM Std.Coeff. (z-value-Sig.)	Regression Std.Coeff. (t-value-Sig.)
Ordinance → Trust by promoting policy	0.226 (4.59 ***)	0.226 (4.44 ***)
Dedicated team → Trust by promoting policy	0.028 (0.53)	0.028 (0.53)
Publicizing → Trust by promoting policy	0.092 (1.78 *)	0.092 (1.76 *)
Public campaign → Trust by promoting policy	0.132 (2.52 **)	0.132 (2.48 **)
Trust mark → Trust by promoting policy	0.214 (4.27 ***)	0.214 (4.14 ***)
Tour business → Trust by promoting policy	0.042 (0.82)	0.042 (0.81)
Based on research → Trust by promoting policy	-0.002 (-0.03)	-0.002 (-0.03)

Note: the outcome of SEM from Table 5.4.5 and the results of regression analysis are separately conducted  $F(4,407) = 23.82$ , R-square = 0.2906.

Among regulating policies, taxation (H4a), penalties (H4b) and government controls (H4e) significantly affect trust in accommodation sharing at  $\alpha = 0.01$  but preparing guidelines for sanitation, firefighting, and other risks (H4c) and special zoning policies (H4d) do not affect trust-building. Taxation, penalty and government controls and supervision are very strong government regulations and individuals perceive the effective to improve trust in accommodation sharing. However, the individual inspections to the rapidly increasing number of accommodation sharing become huge administrative burdens to governments, so well-prepared guidelines can help self-regulation and improve the efficiency of regulating by combining with direct regulations such as imposing tax, penalty and direct government controls. Also, individuals might feel inconvenience if governments regulate accommodation sharing in specific areas where they prefer to stay by the special zoning. Despite some inconvenience, it might be effective to regulate in the areas where are highly competitive accommodation sharing and to protect stable local residential housing from gentrification due to accommodation sharing. By comparing the results from both SEM and regression analysis, the estimates show significant factors consistently with different significance levels. The result in Table 5.4.7 shows penalty and government controls are the most effective regulation than others.

**Table 5.4.7 Comparison between SEM and Regression Analysis of Regulating Policies**

	SEM Std.Coeff. (z-value-Sig.)	Regression Std.Coeff. (t-value-Sig.)
Taxation → Trust by regulating policy	0.122 (2.64 ***)	0.122 (2.60 **)
Penalty → Trust by regulating policy	0.293 (5.79 ***)	0.293 (5.54 ***)
Guidelines → Trust by regulating policy	0.076 (1.47)	0.076 (1.45)
Special zoning → Trust by regulating policy	0.048 (1.07)	0.048 (1.06)
Government controls → Trust by regulating policy	0.209 (3.93 ***)	0.209 (4.06 ***)

Note: the outcome of SEM from Table 5.4.5 and the results of regression analysis are separately conducted  $F(4,409) = 38.56$ , R-square = 0.3204.

This study focuses on policy reactions and impacts of policy instruments, but this study includes reviews and rating systems and insurance for platforms, guests and hosts. This

study investigates that trust-building by several sources can improve the willingness to use accommodation sharing with perspectives of guests and hosts. The study shows the trusts by promoting policies (H5a) and the trusts by guests' and hosts' insurance significantly affect the willingness to use at  $\alpha = 0.01$ , and the trusts by reviews and rating system affect the willingness at  $\alpha = 0.05$ . The trust-building from regulating policies (H5b) and insurance provided by the platform do not significantly affect the willingness. The results show that promoting encourage positively people to access easily accommodation sharing. Regulation may not be effective in attracting people, while it increases trust in reliable accommodation sharing. The MONOVA shows that the willingness of being hosts and guests are related to experiences to stay at accommodation sharing at  $F(2,398) = 23.08$ ,  $P < 0.01$ ; Wilk's lambda = 0.8961, and types of sharing which individuals prefer between entire house and private room sharing at  $F(2,398) = 10.70$ ,  $P < 0.01$ ; Wilk's lambda = 0.949. By comparing means of each group, the willingness to be hosts and guests are higher mean in the groups of people with experience of staying accommodation sharing and with a preference for private room sharing. It explains that individuals become more open-minded after their experience and they also people who prefer to share private room sharing consider positively becoming hosts because the guests have a better chance to understand the role and importance of hosts.

This study finds that the willingness to use accommodation sharing affects potential growth (H6) in sharing economy and tourism industries with integrated services, at  $\alpha = 0.01$ . The growth also affects the existing market (H7) to causes more competition but change the service quality, at  $\alpha = 0.01$ . The more individuals are willing to participate in accommodation sharing as hosts and guests, the more accommodation sharing grows the volume of business in the market and it grows together with other sharing economy businesses closely and provides benefits to tourism industries because people easily access lower and convenience accommodations.

The phase 2 shows that the promoting policies including established ordinances, publicizing, campaigns, and regulating policies including taxation, penalty, and government controls become effective in building trust. According to improvement willingness, promoting policies positively influences the willingness to use. While the regulating policies improve trust in accommodation sharing, it does not improve the willingness of individuals to use accommodation sharing. Also, the study finds that the positive willingness of accommodation sharing contributes growth in sharing economy and tourism, and positively related to existing industries with more competition but the impact on service quality.

## **VI. Study 4: Comparative Study on Policies in Various Societies**

### **6.1. Reviews: Comparative Studies of Policies for Accommodation Sharing**

By mediating the massive scale of accommodation sharing from local residents to other travelers, accommodation sharing becomes strong competitors to traditional accommodation industries. Despite the benefits to societies such as additional incomes to hosts and low priced accommodations to guests, the increasing number of accommodation sharing may cause conflicts with existing industries and incur adverse side effects, including illegal operations, customers' damages, or quality degradation. Also, the large number of short-term accommodation sharing tends to increase the price of real estates and rental fees in the communities (Lee, 2016), so many popular cities such as New York, Paris, Amsterdam, and Barcelona experience gentrification due to the hyper-tourism (Bernardi, 2018; Kerr, 2019). Therefore, governments are concerned with protecting long-term rented housing and residential environments (Dimitrova, 2019) by preparing laws and regulations.

In San Francisco, where the Airbnb started, the city government enacted the Short-Term Residential Rentals Ordinance (Chapter 41A of the San Francisco Administrative Code) in 2014, and the ordinance legalizes short-term rental activities. According to a report by R Street, a nonprofit public policy research institute in the U.S., Moylan (2016) investigates 59 cities in the U.S. that the 21 cities have legal frameworks to legalize accommodation sharing with several different terminologies such as short-term rentals, vacation rentals, and room-sharing. The report also mentioned that each city in the U.S. tends to have different laws and regulations such as banning unhosted accommodation sharing or accommodation sharing in limited zones, based on the local economy, housing market situations, or political attitudes.

This study plans to conduct a comparative analysis of laws and regulations in cities and countries, including types of ordinances, the definition of accommodation sharing from the laws, registration, and other regulatory issues. The fundamental purpose of this comparative study is to contribute to the understanding of the different laws and regulations based on country-specific and to help to establish laws and regulations for other cities and countries where the laws and regulations have not been yet prepared.

### **6.2. Methodology: Selection of Regions**

This study applies the comparative research on laws, regulations, and policies of accommodation sharing across different societies. The cross-country comparisons associated with qualitative and exploratory research explain the differences and similarities among

selected countries (Grand Canyon University, accessed in 2019). This study chooses 16 countries from 36 OECD member countries by comparing the countries where the largest Airbnb cities are on the AirDNA list (Shatford, 2015). The selected countries are included Australia, Austria, Canada, Czech, Denmark, France, Germany, Israel, Italy, Japan, Netherlands, Portugal, Spain, Turkey, U.K, and the U.S.

For the comparison analysis, this study mainly focuses on mainly capital cities or famous cities among travelers if the countries apply city-level laws and regulations. Notably, this study investigates governmental policies and local legislation in terms of the legal framework, limits of days, taxation, penalties, and registration, in each country, by collecting and analyzing contents from various sources such as news articles, research reports, papers, or ordinances.

### 6.3. Analysis of Study 4: Comparative Study on Policies

Among 16 selected countries, each country develops laws and regulations based on government systems between central and local government, and local situations such as economic and social factors, land planning, and local businesses. The policies on accommodation sharing vary in different localities. In the areas with high population density and overheated tourism, the local government implement policies on the regulation of accommodation sharing. Other local governments implement policies on the promotion of accommodation sharing in order to accelerate the local economy with the tourism business.

As this study focuses on the case of Korea, this study states that the sharing economy in Korea in the early stages with rapid growth, but it accounts for an insignificant portion of the Korean economy. The government is required to prepare relevant laws and policies on the sharing economy. Before discussing the policies on accommodation sharing, this study reviews the current status of sharing economy and policy movement in Korea. This study reverts to the subject of accommodation sharing and explore the laws and regulations in various cities and countries and the progress of policy on accommodation sharing in Korea and discuss policy factors to be considered.

#### 6.3.1. Overview of Sharing Economy and its Categories in Korea

Like global trends, the sharing economy in Korea continues to grow. The Bank of Korea (2019) recently estimates that the digital sharing economy between peers grows tenfold from 20 billion won (17 million dollars) in 2015 to 198 billion Won (168 million dollars) in 2018. The Korea Creative Economy Research estimates that the potential market for sharing

economy in Korea would reach 8.5 trillion Korea Won (7.6 billion dollars) by 2025 (Lee, Lee, Jang, & Lee, 2015). However, despite rapid growth, the size of the market for the sharing economy in Korea has been relatively small compared to global growth.

The current volume of the P2P sharing economy becomes approximately 0.01% of GDP in Korea, and the contribution to the national economy seems to be insignificant (Jung, 2019). According to the estimates, the Bank of Korea only includes accommodation sharing (Airbnb), car-sharing (car-pooling service), and skill-sharing (freelancers, etc.). The actual volumes of the sharing economy can be larger if the estimates include other P2P, B2C, and G2C sharing activities such as space, bike, tools, and other goods. However, accurate estimates of the sharing economy in Korea are difficult to measure without a generally accepted definition of the sharing economy in the local context.

Some city governments attempt listing up the sharing activities in their communities. Currently, the cities of Seoul, Suwon, and Sunghnam operate the government-supported platforms for the sharing economy and introduce the local supports and government programs. However, the lists of sharing economy start-ups and activities on the platform can not help estimating the volumes of the sharing economy because many services are overlapped and government platforms include public assets and services such as community centers with sports facilities, public parking lots, or delivery pick-up spots. For instance, ShareHub, an online platform operated by the Seoul Metropolitan Government, introduces 97 appointed sharing services in the five sectors including space, talent, goods, mobility, and knowledge. The platform contains news and policies related to the sharing economy and a map of available sharing services. The list of sharing economy services updated on the Share Hub is shown in Table 6.3.1. and the lists of sharing economy businesses help to understand the current market of the sharing economy in Korea.

**Table 6.3.1. List of Sharing Service on the Share Hub in Seoul**

	Category	Lists of companies and organization (Project names)
1	Goods	CLinformet (i-baby), Reasons (Sharemom), Affix (Picksell), Lightshare, Hiddenbook, SSOCIO, HelloMarket, Kiple, Living Art, The Open Closet, Jarakdang (Market In U), EunPyeong E-Poomasi
2	Space	Capus Stay, Antena, School Sharing, Toadhousing, Star Parking, Pajeori, Mata Company (Matazoo), Prvahour, Shareus, Ruach, Bnb Hero Korea, Somestay Korea, Kozaza, Woozoo, Moduparking, Local Design Movement, Blank, Honghap Valley
3	Talent	Humming b, Teamsquare, Day Graphy, Art Trip, Frip, BM (Beyond Maeul), Beum & Chaum, Busking Play, Auditory Universal Design, Xvision Technology, Liberabit (letter and records), Wishket, Joinus Korea
4	Knowledge	Flyers, IGONG alternative visual culture factory, Yesform, Dreaming Loft, Creative Commons Korea, Play Planet, Readt & Start (itdaa), Onoffmix, IndieCF
5	Mobility	Maas Korea, Hancom Mobility, Green Car, Car sharing Korea (CARSSUM), SOCAR, Last 30 min (Ithca), ARS Parking

Source: [http://sharehub.kr/shareenterprise/shareenterprise\\_list.do](http://sharehub.kr/shareenterprise/shareenterprise_list.do) and not all 97 entities are listed on the site.

As the sharing economy services become popular for individuals and various start-ups provide diverse sharing services, so it is important to list and estimate sharing economy in Korea so that the government can prepare policies on promotion and regulation based on legal background.

#### 6.3.1.1. Progress of Policies on Sharing Economy in Korea

At the early stage of sharing economy in Korea, Kang & Choi (2013) stated that sharing economy is concerned whether people are willing to share their own goods and service with others due to the virtue of private property rights and the lack of intention to use sharing economy services, trust and reputation, and legal framework in Korea. Therefore, the roles of local governments become important to educate the culture of sharing economy and to attract people to participate in sharing economy. Local governments take initiatives in delivering G2C (government to citizens) sharing services such as bike, office space and vehicle sharing. For a good example of space sharing, Seoul Metropolitan Government provides large conference and banquet hall for citizens to use own events. Not only local government, government-affiliated organization and public enterprises operate sharing services. Korea Land & Housing Corporation provides Nanum Car (car sharing) for low-income residents in public rental housing.

Apart from government initiatives of sharing service, local governments should prepare a legal background in order to foster the sharing economy. In 2012, the Seoul Metropolitan Government declared ‘Sharing City, Seoul’ and started to provide administrative supports to appointed sharing start-ups and organizations, based on the local ordinance on sharing economy. Among 226 municipalities in Korea, Seoul, and other 63 local governments establish ordinances for sharing economy. The ordinances discuss the purpose of the ordinance, the definitions of sharing, sharing organization and sharing business, the function of the committee, the establishment of master plans, the process of designating sharing service organization and business, the support center and operations and more.

By reviewing the 63 local ordinances from the website, called Enhanced Local laws and Regulations Information System, this study clarifies that the purpose of the ordinances is to foster sharing economy in municipalities by improving efficiency to utilize local resources and motivate active participation in sharing economy among residents, so sharing economy can contribute local economy and build community culture. The ordinance defines that sharing or sharing economy is activities to create the social, economic, and environmental values to the

communities and to improve convenience for residents by using space, goods, talents, experience, and things with other residents.

The local ordinance also states about administrative and financial supports. Local governments can provide administrative supports to designated sharing organizations and enterprises based on laws such as Assistance for Non-Profit and Non-Government Organization Act, Civil Code, Small and Medium Enterprises Act. The consultative committee of facilitating sharing economy establishes the qualification and the process to designate sharing organizations and enterprises for financial or administrative supports. The committee provides advice on policies for local governments. In order to facilitate various sharing economy projects and businesses in each community, local ordinances focus on how to promote the sharing economy, instead of mentioning how to regulate. The detailed contents of local ordinances are summarized in Appendix H.

Despite the local ordinance, the laws on the sharing economy with the national level have been proposed by members of the national assembly in 2018. Unlike existing traditional business, the activities of the sharing economy are provided across sectors based on the high individual participation in both supply and demand sides. The existing laws cannot fully define and regulate the sharing economy. In order to clarify the difference between traditional business and the sharing economy, the proposed law specifies permanent and temporary providers in the supply sides of the sharing economy. The temporary providers are defined with the relatively low amount and frequency of transactions in each industry and applied favorable regulations, compared to permanent providers. However, permanent and temporary providers cannot be clearly distinguished (Seok, 2018). The proposed law also states the qualification and responsibility of platforms as intermediaries to protect both supply and demand sides to prevent the information asymmetry.

Based on the review report about the proposed laws by the Strategy and Finance Committee, Seok (2018) posits the necessity of laws and regulations because the growth of the sharing economy causes severe conflicts against existing industries due to the absence of law and regulation. For instance, car sharing has severe conflict against the taxi driver association because the association claims that car sharing violates the current Passenger Transport Service Act. Also, hotel and hostel business concerns that accommodation sharing operates a hospitality business without applying Public Health Law, and Tourism Promotion Act. However, the proposed law should be elaborate on the sharing economy with related industries.

Along with the legal discussion, the Korean Government acknowledges the necessity of preparing legal framework and policies and eliminating entry barriers from current laws and

regulations. According to the perspective of temporary providers with idle assets, the current regulations are stringent to regulate incumbents in related fields, so the policies and regulations are required to be revised and eased for the temporary providers as long as maintaining fairness and minimizing the damages of incumbents. For the workers and individual providers in sharing economy, the government states social protection workers' compensation insurance because they may involve in informal sectors. Also, the government adds simple taxation guidelines in consideration of taxpayers' convenience and administrative burdens. (Ministry of Economy and Finance, 2019)

Koo, a lawyer in Korea, stated at the forum on 'Innovation Growth and the future of Digital Korea' that Korea has too many laws and regulations including invisible legal references (Sohn, 2018). The government attempts to solve the regulatory barriers which make it difficult for innovative products or services such as sharing economy to respond promptly. One of the alternatives to overcome the regulatory barriers can be 'Regulatory-Sandbox.' Regulatory Sandbox was introduced by the Financial Conduct Authority in the UK in 2016 to allow both startups and business to roll out and test new ideas, products and business models (Fenwick, Kaal, & Vermeulen, 2017).

In Korea, the regulatory sandbox can be applied for innovative products and services beyond current laws with three services in the following cases: i) quick legal check-in 30 days whether related regulations exist; ii) temporary authorization for products and services with secured stability, but with ambiguous legal regulations; iii) special permits to allow a trial test for the products and service for four years once every two years if the regulation is ambiguous or unreasonable (Kim, 2019). At the fourth ICT Regulatory Sandbox Deliberation Committee in 2019, it has been decided that several sharing businesses such as transportation and kitchen sharing would be applied regulatory sandbox (National IT Industry Promotion Agency, 2019). Currently, the taxi-ride sharing in meters and kitchen sharing operate their service under the regulatory sandbox (Kim, 2019). Although it currently applies to some limited areas, it provides opportunities to other types of sharing economy to enter the market and to verify social and economic values of sharing economy.

### 6.3.2. Analysis of Policies on Accommodation Sharing in Various Countries

Unlike existing traditional industries, the sharing economy provides services across industries and includes peer providers and professional business providers. A unilateral law on the sharing economy can not control all transactions of the sharing economy in various fields. Many cities and countries have specified legislations to particular sharing activities in each



related field based on the local context This study focuses on the policies and laws on accommodation sharing in detail.

#### 6.3.2.1. Legislation

##### *Establishment of Law on Accommodation Sharing in Various Cities in Countries*

Governments in various cities prepare new laws on the short-term rental or revise existing laws on housing or tourism in the city or country level to deal with the existing number of P2P accommodation sharing (Refer to Table 6.3.2). For example, the San Francisco city government introduces the Administrative Code Chapter 41A in 2015, so-called ‘Short-Term Rental Ordinance.’ New York City regulates accommodation sharing under several local regulations such as New York Administrative Code for business licensing, the Multiple Dwelling Law for incidental and occasional occupancy, New York City Zoning Resolution for transient rental building location (Airbnb, accessed in 2019; Dobbins, 2017). Also, some countries consider accommodation sharing highly related to travel industries, so regulations of accommodation sharing belong to a part of the tourism acts such as laws in Barcelona, Rome, and Vienna. In the case of Paris, Amsterdam, and Denmark, both laws on tourism and housing regulate accommodation sharing.

Legislation importantly defines the legality of accommodation sharing and responsibilities of participants such as hosts’ registration and taxation, data disclosure from the platforms. For instance, the City of Toronto Municipal Code Chapter includes detailed definitions of terminologies related accommodation sharing, the requirement of registration and license, prohibition on unregistered short-term rentals, a procedure to apply for a license or its renewal, complaint procedure, and inspection guidelines. Unlike cities with a single law on short-term rentals, the City of New York restricts the unhosted short-term rentals less than 30 days for Class A dwellings (i.e. a multiple dwelling that is occupied for permanent residence purposes) based on the New York State Dwelling law. Accommodation sharing is possible only in the residential area based on the New York City Zoning Resolution. The New York City Administrative Code (ADC) guides the process of registration and licensing of transient use for the short-term rentals to provide the accommodations sharing.

The importance of legislation is that these laws define short-term legal rentals for accommodation sharing and distinguish from illegal transactions. Based on the legislation, this study continues to investigate the definition of accommodation sharing and critical factors of regulations.

**Table 6.3.2. The lists of laws on Accommodation Sharing**

Types	City/Country	Name of Laws
Short-term rental (city level)	San Francisco	San Francisco's Short-Term Rental Ordinance (Administrative Code Chapter 41A)
	London	Private Members' Bill (under the Ten-Minute Rule) Short and Holiday-let Accommodation (Notification of Local Authorities) Bill 2017-19
	New South Wales	Fair Trading Amendment (Short-term Rental Accommodation) Act 2018 (NSW)
	Toronto	Code Chapter 547, Licensing and Registration of Short-term Rentals
Short-term rental (country level)	Japan	Private Lodging Business Act (New Private Lodging Business Act), so-called Japan's 'minpaku' law
Housing	New York	NYS Multiple Dwelling Law NYC Administrative Code New York City Zoning Resolution
	Berlin	Gesetz über das Verbot der Zweckentfremdung von Wohnraum (Zweckentfremdungsverbot-Gesetz - ZwVbG) : Law on prohibiting the misappropriation of housing Verordnung über das Verbot der Zweckentfremdung von Wohnraum (Zweckentfremdungsverbot-Verordnung - ZwVbVO) : Ordinance prohibiting the misappropriation of housing
Tourism (city-level)	Cataluña/ Barcelona	DECRET 159/2012, d'establiments d'allotjament turístic i d'habitatges d'ús turístic (Oficina Virtual de Tràmits, 2019) DECREE 159/2012, of tourist accommodation and tourist accommodation establishments (Virtual Procedures Office, 2019)
	Rome	Italy's National Tourism Code and Legislative Decree no. 79 Regional Regulation No. 8 (New regulation of non-hotel accommodation facilities)
	Vienna	Landesrecht konsolidiert Wien: Gesamte Rechtsvorschrift für Wiener Tourismusförderungsgesetz (Consolidated state law Vienna: Entire legal provision for the Vienna Tourism Promotion Act)
Tourism (country level)	Turkey	KBS (Kimlik Bildirim Sistemi) Guest Registration GIYKIMBİL (Geçici İkamet Yerleri ve Kimlik Bildirme Projesi/Temporary Residency and Identity Notification Project)
Housing and Tourism (city level)	Paris	Articles L.631-7, Code de la construction et de l'habitation (Articles L.631-7, Construction and Housing Code) D.324-1 Code du tourisme (324-1 Tourism Code)
	Amsterdam	Regels toeristisch verhuur van woningen (vakantieverhuur) (Rules Tourist rental of houses (holiday rental), Huisvestingsverordening Amsterdam 2016 (2016 Amsterdam Housing Regulation)
Housing and Tourism (country level)	Denmark	Boligreguleringsloven og lov om udlejning af fast ejendom til ferie- og fritidsformål m.v. og campering m.v. regulerer (Lovændring på vej pr. 1. maj 2019) (The Danish Business Authority, 2019) : The Housing Regulation Act and the Act on letting real estate for holiday and leisure purposes and camping, regulate (Legislative amendment on the way as of 1 May 2019)

Note: for languages other than English, the titles are translated in English.

### *Legal Status of Accommodation Sharing in Korea*

Accommodation sharing in Korea is significantly related to the Tourism Promotion Act and Rearrangement of Agricultural and Fishing Village Act for P2P accommodations. The Tourism Promotion Act and its enforcement ordinance specify types of peer accommodations such as homestays for foreigners in urban areas and experience of Korean traditional house 'Hanok' in order to provide a cultural experience. The Rearrangement of Agricultural and

Fishing Villages Act specifies homestays in farming and fishing villages. Self-caring accommodations in Korea operate with business and legal purposes under different laws. The laws are related to foreign guests, traditional houses ‘Hanok’, and location in rural areas, so P2P accommodation sharing for Korean domestic travelers in urban areas has not been defined under any law. The Tourism Promotion Act is proposed to include the homestays for Koreans in urban areas.

Except for the experience of Korea traditional house, most of the entire house sharing in Korea is illegal due to the lack of legal background. However, the distribution of Airbnb in Korea shows that the majority of registered accommodation sharing is the entire house sharing, in Table 4.2.1. The distribution of Airbnb in Korea shows that the sharing of entire houses are about 56% (41,213 houses registered), the types of private room is 37% (26,706 rooms registered), and types of shared room is 7% (5,226 rooms registered) of total registered accommodation in 2018 (73,145 registered accommodations). The occupancy rate of accommodation sharing is significantly influenced by sharing types and the result explains the preference of individuals on entire houses, shown in Table 4.5.1 and Table 4.5.2.

**Table 6.3.3. List of Accommodation Types Similar to Accommodation Sharing**

	homestay for foreigner in urban areas	experience in traditional Korean houses	homestay in farming and fishing villages	homestay in urban areas (Proposed)
<b>Law</b>	the Tourism Promotion Act **		the Rearrangement of Agricultural and Fishing Villages Act ***	<b>the Tourism Promotion Act</b>
<b>Target</b>	Foreign travelers	Both Korean or foreign travelers		<b>Korean</b>
<b>Property</b>	House, apartment A sort of multiple dwellings (equal or smaller than 230 m <sup>2</sup> )	Hanok only	House (equal or smaller than 230 m <sup>2</sup> )	<b>House only (will be specified)</b>
<b>Portion of property</b>	Partial	Entire/Partial	Partial	<b>Partial</b>
<b>Host</b>	Primary residents *	No need to present during guests' stay An owner or main tenants	Primary residents	
<b>Days of Limit</b>	No specific day limit			<b>180 days</b>
<b>Location</b>	City	No specified	Farming/ fishing village	<b>City</b>

\*. A primary residence is a person who actually lives in the residential property to share.

\*\*. Ministry of Culture, Sports and Tourism. (revised in 2019) Enforcement Decree of the Tourism Promotion Act.

\*\*\*. Ministry of Agriculture, Food and Rural Affairs, and Ministry of Maritime Affairs and Fisheries. (revised 2013 and 2019). Rearrangement of Agricultural and Fishing Villages Act. Retrieved from National Law Information Center.

Accommodation sharing in urban cities in Korea has been operated under the Tourism Promotion Acts and some of accommodation sharing might be still illegal in Korea, so the government should prepare the revision of laws on accommodations for Koreans and regulations against illegal accommodation sharing by considering host and property qualifications, or possible conflicts against other current laws related to housing and health. The policy instruments to secure and improve the reliability of accommodation sharing would be established based on legal background, so appropriate legislation is most fundamental.

#### 6.3.2.2. Policy on Definition of Accommodation Sharing

##### *Legal Definitions of Accommodation Sharing in Various Cities*

According to a legal perspective, various terminologies describe accommodation sharing such as short-term rental, furnished tourist property rental, short and holiday-let accommodation, private holiday rental, local lodging, tourist accommodation, or private lodging. For example, the San Francisco Rental Ordinance (Administrative Code Chapter 41A) defines that a short-term residential rental is a rental of all or a portion of a home for periods of less than 30 nights. In this definition, accommodation sharing is specified by three factors: i) an actual residential property; ii) the entire property or a portion of the house such as private rooms; iii) days of rentals. The definitions are summarized in Table 6.3.4.

The legal definitions differentiate accommodation sharing from long-term residential rentals or the existing accommodation business such as hotels and hostels. Most of the definitions emphasize to restrict certain consecutive days of renting for accommodation sharing. According to the defined period, a single booking for more than consecutively 30 days or defined days considers as the general housing rental business, not types of accommodation sharing.

**Table 6.3.4. The List of Definition of Accommodation Sharing**

<b>City/Country</b>	<b>Definition</b>
San Francisco	A short-term residential rental is a rental of all or a portion of homes for periods of less than <b>30 nights</b> (City & County of San Francisco; accessed in 2019)
New York	In New York City, the term ‘short-term rental’ refers to renting for any period shorter than <b>30 days</b> (City of New York; accessed in 2019.)
London	If individuals are considering letting the property for fewer than <b>90 consecutive nights</b> , but the cumulative total of all short-term lets of the property exceeds 90 nights in the same calendar year (i.e. 1 January to 31 December), hosts will need planning permission (City of London; accessed in 2019)
Cataluña/ Barcelona	A tourist dwelling is the one that is offered, by the owner, directly or indirectly, to third parties, for a price, for periods of time <b>equal to or less than 31 days</b> . It must be legalized by the corresponding city council (Government of Catalonia; accessed in 2019)
New South Wales	commercial arrangement for giving a person the right to occupy residential premises for a period of <b>not more than 3 months at any one time</b> (New South Wales Government, 2018)
Toronto	All or part of a dwelling unit used to provide sleeping accommodations for any rental period that is less than <b>28 consecutive days</b> in exchange for payment and includes bed and breakfasts but does not include hotels or motels (City of Toronto, 2017)

Note: among 16 counties, this table includes the definitions written in English.

In the case of Paris, the scheme of categorizing accommodation is very specified. For instance, in terms of taxation, individuals or commercial experts have annual revenue limit based on the categories of unraked furnished accommodations, ranked furnished accommodations or bed and breakfast, partial rentals of primary residences, professional bed & breakfasts (Airbnb, accessed 2019). The furnished tourist property provides accommodation sharing for certain numbers of available operating days, depending on the primary or secondary residence. The primary residence is the place the owner or tenant lives at for at least eight months per year, and a secondary residence is a place where they live for less than four months a year.

In the case of San Francisco, the city government requires the qualifications of permanent residents. If citizens who are willing to operate short-term rentals, they must be the permanent resident of the unit. The permanent resident means that the individuals spend at least 275 nights a year in the unit where to host short-term rentals (City & County of San Francisco; accessed in 2019).

The definition of accommodation sharing describes who can provide (permanent residents), which properties are available (primary or secondary residence, types of properties such as house, villas, apartment), and how long can operate for short term rentals (shorter than 28 nights, 30 nights, or 90 nights). Based on the laws and definitions in Table 6.3.2 and Table 6.3.4, this study will look into the way for hosts to provide legal services with proper

registrations. Accommodation sharing is defined based on different legal backgrounds. The laws and regulations aim to protect the local housing market and to promote tourism.

### *Legal Definitions of Accommodation Sharing in Korea*

Accommodation sharing in Korea has been developed as P2P accommodations similar to homestays. Under the Tourism Promotion Act, homestays for foreigners in urban areas and experience of Korean traditional house ‘Hanok’ are defined and homestays for Koreans in urban areas are proposed. The definition of homestays for foreigners in urban areas is a cultural exchange program to provide accommodations and foods for foreign travelers to experience the local culture while staying together with local hosts. The experience of Hanok means that both foreign and domestic guests can stay in the entire or portion of the traditional Korean houses and experience food and local housing culture. The proposed homestays for Koreans in urban areas expand the scope of guests to Korean users. Under the Rearrangement of Agricultural and Fishing Villages Act, homestays in farming and fishing villages provide business opportunities to generate additional incomes by offering their spare rooms.

Compared to the definition of similar terminologies to accommodation sharing such as short-term rental, home-sharing, vacation rental, and private lodging in various countries, accommodation sharing defines the status of primary residence, a proportion of sharing space, days of rentals. For instance, the City of San Francisco defines that a short-term rental is a rental of all or a portion of homes for periods of less than 30 nights by permanent residents. In Korea, most accommodation sharing may prohibit entire house sharing. Hosts should present while guests stay in their property, except staying at the Korean tradition house (i.e. hanok). Also, accommodation sharing has not defined any restriction to the consecutive rental periods.

The registered accommodation sharing for the entire houses on the platform needs to be checked the legal status. The government should regulate and supervise illegal accommodation sharing for fair competition with existing industries such as hotels and for the protection of guests with secured accommodations.

### 6.3.2.3. Policy on Business Registrations/Permits/Certificates

#### *Requirements of Registration/Permits/Certificates for Legal Operations in Various Cities*

According to the registration, each government requires to register accommodation sharing or to obtain permits, certificates, or licenses, at least one of them, shown in Table 6.3.5. The registration helps to secure the guests to stay proper places and to supervise hosts efficiently whether they provide legal operations as well as proper tax reporting.

In San Francisco, the city government asks hosts to obtain both a business registration certificate from the Office of the Treasurer & Tax Collector and a short-term rental host certificate from the Office of Short-Term Rentals (City & County of San Francisco; accessed in 2019). Business registration is necessary to hosts of accommodation sharing, but it does not mean that accommodation sharing treats the same as business entities like hotels. Danish government requires to register if hosts provide entire properties for primary and secondary residences, but do not require to register if they offer private rooms for the short-term rentals (Medium, 2019; Erhvervsstyrelsen, accessed in 2019). The scope of registration is related to the definition of accommodation sharing on the laws. In the case of London, only renting an entire home for more than 90 days in a year is required the permit (Medium, 2019).

For the process of registration of the short-term rentals, hosts need to check the purpose of the buildings. For example, in New York, the building should be titled as transient use for accommodation sharing. Otherwise, the hosts or owners should change from long term residential properties to transient rental use in New York (Goldfeder, 2018). In Turkey, hosts should acquire licenses for accommodation sharing, but apartments are difficult to be licensed, compared to houses. In New York in the U.S. and New South Wales in Australia, multiple dwelling as buildings with numbers of households are restricted to operate accommodation sharing. Compared to other countries, Japan has relatively easy to register and operate accommodation sharing under the newly introduced laws on private lodging. Hosts in Japan require to register a private lodging service whether the property is primary or secondary residence regardless of property types such as a house, apartment, or other types. Also, hosts can rent out entire or partial properties (Japan Tourism Agency, accessed in 2019).

Although hosts are willing to operate accommodation sharing, governments can control the number of registered accommodation sharing without releasing any license to new entrants. By controlling the number of short-term rental in the area, governments attempt to avoid side effects from the increasing numbers of accommodating sharing such as lack of affordable rentals or losing authentic local culture. In Barcelona, the city government has not released any new license since 2014 (Cromarty & Barton, 2018).

**Table 6.3.5. The List of Required Registrations**

City/Country	Registration/Permit/Certificates
San Francisco	Obtain a Business Registration Certificate from the Office of the Treasurer & Tax Collector Obtain a host <b>certificate</b> (valid for 2 years) from the Office of Short-Term Rentals (City & County of San Francisco; accessed in 2019)
New York	A change of occupancy from long-term residential to <b>transient rental use</b> requires amendment of the <u>certificate</u> according to New York City Admin. Code Section 28-118.3.3 (Fishman, 2019; Goldfeder, Short-term Rental Regulations in New York City, NY, 2018)
Paris	<b>Registration</b> is not necessary if only offering private rooms for short-term rental, but is <b>necessary if renting an entire property</b> , and if the property is a primary or secondary residence (Medium, 2019).
London	Renting an entire home for more than 90 days in a year is <b>require the permit</b> (Medium, 2019).
Cataluña/ Barcelona	Short-term lettings must obtain <b>a license</b> (“Cèdula d’habitatitat” certificate) for the concept of housing for tourist use from the City Council (Cromarty & Barton, 2018; Goldfeder, 2018), although no new licenses have been issued since 2014.
Denmark	Whole permanent residence for holiday and leisure purposes etc. requires the owner of the dwelling to <b>obtain the consent of the local council</b> , but rental of part of the home for holiday and leisure purposes, etc. does not require the consent of the local council. (Erhvervsstyrelsen; accessed in 2019)
New South Wales	require this <b>registration</b> if intend to establish or operate short term accommodation (Australian Business Licence and Information Service (ABLIS), accessed in 2019).
Amsterdam	Tourist rentals (holiday rental and bed & breakfast) need to <b>be registered</b> at the municipality office. (Gemeente Amsterdam; accessed in 2019)
Istanbul	Hosts in Istanbul must have a tourism operation <b>license</b> (Vergi Levhasi). simple to get for a house but not for an apartment (Murray, 2018).
Toronto	No person shall carry on the business of a short-term rental operator unless they have registered as such with Municipal Licensing and Standards based on the City of Toronto Municipal Code Chapter 547, <b>Licensing and Registration of Short-term Rentals</b> (City of Toronto, 2017).
Portugal	require registering properties with the authorities as a Local Lodging establishment (Alojamento Local) (Turismo de Portugal, accessed in 2019)
Japan	A person who intends to operate a Private Lodging Business is required <b>to notify</b> the prefectural governor or similar, stating an intention to operate such business (Japan Tourism Agency, accessed in 2019).
Vienna	People in Vienna who rent out spare rooms or apartments for short-term stays on sharing economy platforms such as Airbnb or Craigslist must now register with the city - even if they only rent out a room occasionally on a private basis and not as a business (The Local, 2016).

Based on proper registration, governments identity accommodation sharing to inspect and supervise accommodations and the service, including sanitation, security, and safety. Also, tax authorities estimate the distribution of accommodation sharing to impose adequate taxes. The registration number should be displayed on the platforms, so guests can access legal forms of accommodation sharing and less likely motivate to use unregistered accommodations.



### *Requirements of Registration for Accommodation Sharing in Korea*

All P2P accommodation sharing in Korea have to be registered in municipality offices. In the case of homestay for foreign travelers in urban areas, the current regulation requires that hosts submit application forms with business plans and documents related to properties (Ministry of Culture, Sports and Tourism, 2016). After submitting the relevant documents, the government officers conduct field inspections to check the status of actual residence of hosts, the condition of properties, safety, and hygiene. The registration certificates are issued if the applicants are qualified for requirements (Seoul Metropolitan Government, 2014; Korea Tourism Organization, 2017). The process of traditional Korean house ‘Hanok’ experience is almost the same as the process of homestay for foreign travelers. The only additional requirement of the homestay for foreign travelers includes a certain level of foreign language service.

According to the registration process in several countries, each society has different levels of registration requirements. In Korea and New York, only portions of residential properties are legally permitted such as private room sharing with business registration numbers and are required to be registered. Unlike Korea, private room sharing is not required to obtain legal consents or permits from municipal governments in many cities such as Paris, Berlin, and Denmark. Many governments mandate to register only entire house sharing. In Korea, P2P accommodation sharing is not restricted by the Public Health Acts as other hospitality business is controlled by the regulation. However, still the registrations for operating services are stricter than homestays and accommodation sharing in many cities. As the number of P2P accommodation sharing becomes popular, the government should consider relaxing the registrations for reducing entry barriers, but at the same time to establish another regulation to secure accommodation sharing for both guests and hosts. However, these government control and supervision of accommodation sharing cost significant administrative expenses. With limited administrative personnel and resources, governments face difficulties to crack down illegal accommodation sharing and supervise legal operations (Beck, 2018). Therefore, the government should determine the adequate level of registration requirements and closely work together with platforms and hosts based on detailed guidelines for improving the effectiveness of self-regulation.

#### 6.3.2.4. Policy on Limitation of Operating Days

##### *Regulation on Maximum Operating Days for Accommodation Sharing in Various Cities*

The definition of accommodation sharing has a clear condition of period of rentals less than a certain number of days such as 30 days or 90 days upon a single reservation (refer to 6.3.2). At the same time, many governments define the maximum days of P2P accommodation sharing per year. For instance, In San Francisco, a host can provide accommodation sharing for a maximum of 90 days in a year if the hosts are permanent residents who live in her/his primary residence for 275 days at least.

The maximum operating days are defined based on mainly two factors: i) the status of a primary or secondary residence, ii) an entire property or a proportion of sharing space. In terms of the status of a primary or secondary residence, in Paris, a primary residence is a place where an owner or the main tenant lives for at least eight months per year, and a secondary residence is a place where he/she lives for at least four months in a year. In the case of a primary residence, a host can provide accommodation sharing for a maximum of 120 days in a year; whereas, in a secondary residence, a host can provide the service for an unlimited number of days.

According to the existence of host, entire house sharing has more strictly regulated than private room sharing. In London, hosts can provide entire properties for a maximum of 90 days in a year, but a portion of the properties such as room sharing for unlimited days. In Sydney, a host may use his/her residence for short-term holiday letting the whole year if a host presents, but only possible to provide short-term letting up to 180 days if a host is not present. In Toronto, a host provides an entire unit rental for no more than 180 days but one or more rooms in a property for the unlimited number of nights per year. However, entire house sharing can be completely banned in some other cities such as the City of New York. Accommodation sharing in New York is legally permitted only if hosts must present during the stays of guests. However, in Japan, hosts can provide the services only 180 days with registration regardless of the portion of sharing properties. The cities and countries such as Turkey and Portugal have no restrictions on maximum operating days, so hosts in these countries can operate accommodation sharing for unlimited days as long as completing adequate registration or holding qualified permits.

Some governments have a flexible policy to control the maximum operating days by considering the supply and demand of tourist accommodations and the condition of housing markets (Wachsmuth & Weisler, 2018; Füller & Michel, 2014). In Amsterdam, it was initially

accepted to rent out for 60 days, but the number of maximum days decreases to 30 days since 2019. However, the Danish government provides more flexibility to operate accommodation sharing, so hosts in Denmark extend maximum days of accommodation sharing for 100 days with government permits, although the law allows providing 70 days.

**Table 6.3.6. The List of Maximum Days of Accommodation Sharing**

City/Country	Number of Days
San Francisco	Rent entire or a portion of the unit for less than 30 consecutive nights without host existence for a <b>maximum of 90 nights</b> per the calendar year. Rent for less than 30 consecutive nights with host existence for an <b>unlimited number of nights</b> per the calendar year. (City & County of San Francisco; accessed in 2019)
Paris	If a principal residence, short-term lettings up to <b>120 days</b> a year. As for secondary residences and private rooms, they can be short-term rented with <b>no limit</b> (Medium, 2019).
London	Short-term rent entire home <b>for 90 days of the calendar year without a permit. No limit</b> to the number of days renting out a portion of own home (Medium, 2019).
Cataluña/ Barcelona	habitatge d'ús turístic (HUT: tourist accommodation): periods equal to or less than 31 days for a <b>maximum period of 4 months</b> per year (not consecutive) (Novoa, 2015)
Madrid	According to business registration, the regulation requires business registration for a <b>holiday rental for more than 90 days</b> (O'Sullivan, 2019).
Denmark	The municipality may decide to withdraw the 70 days up to a <b>maximum of 100 days. No night limits</b> on sharing private rooms and summer houses (Airbnb; accessed in 2019).
New South Wales	If hosts are present, they may use their home for short-term holiday letting <b>all year</b> . When the host is not present, the residence may only be used for short-term holiday letting up to <b>180 days in Greater Sydney</b> (Keighran, Abba, & Prime, 2018).
Amsterdam	entire home (holiday rental) for a <b>maximum of 30 nights</b> per the calendar year from January 2019 (Gemeente Amsterdam; accessed in 2019).
Toronto	No operator shall rent a property as an entire-unit rental for a total of more than <b>180 nights</b> per the calendar year. Operators can rent one or more rooms in a unit and one secondary suite for an <b>unlimited number of nights</b> per year (City of Toronto, 2017).
Berlin	Private room: no required for renting a room in the main residence Entire residence - Primary: not specify a limit for how many days - Secondary: a permit with the district office and rent out a secondary residence for up to <b>90 days per year</b> (Airbnb; accessed in 2019).
Munich	Homeowners are prohibited from entering into short term leases for a total period of more than <b>eight weeks</b> in a calendar year unless they obtain prior approval from the city authorities (Barabash, 2018).
Japan	lodgings at a private house for a fee, the use of which does not exceed <b>180 days</b> a year (Japan Tourism Agency, accessed in 2019).

Each city or country determines the restriction of the number of nights for accommodation sharing services based on local market conditions in Table 6.3.6. Based on local market situations, the maximum operating days are defined differently. The maximum

days of accommodation sharing can prohibit individuals from operating businesses like hotels without holding professional qualifications.

#### *Regulation on Maximum Operating Days for Accommodation Sharing in Korea*

The current types of P2P accommodations in Korea have not specified the maximum days of operations. The government suggests setting 180 days as maximum operation days for the proposed homestays for Koreans in urban areas, but local governments can decide different limits of operating days and apply different restrictions on locations. Restricting maximum operating days can be a regulation to minimize the loss of the traditional hospitality business. If the government adjust limits of days to demands of accommodation sharing by considering tourism and hospitality industries and the purpose of policies in the local context. Also, governments should consider how to detect hosts to follow the limits of days.

#### 6.3.2.5. Policy on Taxation

##### *Different Tax Policies in Various Cities and Importance of Cooperation with Platforms*

Tax policy in each country is very complicated in terms of income tax, corporate tax, and VAT (value-added tax). Accommodation sharing provides global services via platforms and the services are associated with international and local laws, and tax policies in terms of booking on the platform, and bank transfer (Aslam & Shah, 2017). For example, a host in Korea provides accommodation sharing to guests from another country via online platforms such as Airbnb and the host earns accommodation fees from the guests with oversea bank transfer or a foreign credit card. According to this process, the tax authority imposes a tax on every realized revenue, including income tax on hosts, corporate tax on platforms, and tourist tax on guests. However, the scope of this study would be limited to tax on hosts' earnings from accommodation sharing.

Accommodation sharing may impose city tax, national tax or both by applying a flat rate or progressive tax rate, based on the number of operating days or the total amount of revenues from registered accommodation sharing (Airbnb, 2018); (Waisman, 2018). In many other counties, hosts who provide self-caring accommodation sharing tend to be applied the favorable tax rules. In San Francisco, the city government applies the flat tax rate of 14% of the Transient Occupancy Tax (TOT) to the hosts' earnings (City & County of San Francisco, 2017). In Italy, hosts can choose to pay tax with a flat rate of 21% without any expense deduction or traditional progressive tax rate from 23% to 43% based on the total individual taxable income depending on income brackets (Studio Legale Metta, 2019). In Barcelona, the

income from accommodation sharing is required to add to the total taxable income and apply the tax rate from 24% to 45% to impose tax depending on the total annual taxable income. (B Law & Tax, 2008; Goldfeder, 2018). However, some cities aggressively impose business tax on P2P accommodation sharing in some cases. In England, Scotland, or Wales, the hosts of accommodation sharing are charged the business tax rate if the hosts provide accommodation sharing for 140 days or more in a year. In Paris, hosts who earn more than 23,000 euros per year consider as a business provider. However, hosts in countries like Turkey must have business licenses to operate commercial rental with their own private homes and require to pay business taxes (Ozdemir, 2018).

In order to reduce tax responsibility, tax authorities offer tax-free allowance or tax exemption from the total income. In France, hosts with equal or less than earning of 305 euros do not have a tax obligation (Bilingual Minds, 2017). In London, hosts are not liable to pay tax for accommodation sharing in the condition to submit 90-day limit exemption forms to the city council. (Medium, 2019). In the cities of the United States, the rentals less than 14 days per year are not subject to the taxable income based on the federal tax law, the Internal Revenue Code (IRC) Section 280 A (Vazquez-Soto & Watson, 2019). After considering tax exemption or tax-free allowance, the tax authority imposes income tax on hosts by applying different tax rates based on the brackets of total taxable income.

In order to accurate tax estimates, the tax authority needs detailed information about accommodation sharing transactions from the platforms. The city government of San Francisco requests information including the name of hosts, addresses, the date of hosting and the registration numbers based on Chapter 41.A.4 Requirements for Hosting Platform. However, the disclosure of such information is still controversial due to privacy and data protection. In New York, a federal judge blocked the laws to disclose information about registered accommodations (Weiser & Goodman, 2019). Also, in Berlin, the platform companies denied the request to disclose the data, and they insisted that the requests might violate privacy protection laws (Beck, 2018). However, the court in Munich declared that the mandatory disclosures of transactional information did not conflict with the data protection law.

The case of Denmark shows the appropriate cooperation between tax authority and platforms. Based on the political agreement with Airbnb, the Danish Tax Authority (SKAT) can effectively impose accurate taxes (Cromarty & Barton, 2018). Danish homeowners can rent out their homes via the platform with favorable tax-free income as 28,000 kroner for the primary residence and 40,000 kroner for summer houses. If the governments and platforms

build such cooperative partnerships, government administration and the taxation process can become simplified.

This study investigates the tax policy on hosts' earning from accommodation sharing. Based on market conditions, the tax authority may impose income tax or business tax with a flat tax rate or progressive tax rate for short-term rentals, based on the number of transactions or amounts of income from accommodation sharing in regards to the city and national level.

**Table 6.3.7. The List of the Tax Policies of Accommodation Sharing**

City/Country	Tax Policy
San Francisco	San Francisco collects a 14% tax on the amount that they earn from their guests, called the "Transient Occupancy Tax (TOT)" (City & County of San Francisco, 2017).
New York	New York City hotel room occupancy tax, New York State sales tax, New York City sales tax, and the New York State hotel unit fee daily tax
London	Short-term renting an entire home for more than 90 days, receive a permit and submit 90-day limit exemption form. Short-term rentals in greater London is that a host must be liable to pay council tax. host property in England, Scotland, or Wales that is available to let for 140 days or more per year, the government deems it a self-catering property that's subject to business rates. (Medium, 2019; UK Government; accessed in 2019)
Paris	Income from directly or indirectly leasing furnished property has the character of industrial and commercial income for the purposes of income tax, and the taxable income may be subject to income tax, corporate tax, and other taxes such as property tax. (Airbnb; accessed in 2019) If hosts earn €23,000 or more per year, the rental needs to be registered as a business and they will have to pay social security contributions and tax. If hosts earn €305 or less in a year, they no need to pay any tax (Bilingual Minds, 2017).
Cataluña/ Barcelona	If the owner is a resident in Spain (for over 183 days per year), they will be required to register as "Autónomo" or "self-employed" and pay Social Security contributions. The current flat rate for income tax in Spain ranges from 24% up to 45% depending on total annual income (Goldfeder, 2018).
Madrid	Hosts must declare the income tax return after deducting expenses. The gross income is not subject to a fixed tax rate, depend on the total income of the taxpayers (B Law & Tax, 2008).
Denmark	Based on the political agreement with the platforms, it increases tax-free allowance on the rental income. The rental income exceeds the tax-free allowance will be taxed by Skat (Danish online tax system) For permanent residences, the earning before tax increase from 24,000 to 28,000 kroner. For those renting our summer homes, the tax-free allowance is 40,000 kroner (Scanpix, 2018).
Turkey	All private owners who are commercially renting their Turkish holiday homes must now have a business license to operate and pay business taxes (Ozdemir, 2018).
Toronto	The laws require hosts for short term rentals to have a permit and pay a hotel tax (a Municipal Accommodation Tax (MAT) of 4 percent (McQuigge, 2017); (City of Toronto, 2017).

Portugal	<p>With gross annual revenues not exceeding € 200,000, alojamento local may benefit from a simplified regime of taxation.</p> <p>In this regime, only 35 percent of gross revenue is subject to taxation.</p> <p>For individuals, this results in a top tax rate not exceeding 13.5 percent, although much lower on small incomes.</p> <p>For companies, the effective corporate tax rate might be only 7.35 percent.</p> <p>In the case of regular leases, a flat 28 percent rate on income is required to pay. (Coriel, 2017)</p>
Rome	<p>Since 2017 the law (decree no. 50/2017) gives landlords the option to apply a flat 21% tax to short-term rental income, instead of the traditional progressive taxation based on total personal income brackets (ranging from 23% to 43%).</p> <p>The 21% tax applies to the gross amount charged by the landlord without any deductions (Studio Legale Metta, 2019).</p>
Vienna	<p>The Vienna Tourism Promotion Act of September 2017 governs the collection of local taxes (city tax). Income tax Where an individual earns income in Austria, it is likely that they will be required to pay a percentage of tax on this income to the Austrian Tax Authority (National tax). Austria has a progressive tax rate ranging from 0% to 55% (Airbnb, 2018).</p>

### *Tax Policy on Accommodation Sharing in Korea*

Under the current laws, legally accepted accommodation sharing are homestays for foreigners in urban areas, experiences of Korea traditional houses, and homestays in farming and fishing villages. The taxation on accommodation sharing is followed the almost same process, except for the tax-free allowance on homestays in farming and fishing villages. Each type of homestay has been developed based on different policy purposes. Homestays in farming and fishing villages have been initiated in order to generate additional income for villagers, so the tax authority offers a tax-free allowance for total taxable income 30,000,000 Korea won, including income from the homestays (Korea Ministry of Government Legislation, 2019).

This study discusses the tax on homestays for foreigners in urban areas to understand tax policy in Korea. In the case of the homestay for foreigners in urban areas, only individuals can provide the homestay service and any form of a corporate body can not provide the homestays. The registered individuals are imposed from total taxable incomes. If hosts have other sources of income other than the income from the homestays, hosts in Korea estimate taxes based on the consolidated taxable income by adding the income from the homestays. On the individual tax return, the income from the homestays is reported under the category of other tourism accommodation facilities. The tax authority in Korea has been introduced a simple taxation scheme in order to improve convenience for taxpayers and decrease administrative expenses. Unlike countries apply a flat tax, hosts in Korea require to pay both general taxes and local taxes at a progressive tax rate on total income tax bracket.

The tax authority has not applied tax exemptions for P2P accommodation sharing, but the tax-free allowance can motivate positively to participate in voluntary tax payment. Also, the government plans to cooperate with platforms and request data disclosure of transactional information. The Danish Tax Authority (SKAT) provides a convenient tax online system by including Airbnb transaction data. The matching information with tax reports and transactional data via the online tax system, Hometax in Korea, could improve efficiency to estimate accurate tax amounts and convenience to individual taxpayers.

#### 6.3.2.6. Policy on Fines and Penalties

##### *Examples of Fines and Penalties for Illegal Accommodation Sharing in Various Cities*

In order to prevent illegal accommodation sharing and misconduct, governments claim heavy fines and penalties. For example, inappropriate advertisement of a Class A multiple dwelling (i.e. housing for permanent residence only) in New York can be charged fines from 1,000 dollars to 7,500 dollars (City of New York; accessed in 2019). If any host fails to comply with regulations such as exceeding maximum days, the French government imposes fines individual hosts from 5,000 euros to 10,000 euros and the platforms from 12,500 euros to 50,000 euros (République Française Gouvernement, 2018; accessed in 2019). In 2016, the Barcelona city government fined Airbnb 600,000 euros for advertising unlicensed flats on the platform (Burgen, 2017). However, without a proper legal basis, the municipal authority has no power to issue fines. In Madrid, the inspectors caught unlicensed holiday rental but proceeded with individual legal actions instead of charging penalties. Therefore, fines and penalties based on laws related to accommodation sharing can be a strict policy instrument to regulate the illegal practice of accommodation sharing.

**Table 6.3.8. Examples of Collecting Fines or Penalties**

City/Country	Fines and Penalties (examples)
San Francisco	Penalties of at least \$484 per day for each unit in violation; \$968 per day per unit for a 2nd violation, and escalated penalties repeat violations (City & County of San Francisco, 2017).
New York	Fines from \$1,000 to \$7,500 to the person who is responsible for the advertisement of a Class A multiple dwelling, generally a building with three or more permanent residential units for rent for less than 30 days (City of New York; accessed in 2019.).
Paris	Fines for individual owners can range from 5,000 to 10,000 euros, with those for platforms ranging from 12,500 to 50,000 euros when the tourist rental is abusive and fails to comply with regulations (most often, this concerns cases where the rental period exceeds 120 nights a year or where accommodation which could be rented out remains empty) (République Française Gouvernement, 2018).
London	a fine of up to £20,000, along with being found guilty for not complying with an Enforcement Notice (Medium, 2019)



Cataluña/ Barcelona	Cross-referencing licenses with a property advertised online, fines of up to €60,000. Fine to Airbnb €600,000 for continuing to advertise unlicensed flats on its platform in 2016 (Burgen, 2017).
Australia	Companies that breach the code of conduct or the strikes policy will face significant financial penalties, including fines of up to \$1.1 million for corporations and \$220,000 for individuals (Visentin & Smith, 2018).
Netherlands	People caught breaking the rules can be fined €6,000 for a first offense, amounting to €20,000 for repeated illegal rentals (Dutch News, 2018)
Turkey	Fines and Penalties for non-complying homeowners are as follows: Non-registered property 10.383 TL Fine; No-reporting of guests 700 TL per day; Intentional or accidental inaccurate reporting 5.191 TL (Bodrum White Villas and Management, 2018)
Portugal	Owners failing to comply with the AL law – for example, if a property accommodates more guests than legally allowed, or if it falls short of hygiene or safety standards – now face heftier fines, which have been upped from €2,500 to €4,000 in the case of individual owners, and from €25,000 to €40,000 if the property is owned by a company (Bratley, 2018).
Berlin	Homeowners without a permit will incur a fine of up to €100,000 (about US\$112,000). The maximum penalty for breaking the rules has been multiplied by five, to a potential fine of €500,000 (\$617,000) (McIntire, 2018; O’Sullivan, 2019).
Japan	Not legally register, hosts could be fined as much as ¥1,000,000 (Brasor & Tsubuku, 2018).
Prague	For a person who does not fulfill the reporting obligation, the administrator can impose a fine of up the 500,000 CZK pursuant to Section 247a of the Tax Code (Prague City Hall, 2017).

### *Government Control for Illegal Accommodation Sharing in Korea*

According to illegal or non-registered accommodation sharing, local governments in Korea impose administrative measures such as suspension, penalties, or registration revocation (Ministry of Culture, Sports and Tourism, 2016). However, government control and inspections for tens of thousands of registered and non-registered accommodations must be challenging for local governments to control and supervise illegal transactions. In Berlin, a local government officer has an interview that six inspectors of his team attempt to eliminate 146,514 illegal Airbnb in his jurisdiction and the team conduct various ways to catch illegal transactions but also highly depends on reports from neighbors (Beck, 2018). The government attempts to defining appropriate fines and penalties, so hosts have no temptation to break the laws and conduct illegal or non-transparent business. However, strict regulation should have a strong legal background, as discussed in section 6.3.2.1.

#### 6.3.2.7. Other Issues

##### *Other Policy Issues of Accommodation Sharing in Various Cities*

Most accommodation sharing is located in the residential areas, so the laws and regulations might concern the impacts on the community due to floating populations for accommodation sharing. Governments establish more regulations including restrictions on the other usage of properties, the maximum number of guests, subletting, or multiple listings as well as dealing with public complaints. Therefore, this chapter discusses more issues related to policy concerns about accommodation sharing.

First, the usage of accommodation sharing is restricted to residential use. Other uses such as ceremonies, conferences, or meetings are prohibited. Airbnb monitors reservation status to minimize improper uses and the ordinance in the City of San Francisco clearly states the regulations such misuses because such events may cause noise and other inconvenience to neighbors. The neighbor may report complaints to local governments via online or phone. The Berlin city government encourages neighbors to report illegal accommodation sharing in their neighbors (McIntire, 2018). In New York and San Francisco in the U.S and Japan, the governments open the websites for guests, hosts, and neighbors to update their complaints. Also, governments attempt to reduce complaints and to prevent repeated misbehaviors. In Australia, a ‘two strikes and you’re out’ policy regulates inappropriate behaviors of guests and hosts more than two times in two years, the guests and hosts with misbehaviors are banned from all short-term holiday platforms for five years (Keighran, Abba, & Prime, 2018).

Second, regulating the maximum number of guests for each accommodation sharing enable to prevent excessive accommodation sharing. In San Francisco, hosts cannot offer more than five individuals at the same time (City & County of San Francisco, 2017). In the City of New York, hosts have only two paying guests at the same time (City of New York; accessed in 2019). In London in the U.K., New South Wales in Australia, and Italy, the short-term accommodation sharing cannot accommodate more than six people, so-called ‘six-bed rule’ (Cromarty & Barton, 2018; Australian Business Licence and Information Service (ABLIS), accessed in 2019). In addition to the number of listings, the restriction on the maximum number of guests would regulate the excessive number of accommodation sharing and prevent to change properties from residential use to commercial use.

Third, the government also initiates a sort of campaign about hosts and guests’ etiquette for accommodation sharing. The rules of ‘good neighbor’ makes hosts take care of health and safety regulation, including noise, garbage, and parking protocol (Waisman, 2018).

With such efforts, hosts can provide clean and safe accommodations, and the guests show their respect to local rule and culture, and the neighbors might tend to have positive attitudes toward accommodation sharing in their communities.

Fourth, according to sublet, the housing laws prohibit sublet without consent from the homeowners in many cities and countries. In San Francisco, the city government sends a courtesy notice to the owners to inform the application of the short-term rentals (City & County of San Francisco, 2017). In New York, the hosts of accommodation sharing as main tenants should have consents from the owner, because residential leases are prohibited from subleasing without the landlords' permission in New York, as well as in London (Fishman, 2019; Cromarty & Barton, 2018). Furthermore, in some particular areas, the government advice that the hosts for the short term rental should inform the operation of accommodation sharing to the neighborhood. For properties located in specific area, so-called Ph-1(D) zoning districts in San Francisco, hosts should send a notice with name and address to all property owners and residential tenants who live within 300 feet of the unit for short-term rental (City & County of San Francisco, 2017).

Fifth, accommodation sharing continually evolves with various other services. In Japan, administrators are introduced, and hosts hire administrators to manage accommodations professionally even if the hosts do not stay at the accommodations (Keycage, 2019). Also, the Sharing Economy Associate Japan (SEAJ) (2017) provides the official sharing economy trust mark based on the model guideline formulated by the Cabinet Secretariat IT Strategy Office Sharing Economy Association Japan. Moreover, the partnership between Airbnb and Family Marts in Japan provides options to pick the keys of the accommodation sharing from the nearby store. This attempt will improve the convenience of accommodation sharing and increase interaction with local vendors.

Lastly, the government should prepare opportunities for local citizens to deliver their opinions about accommodation sharing and persuade specific conditions of local markets. For instance, in Toronto, the ordinance has already been enacted, but the city government admitted that the hearings in 2018 were not sufficient to discuss the cons and pros of accommodation sharing, so an additional hearing is scheduled on August 2019 and the application of a new ordinance for accommodation sharing is postponed.

#### *Other Policy issues of Accommodation sharing in Korea*

In terms of issues discussed in other various cities in countries, accommodation sharing in Korea are not strictly regulated to purpose of uses, maximum numbers of guests, and

specific zoning rules. However, the local governments should consider the purpose of uses to prevent inconvenience to neighbors such as noise from parties, maximum numbers of guests to prohibit business operations, and special zoning to reduce the risks of gentrification and protect local housing. Local governments in Korea conduct campaigns about introducing sharing activities and the benefits to participate in sharing economy because Korea still experiences initial stages of sharing economy. However, publicizing and campaigns are required to introduce the etiquettes for guests and hosts and the legalized accommodation sharing in Korea.

According to the property types in urban areas, local governments need to consider the types of housing, the status of ownership and other related issues when they prepare rules and regulations. For instance, large a number of multiple dwellings are located in the densely populated residential areas and the more detailed regulation and guidelines to operating accommodation sharing are required. The registered Airbnb accommodations are highly concentrated in five specific areas, refer to Figure 4.2.3. The finding shows the possibilities of expected overheated areas for highly commercialized accommodation sharing and the impacts on the housing market in these areas. There fore, the local governments should consider special zoning policies to permit the number of accommodation sharing or to restrict them. The current regulation for the homestays for foreign travelers in urban areas permits the services at the house, apartment, and other multiple-family houses so that accommodation sharing bear the risk to cause inconveniences to neighbors. Hosts should acquire the consents from homeowners or neighbors to operate accommodation sharing, are often required, particularly in apartments.

In terms of safety and hygiene regulation, the types of homestays in Korea as accommodation sharing are not subject to Public Health Control Act, so local governments try to inform hosts about proper guidelines to keep a certain level of safety and hygiene quality. Also, government officers are responsible for field inspections and supervision. Due to safety concerns and prohibitions on entire house sharing, the governments emphasize the importance of hosts' existence, while the start-ups for property management insist security technology and professional administration service can replace the roles of hosts during the guests' stays.

These various policies and regulations in many cities and countries help to prevent risks and difficulties in the future accommodation sharing market in countries where accommodation sharing grows rapidly. Also, the reviews on the various policies and regulations provide an opportunity to consider prepare proper regulations to maintain stable markets, provide reliable service, and minimize adverse effects from new businesses.

The comparative analysis of policies and regulation in Korea and other countries are summarized in the following table.

**Table 6.3.9. The Summary of the Comparison between Korea and Other Countries**

	<b>Korea</b>	<b>Examples from Other Counties</b>
Definition and Related Laws	<p>Tourism Promotion Act Homestay for foreigner in urban areas : Local residents provide food and accommodations for foreign travelers to experience the local culture</p> <p>Experience in traditional Korean houses : Both foreign or domestic travelers can stay in traditional Korean houses and experience food and housing culture.</p> <p>Rearrangement of Agricultural and Fishing Villages Act Homestay in farming and fishing villages means that residents in farming or fishing village : Farmers and fishers provide their spare rooms and facilities of their own house for the purpose of an increase in the individual income.</p> <p>Tourism Promotion Act (proposed) Homestay for Korean in urban areas : Local residents who live in cities provide portions of their primary houses as accommodations sharing for other Korean guests</p>	<p>Mainly laws on housing or tourism</p> <ul style="list-style-type: none"> <li>- San Francisco, Short-term Rental Ordinance</li> <li>- New York: Administrative code, dwelling law, zoning resolution</li> <li>- Italy: National Tourism Code</li> <li>- Paris: Constriction and housing code, Tourism code</li> </ul> <p>Definition</p> <ul style="list-style-type: none"> <li>- San Francisco: A short-term residential rental for all or portions of homes for periods of less than 30 days</li> <li>- Barcelona: A tourist dwelling is the one that is offered, by the owner, directly or indirectly, to third parties, for a price, for periods of time equal to or less than 31 days and legalized by the corresponding city council.</li> </ul>
Registration	<p>Submit application forms with business plans and documents related to properties. Registration certificates are issued</p>	<p>Obtain a business registration, a certificate or license Obtain the consent of the local council</p>
Day Limits	<p>(Proposed) 180 days in maximum (Homestays for Koreans in urban areas)</p>	<p>San Francisco: 90 days for entire homes Paris: 120 days for entire homes Part of house: normally unlimited days</p>
Tax	<p>Income from the homestay is added to consolidated income taxes. Differential tax rates are applied to total taxable income.</p>	<p>San Francisco: 14% of transient Occupancy Tax Rome: 21% of the flat rate Barcelona: self-employed, different rate based on the income bracket</p>
Fines & Penalties	<p>Local governments in Korea impose administrative measures such as suspension, penalties, or registration revocation in the case of illegal or non-registered accommodation sharing.</p>	<p>San Francisco: \$484 per day for each unit, \$986 per day for 2nd violation Barcelona: fine €600,000 to Airbnb</p>
Safety & Hygiene	<p>Not subject to the Public Health Control Act, promote self-regulatory Inform the guideline of safety &amp; hygiene</p>	<p>‘Two strikes and you’re out’ policy in Australia ‘Good Neighbor’ rule in Vancouver</p>
Platform Responsibility	<p>(Proposed) Monitoring illegal transaction and Provide transactional information to the government or the tax authority</p>	<p>Disclose the transactional information In Denmark, the Danish Tax Authority and Airbnb, and automatically impose taxes via the Airbnb platform.</p>

\*. The few cases of policies and regulation in other counties in the table, more information in the tables from Chapter 6.3.2.

## **VII. Conclusion**

### **7.1. Summary of Findings**

This research consists of four studies to investigate characteristics of accommodation sharing, the impact of the attributes on business performance, and individuals' perceptions of policy reactions by using both primary and secondary data. Also, this study explores various government policies to regulate accommodation sharing based on local contexts. The findings from study 1 to 3 provide current issues on accommodation sharing and the issues are also associated with legal issues discussed in study 4.

#### *Discussion on Sharing Types in terms of Guests' Preference and Legality*

According to types of accommodation sharing, this study finds that each sharing type such as entire houses, private rooms, and shared rooms have unique characteristics of accommodation sharing. Guests who share entire houses are concerned with the property as a whole, home appliances, and facilities. Guests who share private rooms are concerned with the rooms to stay and interactions with hosts. Also, guests who use shared rooms are concerned with the rooms and interactions with hosts and other guests. In order to select accommodation sharing, guests consider various factors of entire house sharing including properties, prices and expenses, location, and other information such as reviews and photos, while guests with private rooms or shared rooms are concerned with fewer factors including price and expenses, the number of reviews and photos, and the availability to instant booking based on economic benefit and convenience.

According to individual attitudes, this study highlights that people tend to have positive attitudes and are willing to use at accommodation sharing. Notably, people have a strong preference for entire house sharing. The study analyzes the total number of accommodations on the platforms and the total numbers have significantly increased since 2014 in Korea, and the number of entire house sharing accounts for more than half of registered accommodation sharing on the platform. However, based on the current laws on homestays, the entire house sharing is highly related to legal issues because the laws emphasize the interactions and experience of local culture via homestays.

#### *Discussion on Positive and Negative Factors of Accommodation Sharing*

According to the individuals' perception of accommodation sharing, this study finds the effects of positive and negative factors on the individuals' attitudes. Among positive factors,

the economic benefits for a low price for guests and additional incomes for hosts, social ties between hosts and guests, the experience of local culture, available eco-friendly tourism, and community benefits such as fostering local economy and regenerating community positively affect overall attitudes toward accommodation sharing. Especially, this study includes impacts on communities because the services are operated in the communities and local residents in the community are influenced in various aspects. The guests perceive that the increasing number of guests for accommodation sharing in the community provides many business opportunities, but interactions with local residents do not affect their attitudes. In terms of cultural factors, the housing culture is not significant. According to the survey of Koreans, they would be less likely to perceive cultural differences during their stays in accommodation sharing in Korea.

According to negative factors, sanitation concerns, inaccurate information, and unstandardized properties and services negatively affect attitudes toward accommodation sharing. From the content analysis of guests' reviews, this study finds that negative reviews are related to security and safety, sanitation, inconvenience of property, location, the accuracy of the information, hosts, and communication. However, based on the survey analysis, security and safety, amount of information, and community disadvantages such as inconvenience in the neighborhood or gentrification are not significant factors to attitudes because of the following reasons: i) security and safety might become risk factors when people face problems; ii) guests may feel that the information on the platforms is sufficient for guests and easily filtered based on the guests' preferences; iii) people perceive that accommodation sharing brings more benefits than disadvantages in the community. Initially, the study hypothesizes that the location of accommodations with limited accessibility negatively affects attitudes because accommodation sharing is located in residential areas with limited accessibility, but the result shows that location in the residential areas positively affect attitudes. The finding indicates that people prefer accommodation sharing in residential areas because they can stay away from crowded commercial districts and provide accommodation at a comparably lower price and a more comfortable environment.

#### *Discussion on the Necessity of Policy Reactions*

According to the policy reaction, the attitudes toward accommodation sharing significantly affect the necessity of policy reactions, including definition, legislation, promoting and regulating policies, and localization. It means that individuals with positive attitudes require more policy reactions. According to definition and legislation, this study finds that countries have various terminologies and related laws and regulations. Accommodation

sharing has not yet been legally defined in Korea, but considers accommodation sharing similar to types of homestays with the importance of hosts' existence during guests' stays under the Tourism Promotion Act. The exploratory study shows that various terminologies are accepted to define accommodation sharing in various countries such as short-term rental, furnished tourist property rental, holiday-let accommodation, private holiday rental, local lodging, or private lodging. For example, the City of San Francisco defines a short-term rental as rental of all or portions of homes for periods of less than 30 consecutive nights under the San Francisco Rental Ordinance.

The definitions related to accommodation sharing are specified in terms of the status of primary residence, entire or proportion of house, and days of rentals. Homestays in Korea are permitted rentals for a proportion of properties such as private room sharing by permanent residents. In the case of Paris, both primary and secondary residences are available for tourist properties with different qualifications and maximum operating days. Various cities such as San Francisco, London, Barcelona, Amsterdam, Toronto, and more allow entire house sharing with restrictions on maximum days of operation. The clear definitions under the laws are important because the regulations and promotion including registration and taxation are determined highly based on the definition under the local conditions. By comparing local ordinances, the study finds that each city or country has different laws and regulations for the local housing market and the demand and supply sides of the accommodation business. This study finds that only 30% of respondents are aware of the difference in the laws and regulations in each society. The government should inform individuals about legal transactions of accommodation sharing and prevent illegal accommodations.

#### *Discussion of Policies for Promotion*

According to promoting policies, this study also finds that ordinance for accelerating the sharing economy, government publicizing and campaigns, and trust mark and certificates significantly affect trust-building, but the dedicated teams, government-initiated tourism business in unpopular areas, research-based policies do not affect trust-building for accommodation sharing.

Local governments establish ordinances for accelerating the sharing economy. For instance, 63 local governments in Korea have been passed municipal ordinances and prepared the legal background for administrative supports. Also, individuals perceive that government publicizing activities about government policies, regulations, and government-funded programs are effective to promote accommodation sharing. The campaigns for sharing culture



and etiquette between hosts and guests are effective for individuals building trust in accommodation sharing. Such promoting effect helps reduce security and safety concerns such as privacy invasion, violence, and damages to their properties. The improved trusts by the publicizing and public campaign can diminish the potential worries to be hosts and guests for accommodation sharing. This study also proposes that the trust mark and certificate significantly affect trust-building. From the analysis of transactional data, this study finds that superhost badges positively affect both occupancy rate and price. It shows that people count on such a mark and label to increase trust. Currently, governments in various countries mandate showing the legal registration numbers on the platform so that guests can check the legal status of each accommodation. Moreover, if trust marks and certificates are introduced by a reliable accredited organization, individuals would have higher trust and confidence in using accommodation sharing such as trust marks by the Sharing Economy Associate Japan.

Although people perceive that having a dedicated team to deal with inquiries and complaints, government-lead tourism business in unpopular areas and policies based on research are less effective in building trusts, these policies are still important to promote and secure accommodation sharing. In the case of dedicated teams, the city government in New York and San Francisco and the Japanese government have introduced websites and allow individuals to make public inquiries and complaints via the platforms and to contact directly the dedicated teams. The roles of the dedicated team become more critical in societies where the laws on accommodation sharing are complicated and individuals have already suffered from accommodation sharing due to a large volume of local tourism.

Related to the government-initiated tourism business, some local governments closely work with platform providers to develop tourism in unpopular areas. For example, during the Pyeongchang Olympic Games, the government have permitted numbers of accommodation sharing in Gangwon provinces and the occupancy rate in these areas is still increasing after the game. Local governments are willing to explore the tourism resources in the area and to promote local tourism via accommodation sharing platforms. Also, related to research-based policies, measuring the accurate impacts of the policies would improve the efficiency of policy implications, and the researches help to understand the conflicts between newly introduced sharing activities and existing businesses. Therefore, individuals perceive that some promoting policies would be less effective in improving trust in accommodation sharing, but the government should maintain some roles in social benefits and stabilized accommodation sharing.

### *Discussion of Policies for Regulation*

According to regulating policies, people perceive that appropriate taxation, penalties and fines, and government controls are effective to improve trust in accommodation, but providing guidelines for sanitation and fire safety, or applying special zoning regulations does not significantly affect trust-building. According to taxes on additional incomes from accommodation sharing, hosts in Korea add this additional income to their total taxable income and apply different tax rates based on their taxable income bracket. In Rome, the hosts can choose either paying a flat rate on short-term rental income or applying a progressive tax rate based on total personal taxable income. The Turkish government considers holiday home rentals by private owners as business activities and imposes a business tax on the income from accommodation sharing. The tax schemes are complicated and different in each country, so governments should introduce easier and more simplified tax reporting in order to prevent tax evasion.

Taxation is related to legally registered accommodation sharing, but penalties and fines regulate illegal or non-transparent transactions. In many cities, governments apply strict restrictions to violation of rules and regulations by imposing heavy penalties and fines. In San Francisco, penalties are imposed as fines per day and doubled for second violations. In Barcelona, unregistered accommodations and the platforms to advertise them were charged huge fines in 2017. A significant amount of fines and penalties inhibit any temptation to violate regulations. Also, governments control and supervise registration and compliance with safety and security guidelines regarding accommodation sharing. Although people perceive that direct government controls are effective to improve trust in using accommodation sharing, government controls increase administrative burdens. Therefore, the balance between government controls and self-regulation based on guidelines for hosts and platforms should be more efficient. The mere guidelines may not be effective, but it can be very efficient and effective in complying with the guidelines together with strict penalties and fair taxation.

This study finds that people consider special zoning as not being effective in building trust. Based on special zoning, the government provides permits or prohibition of accommodation sharing in specific areas. Regulating in specific areas may not be necessary under current circumstances in Korea because the proportion of accommodation sharing is still insignificant, but it requires policy consideration in areas where local residents experience serious community problems such as shortage of available rentals due to high density and extremely high competitions, in order to prevent gentrification due to local tourism.

### *Discussion on Trust Building and Potential Growth*

According to trust-building by promoting and regulating policies, rating and review systems, insurance secured by platforms, and insurance packages for guests and hosts, this study finds that individuals perceive that rating and review systems, insurance for guests and hosts, and promoting policies positively affect their willingness to use, but insurance provided by platforms and regulating policies are not significant factors in terms of the willingness to use accommodation sharing. This study indicates that regulating policies secure transactions and protect against illegal operations, but do not encourage individuals to use accommodation sharing. The reviews and rating system provide chances to choose more reliable accommodation and the guests feel secured with insurance for guests and hosts, not insured by platforms.

The individual willingness to use would cause the growth of accommodation sharing and affects the sharing economy and tourism industries with integrated services in various fields. Also, individuals perceive that growth in accommodation sharing influences existing businesses. This study finds the impacts of other accommodations on the performance of accommodation sharing and finds that accommodation sharing has cluster effects on business performance if accommodation sharing is located with other registered accommodation sharing within a short distance. However, the entire house sharing is negatively influenced by the number and distance of hotels but is better than that of the hostel. In the case of private rooms, the number of hotels or hostels are not significant for business performance, but the distance to the nearest hotel and hostel negatively affect the performance. In the case of shared rooms, the distance of the nearest hotel negatively affects the performance of the shared rooms. It implies that the increasing number of accommodation sharing causes competition between accommodation sharing and the existing market. Therefore, the government asks the incompatible roles of eliminating regulatory barriers for newly introduced sharing economy business and minimizing the damages to existing industries.

**Table 7.1.1. Summary of Studies (1/3)**

	Study 1 Characteristics from Reviews	Study 2: Analysis of Individual Preferences on Performance	Study 3 Analysis of Individuals' Perceptions	Study 4: Exploratory Study of Policies in Various Countries
Sharing Types (Entire house/Private room/Shared room)	The characteristics of guests based on types of sharing. - Entire house: property, facilities - Private room: rooms, interaction with hosts - Shared room: rooms, interaction with hosts and other guests => Implication: considering sharing types for these following studies.	Entire house sharing is the most preferred with a higher mean of occupancy rate. (55% of registered accommodation sharing in Seoul are entire house sharing) The study conducts four models: aggregated, entire house sharing, private rooms and shared rooms	Majority of respondents prefer to share entire houses (60.45% of respondents choose entire house sharing, 36.39% for private rooms, and only 3.13% for shared rooms.) => Implication: there is a gap between guests' demands in the market and the policy purpose of interaction and accelerating the local economy by sharing.	In Korea, accommodation sharing is permissible for a form of homestays with the existence of host, under the law on homestays for foreigners in urban areas and the law on homestays in farming and fishing villages. New York also prohibits entire house short term rentals. Most countries and cities permit certain days of entire house sharing.
Economic Factors	Economic factors have not frequently mentioned in the reviews.	Price is significant factors and guests expect lower prices by P2P accommodation sharing. The host set own price mainly based on sharing types, property types, and locational benefits. => Implication: there is a gap between hosts' and guests' perspectives.	Lower the price for guests and additional income for hosts positively affect overall attitudes.	The lower price of accommodation sharing expects negative impacts on the existing accommodation business, so the government proposes to provide financial support to existing businesses.  The additional income for hosts is related to tax issues.
Social Factors	Guests with private rooms and shared rooms concern more interaction with hosts and guests. Some negative reviews are stated about the lack of interactions with hosts.	The number of reviews and response rate and time and superhost are significant factors for occupancy. => Implication: not only the number, it indicates that the information on the reviews is important.	Individuals perceive that interactions with local people do not significantly affect attitudes, but social ties between hosts and guests are positively significant. => The important roles of hosts.	The laws allow homestays provided by peers because the government expects the benefits to the local economy by interacting neighbors and businesses in the community.
Cultural Factors	The reviews mention the experiences related to cultural experience, and different housing is part of the experience, such as staying traditional houses.	Experience in food culture: providing breakfast increases the price of accommodation sharing but lowers the occupancy rate.	The local culture positively affects the overall attitudes, but the housing culture is not significant. => Implication: domestic residents less likely to perceive the experience of housing culture.	The law on homestays for foreigners in urban areas aims to provide cultural exchanges by providing food and accommodation by local residents.
Community Benefit	On the reviews, guests state their experience to use local businesses such as restaurants, café, bakery, and stores.	n.a.	Individuals perceive the positive effects of the local economy and regenerating community, while the interactions with local residents have any significant impacts.	The local ordinances in 63 municipalities are established and aim to accelerate sharing activities in their communities. => Implication: the purpose of the policy to regenerate the community.

**Table 7.1.1. Summary of Studies (2/3)**

	Study 1 Characteristics from Reviews	Study 2: Analysis of Individual Preferences on Performance	Study 3 Analysis of Individuals' Perceptions	Study 4: Exploratory Study of Policies in Various Countries
Safety & Security	Some negative reviews describe the feeling of insured in the neighbors or unexpected situations without hosts' supports.	n.a.	Security and security show no significant impact on overall attitudes. => Implication: it becomes critical when individuals face problems.	Governments introduce guidelines of hosts' responsibility to operate reliable service => Implication: self-guideline for both hosts and platforms.
Sanitation	Sanitation is one of the major factors of accommodation sharing on the reviews and large frequency of negative reviews.	The additional cleaning fee positively affects performance. => Implication: it means guests expect clean accommodation despite paying additional cleaning fees.	Sanitation is important concerns to individuals. Both hosts and guests have a sufficient understanding of the importance of hygiene issues.	In Korea, accommodation sharing such as homestays has not applied Public Health Control Act. Sanitation is inspected during the registration. => Implication: the importance of self-guideline based on guidelines.
Information Asymmetry	Guests express their negative experiences due to incorrect information on the platform compared to actual services. => Implication: how to maintain legal transactions with accurate information on the platforms.	n.a.	Individuals perceive that the information on the platforms is sufficient. The discrepancy between online information and actual service negatively affect attitudes. => Implication: the roles of platforms.	High fines and penalties imposed unregistered or illegal accommodations in many cities. The platform has a responsibility to advertise only registered and legal accommodations sharing. => Implication: the roles of platforms.
Inconvenience related to Property	Guests frequently state apartment and house on their reviews, but types of hosing between apartments and houses are not related to the frequency of negative reviews.  Word frequency and negative review analysis find that - guests' concern about the property such as room size, floor heating system, wet floor in bathroom, etc. - guests concern about location on how to access accommodation described by subway, bus stop, walking distance and more.	The properties are 53.16 % of apartments, 29.87% of houses, 12.32 % of condominium and 4.65% of lofts for residential properties in Seoul. Condo>Loft>Apartment>Houses. The closeness to the subway and more shopping or touristic sites are preferred, but restaurants near the accommodation are not referred. In Seoul, clearly shown several areas with a high density such as Mapo, Junggu Gangnam, Yongsan and Jongno. => Implication: high dense areas need localized policies by considering the local situation.	Individuals negatively perceived the unstandardized property and service because it is difficult to compare with other accommodations.  Individuals still have positive attitudes toward accessibility of accommodation sharing, although they have some inconvenience to access the accommodations in the residential areas. => Implication: the policies are required to allow diversified accommodation services.	In Korea, entire house sharing is not permitted, and one-room types such as officetel are prohibited.  In New York, multiple dwelling is not able to provide short term rentals, and in residential areas due to New York Special Zoning  In Portugal, the building with multiple households must have a separate entrance. => Implication: the cities have strict regulations for multiple dwellings like apartments.

**Table 7.1.1. Summary of Studies (3/3)**

	Study 1 Characteristics from Reviews	Study 2: Analysis of Individual Preferences on Performance	Study 3 Analysis of Individuals' Perceptions	Study 4: Exploratory Study of Policies in Various Countries
Community Disadvantage	Based on hosts' responses, hosts state the complaints from their neighbors due to noise and garbage caused by guests' misbehaviors. => Implication: the necessity of policies for regulations.	n.a.	While people perceive positively the community benefit, they do not perceive the accommodation sharing might cause community disadvantages. => Implication: the regulation aims to minimize the adverse effects, although people less perceive the community's disadvantages.	In order to minimize the adverse effect on the community, countries have policies for regulating accommodation sharing In Australia, hosts and guests cannot use accommodation sharing who cause problems twice in 5 years under 'two strikes and you're out' policy. In Vancouver, guests and hosts should take care of noise and garbage during their stay in the 'good neighbor' rule.
Promoting policies	n.a.	n.a.	The local ordinance, publicizing and campaign, and trust mark and certificate affect positively trust-building. Individuals think that the dedicated team, government-initiated tourism in unpopular areas, and policies based on researches are not effective on trust-building.	Based on local ordinances in Korea, governments publicize various sharing activities and can operate the supporting center and committee to help and supervise sharing activities. => Implication: eliminating entry barriers and promoting based on legal background. => Strategic approach of government roles and policies toward the public.
Regulation policies	n.a.	n.a.	Taxation, penalty, and government control are significant, but providing guidelines and special zoning is not significant. => Implication: individuals perceive the direct government control is effective but needs to consider administrative expenses.	There are many laws and regulations in order to protect local housing and community cultures, such as imposing tax and penalties, or special zoning.
Potential growth and Impact on existing business	n.a.	The number of registered accommodation sharing in Korea rapidly increases (3,325 in 2014 to 71,970 in 2018) => Implication: the data shows an increasing trend of registered accommodation sharing on the platform.	People expect that willingness to use positively related to potential growth in sharing economy, tourism, and the integrated service with accommodation sharing.	In order to minimize damages to existing accommodation businesses, the government proposes administrative supports to small accommodation businesses such as tax exemption for employee income in Korea.

## 7.2. Policy Implication

This study indicates the legal and policy concerns of accommodation sharing from both qualitative and quantitative data analyses and investigates how other societies establish laws and regulations in order to legalize the accommodation sharing and prevent adverse effects. This study also finds the necessity of policy reactions based on individuals' perceptions. This study provides the policy implications for related stakeholders of accommodation sharing.

### *Necessity of Laws and Regulations on Accommodation Sharing*

In terms of legality of accommodation sharing, the lawmakers should be concerned about permits for domestic residents' uses of accommodation sharing and the entire house sharing. Under the current laws, Koreans are not allowed to use homestays in urban areas due to the absence of law. The recent statistics of Airbnb show that 69% of guests were Korean in 2018 (Kim, 2019) and the laws on homestays for Koreans in urban areas are in the process of legislation. However, the entire house sharing is excluded from the discussion, although guests expect that various types of accommodation sharing including entire houses can be provided along with the global trends. Many cities in various countries legally permit the entire house sharing under the restrictions of limits of maximum operation days and the maximum number of guests. The current attitudes of the legislature and governments in Korea still oppose legal permits of entire house sharing.

The registered accommodation sharing under the laws on homestays cannot provide entire houses without the existence of hosts during the guests' stays. For providing entire houses, hosts should be registered as accommodation businesses and hold qualifications such as safety and facility standards, and several operational requirements, but the qualifications for professional accommodation business cannot be applicable to private dwellings. However, this study finds that there is a higher proportion of entire house sharing with a significantly high occupancy rate. Except for experiences of Korean traditional house 'Hanok', entire house sharing might be highly related to legal concerns because only 123 Korea traditional houses have been registered in Seoul (Seoul Metropolitan Government, 2018; accessed in 2019). The government should consider actual usages of P2P accommodation sharing in the market and provide legal background to regulate illegal business and protect business opportunities for peer participation in accommodation sharing and the sharing economy.

In Korea, there is a foray into entire house sharing. A start-up initiates a project, called 'Dajayo' for short-term rental by using empty houses in the countryside without any damages

to the environment and local culture. The ‘Dajayo’ project plans to apply a regulatory sandbox in order to provide the entire house sharing. Governments have great concerns about security, safety, and the quality of services without hosts’ existence, while the start-up of ‘Dajayo’ insists that the security technology and property management service can solve the expected risks (Kim, 2019). The model can be tested by the regulatory sandbox. The governments and legislation organization should endeavor to improve legal and administrative systems by applying flexible and open approaches to develop service in accordance with customers’ needs for accommodation sharing, but to minimize the negative effects in local communities due to influx of guests and to contribute local economy, instead of retaining the existing laws.

#### *Necessity of Government Policies on Accommodation Sharing*

According to government policies based on legal backgrounds, governments should focus on four policy directions as following: i) economic benefits by promoting new industries; ii) securing the housing market for a residents and preventing gentrification due to the high dense accommodation sharing in specific areas; iii) maintaining fair competition between accommodation sharing and the existing traditional accommodation business; iv) customer protections. This study finds that individuals with positive attitudes toward accommodation sharing perceive the necessity of policy reactions. This study also finds that promoting policies improve trust in accommodation sharing and increase willingness to participate in accommodation sharing, while regulating policies improve trust in accommodation sharing but no significant impact on the willingness. The governments should prepare a strategic approach with policies on promotions and regulations by including perspectives of all participants in accommodation sharing. The government improves the reliability of accommodation sharing by preventing illegal transactions under the regulation and motivating to use accommodation sharing under the promoting policies.

Among the proposed policy instruments, individuals perceive that some promoting and regulating policies are effective to build trust in accommodation sharing. The finding posits that governments should utilize effective policy instrument by choosing the combinations of promotions and regulations toward the public and playing governmental own functions in each relevant department based on policy purposes and local situations. For instance, governments would establish policies to motivate accommodation sharing by publicizing the philosophy of sharing and legal status of transactions in accommodation sharing, campaigns for hosts and guests to respect community culture, government direct controls to prohibit illegal and non-



transparent P2P accommodation sharing operations, and trust marks to notice reliable accommodations.

The government considers some financial supports for medium and small sizes of traditional hospitality businesses in order to minimize the business losses from the competitions due to the increasing number of accommodation sharing. However, financial supports increase the burdens of government administrative expenses. This study suggests regulations that reduce unnecessary competition and conflicts by distinguishing between P2P accommodation sharing and traditional hospitality business in terms of uniqueness of each service from P2P accommodation sharing and other traditional services such as hotels. For example, some cities regulate the maximum operating days and the maximum guests and permit P2P accommodation in only residential areas, not commercial districts. The local ordinance and regulations can be differently developed based on the situations of local markets and communities, so the rules and regulations are established and improved in the city or national level.

The government should cooperate closely with other participants in accommodation sharing including platform providers, hosts, guests, and communities. Cooperation improves the efficiency of policy implementation and reduces the burdens of administrative expenses and civil service.

#### *Necessity of Cooperation of Government Policy and Platforms*

One of the characteristics of accommodation sharing becomes global services between both foreign and domestic guests and local hosts via international or domestic platforms. Although the platform providers are international companies, the platform providers should respect and follow the laws and regulations in each country and should display legally registered accommodation sharing services on the platform. By applying the laws and regulations in each region, the platform can filter out illegal accommodation sharing. In Korea, the laws prohibition P2P accommodation service with studio types properties and efficiency apartments called ‘officetel,’ and Airbnb decides to remove the registered accommodation sharing with studio types and efficiency apartments in 2016 (Seol, 2016). In terms of any illegal transactions such as property restrictions and multiple listings by a single individual, the platforms can effectively regulate and eliminate any possibility for guests to access illegal accommodations. For instance, Airbnb in the U.S. displays P2P accommodations within the maximum operating days and the listings of accommodations would not appear beyond the available operating days. Also, platforms would be a good channel for hosts to apply laws and

regulations and to follow the government guidelines on how to maintain hygiene and security. According to taxation, the Danish tax authority has a mutual agreement with Airbnb that Airbnb provides taxable transaction information to the authority, and the tax authority imposes accurate taxes on accommodation sharing. With direct government controls, policies on promotion and regulation through platforms can be effective and decrease the burdens of administrative expenses. Therefore, the government should prepare a legal and administrative background to build close cooperative systems with platform providers.

#### *Necessity of Cooperation of Government Policy and Hosts*

The individual hosts are actual service providers of accommodation sharing, while the platforms are intermediaries between guests and hosts. In order to get rid of illegal and non-transparent transactions and to promote accommodation sharing, the roles of hosts become important. Hosts should aware relevant laws and regulation and guidelines provided by the governments for securing hosts and guests. Although individuals perceive the direct controls of accommodation sharing, a team of government officials is not able to monitor and inspect all accommodation sharing. Therefore, the self-regulation based on guidelines and via platforms would be efficient and realistic for adequate regulations. On the other hand, hosts promote accommodation sharing by highlighting great benefits such as social interactions between local hosts and guests and diversified services. This uniqueness can differentiate accommodation sharing from standardized hotel services because guests have different preferences of services from hotels or accommodation sharing. The governments promote the unique services of P2P accommodation sharing, rather than emphasize regulate competitions with other traditional accommodations.

#### *Necessity of Cooperation of Government Policy and Guests*

Governments and platforms stress on customer protections by improving trust in accommodation sharing. Governments attempt to regulate based on laws and closely work with platform providers to screen illegal transactions from the platforms. At the same time, governments should publicize the legal forms of accommodation sharing, so the guests would not access illegal accommodations without intentions. The study finds that only 30% of respondents of the survey know whether the laws and regulations of accommodation sharing might be different in each society. Despite efforts of government and platforms, guests also need to pay attention to choose proper accommodation sharing. If the guests are aware of any illegal transactions, it would be good to report to the platform or local governments to prevent

any harm for future guests. Also, guests' behaviors influence significantly in community. The guests staying at accommodation sharing in residential areas can contribute to the local economy but at the same time can cause inconvenience to local residents in the communities. Guests should respect local culture and observe the etiquette to stay someone's houses. Governments conduct campaigns for manners to use accommodation sharing and interact between local residents and guests.

### *Necessity of Cooperation of Government Policy and Communities*

According to the community perspective, the positive and open-minded attitudes and understanding of local residents in community toward accommodation sharing can accelerate accommodation sharing and provide economic benefit to local economies. Also, local residents can easily monitor illegal P2P accommodations in their communities. The government should prepare the communication channel, so any local resident can report illegal accommodation and prevent damages to the community and guests. The hosts should obtain consents or at least inform their neighbors about their operations of accommodation sharing and advice to guests any possible circumstance which may cause complaints from neighbors in advance. The governments should consider the advantages and disadvantages of community and publicizing and campaigns would help build social consensus to understand accommodation sharing.

This study focuses more on public policy on accommodation sharing. Based on the importance of policies, this study also highlights cooperations with other participants in accommodation sharing, including platforms, hosts, guests, and communities, based on the implication on the social welfare perspective.

### 7.3. Managerial Implication

This study indicates that people expect to access more eco-friendly tourism by using accommodation sharing. Based on the survey, the accessibility of eco-friendly tourism positively affects individuals' attitudes toward accommodation sharing. Also, Airbnb states that millions of guests check-in at eco-friendly listings on the platform. Furthermore, accommodation sharing contributes not only to eco-friendly tourism but also to sustainable tourism related to the local economy, such as fair traveling. The number of travelers highly interested in ecological and ethical consumption is increasing, and they are willing to choose eco-friendly and fair traveling to fulfill their feeling of pride in contributing to environmental protection and the local economy.

Accommodation sharing can be a starting point to integrate various sharing activities, and this integrated service can provide a variety of choices to consumers based on their diverse preferences. Currently, the young generation with mobile devices is easily connected with online sharing or rental products and services instead of purchasing ownership. Also, they prefer to use customized bundling services based on their needs by combining multiple services. Accommodation sharing has already provided combined services between accommodations and local tourism by residents in the communities. However, the integrated service can have more potential by cooperating with local governments to connect with local tourism resources and by collaborating with local small businesses or self-employed sharing activities in their respective localities. The integrated sharing services can generate employment in various services and businesses in communities.

#### 7.4. Limitation of the Study

Although the study utilizes various data and analysis tools for a coherent study, there are still some limitations. First, studies 1 and 2 apply Airbnb data in Seoul to measure the characteristics of accommodation sharing and the business impact because Seoul has the largest number of registered accommodation sharing in Korea and the study expects more policy considerations in the area with a high density of accommodation sharing. However, the policy approaches could be different between the overpopulated area and depopulated areas of accommodation sharing. Also, the result of the survey shows that more than 70% of respondents strongly agree or agree with the necessity of localized policy on accommodation sharing and the exploratory study of policies finds that various countries apply different policies and regulations in each city. The research in terms of different volumes of accommodation sharing could be proposed appropriate policies in each region.

Second, study 3 asks the individual perceptions of accommodation sharing to Koreans; however, many guests for accommodation sharing would be foreign travelers but their voices are not included in this study. For instance, the study finds that the cultural factor of housing becomes quite insignificant. Domestic residents in Korea are less likely to feel that they experience different housing cultures. However, foreign travelers would perceive cultural differences from unique interior designs or floor heating systems of housing in Korea. Therefore, the study could provide concrete outcomes if the study includes the various perceptions of accommodation sharing between domestic residents and foreign travelers for cross-cultural comparison.

Lastly, the larger sample size of the survey could provide more reliable analytical results and have opportunities to identify more significant relationships. For instance, this study has smaller observations who prefer to use shared rooms and who have experience or willingness to be hosts. A larger sample can be well-representative of the entire population. Also, sufficient data can be provided meaningful sizes of subsets to measure the impacts of sharing types and geographical distribution, and to compare perspectives between guests and hosts.

#### 7.5. Further Study

This study defines the sharing economy by including guests, hosts, platforms, community, and governments (refer to 2.1.1); and emphasizes the mutual understanding and cooperation among the stakeholders stated above. However, this study tends to discuss heavily guests' perspective, so this study suggests further studies about hosts and community.

First, according to the hosts' perspectives, this study suggests three topics: i) intentions and expectation from P2P accommodations sharing, ii) the own price setting and iii) legal compliance with hosts' business operations. This study finds that accommodation sharing allows hosts to practice free entry and exit in the market based on their own intention. However, the data analysis on transactional data and perceived individuals' attitudes and willingness to be hosts have limited information to explore their motivation to become hosts and benefits from accommodation sharing. Also, unlike price-setting of other goods and services in the market, the price-setting of accommodation sharing can be established based on hosts' expected prices, so this study proposes to study how the individual hosts evaluate their properties and services in order to set the prices based on the price-setting mechanism if the hosts show consistent patterns to establish own price-setting. Also, there are many laws and policies related to hosts' business conducts such as illegal accommodation sharing, taxation, applications of guidelines and others. The in-depth interviews might be an appropriate method to understand hosts' intentions and develop the following study to find their roles and impacts on accommodation sharing, compared to traditional accommodation service providers.

Second, in terms of community benefits and disadvantages, this study proposes to investigate the impacts of accommodation sharing in the community. While study 3 finds that individuals perceive that their actions to use accommodation sharing cause community benefits, but not community disadvantage, further study could measure the economic and social impacts. For instance, the study suggests measuring the expected gentrification effects due to increasing numbers of accommodation sharing by applying the scheme of gentrification index. Recently,

the Korea Research Institute for Human Settlements (KRIHS) introduced a suitable indicator in Korea (Lee, Lim, Park, & Lee, 2018). The gentrification index would monitor any probability to cause negative impacts, although the community may not experience any gentrification currently. With relevant information from the gentrification index and locational information, the spatial analysis can monitor the changes in population, average incomes, rental fees, the status of small and medium businesses, and the distribution of accommodation sharing. Further study would investigate the impact of accommodation sharing on community economy. The expected finding might suggest the policies to generate community benefits with win-win relationship between community and accommodation sharing and to prevent community disadvantages such as the inconvenience of other local residents and possible gentrification.

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## Appendix

### A. Survey Questionnaire

Thank you for answering this survey. This survey is proposed to investigate your opinions about the sharing economy. Your responses will be treated strictly confidential and applied for academic purposes only. There are no exact answers to the questions. Also, this survey will be conducted with your voluntary participation.

If you have experienced accommodation sharing, please respond to the questions based on your experience. If you have not experienced accommodation sharing, please respond to the questions based on what you think of using accommodation sharing.

1. These following questions are asked about the definition of the sharing economy. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	The sharing economy is online mediating services to connect individuals based on the needs of goods or services via internet sites or smartphone applications.					
2	The sharing economy is the rental service to borrow goods or services.					
3	The sharing economy is transactions to use idle assets or services with other people.					
4	The sharing economy is transactions of goods and service among peers (Peer-to-Peer: P2P)					
5	The sharing economy is the service to access goods and services temporarily on-demand without purchasing.					

2. What is the best-described characteristic of the sharing economy? Please select only one.
  - (1) Online mediating services
  - (2) Rental services
  - (3) Uses of idle assets with others
  - (4) Transactions among individuals
  - (5) Temporary access to goods and services
3. Have you ever experienced accommodation sharing to stay an entire or a portion of residence (house or apartment) of other people via platforms such as Airbnb?
  - (1) Yes, I have experienced
  - (2) No, I have not experienced.

4. What was your attitude toward accommodation sharing before you experienced?

← Strongly negative

Neutral

Strongly positive→

1	2	3	4	5
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5. Have you ever provided an entire or a portion of your residence (house or apartment) via platforms such as Airbnb?

(1) Yes, I have experienced

(2) No, I have not experienced

6. Which types of accommodation sharing do you prefer at the most?

(1) Entire house: guests use whole properties.

(2) Private room: guests use private rooms while common spaces are shared.

(3) Shared room: guests use the room with a host/hosts or other guests.

7. Please answer each question below in the case if you use the entire residence (house or apartment).

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	People can stay with members of families or traveling companions.					
2	It is lower priced compared to hotels.					
3	It helps to protect privacy.					
4	It provides comfortable feelings to stay like my place.					
5	It is possible to use kitchen or laundry facilities freely.					

8. Please answer each question below in the case if you use the private rooms of accommodation sharing.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	People can be provided breakfast offered by a host/hosts.					
2	It increases convenience as hosts can offer additional services.					
3	It is relatively lower priced to stay.					
4	It enables me to interact with hosts.					
5	It is easy to deal with embarrassed situations while staying with hosts.					

9. Please answer each question below in the case if you use the shared room with a host/hosts or other guests.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	It is able to exchange information with other guests (travelers)					
2	It is relatively lower priced to stay.					

3	It provides chances to share diverse cultures through the conversation with other guests (travelers)					
4	It makes feel safer to stay with other guests (travelers)					

10. These following questions are asked about the economic factors of accommodation sharing.

Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	Guests can receive lower priced accommodations.					
2	Hosts can gain additional income in the case of offering accommodation sharing.					

11. These following questions are asked about the social factors of accommodation sharing. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	Accommodation sharing may provide chances to interact with local people in the communities.					
2	Accommodation sharing might be built social ties between hosts and guests through the online community.					

12. These following questions are asked about the cultural factors of accommodation sharing. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	Accommodation sharing provides opportunities to experience local culture.					
2	Accommodation sharing provides opportunities to experience local housing culture.					

13. These following questions are asked about the sustainability of accommodation sharing. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	Accommodation sharing helps to protect the environment by using existing residence (house or apartment) in the case of idle properties.					
2	Accommodation sharing provides chances of eco-friendly tourism.					

14. These following questions are asked about fostering community due to accommodation sharing. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	The use of accommodation sharing contributes to the local economy.					

2	Accommodation sharing provides opportunities for community regeneration due to increased traffic (i.e. floating population).					
---	--	--	--	--	--	--

15. Please choose the most important reason for use of accommodation sharing.

- (1) Economic benefit
- (2) Social interaction
- (3) Experience of local culture
- (4) Awareness of sustainability
- (5) Fostering local economy

16. These following questions are asked about the safety and security of accommodation sharing.

Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	The sharing economy may involve risks such as privacy invasion (hidden camera), violence, burglary.					
2	The sharing economy might cause problems in case of fire or disaster due to lack of preparation.					

17. These following questions are asked about the sanitation of accommodation sharing. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	In the case of using accommodation sharing, it is concerned about hygiene and cleanliness.					
2	In the case of accommodation sharing, it may not be sufficient to aware of hygiene and cleanliness.					

18. These following questions are asked about the information asymmetry of accommodation sharing.

Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	The photos or online descriptions may be different from the actual conditions of accommodations.					
2	In the case of using accommodation sharing, online information may not be sufficient.					

19. These following questions are asked about the residential property of accommodation sharing.

Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5

1	Accommodation sharing which is located in residential areas may not provide convenient access to transportation services.					
2	Accommodation sharing with unstandardized types and facilities of properties may be difficult with compare to other accommodations.					

20. These following questions are asked about the influence on the local economy by accommodation sharing. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	Accommodation sharing might cause inconvenience to local residents such as noise and traffic congestion.					
2	Accommodation sharing might cause gentrification (i.e. local residents may leave from their community) due to the increased real estate price and rental fee.					

21. Please choose one of the main reasons that guests might avoid the use of accommodation sharing service.

- (1) Security issues related to risks such as privacy invasion, violence, and fire
- (2) Hygiene or cleanliness-related reasons
- (3) Insufficient information or discrepancy between online descriptions and actual accommodations
- (4) The location or facility-related reasons
- (5) The inconvenience to local residents

22. Please choose one of the main reasons that someone might avoid providing the property as hosts of accommodation sharing.

- (1) It is inconvenient to share your house with other people (guests)
- (2) The hosts need to concern about destroying furniture or appliance at the house.
- (3) There is much negative news about accommodation sharing from the media.
- (4) It is not clear whether accommodation sharing is legalized in Korea.
- (5) It might cause complaints and objections from neighbors.
- (6) The economic benefits do not reach his/her expectations.

23. These following questions are asked about the public policy according to accommodation sharing. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	It is required to establish the definition of the sharing economy that meets the current situations in Korea.					
2	It is required to establish the laws and regulations of accommodation sharing in Korea.					

3	It is required to prepare promoting policies for accommodation sharing.					
4	It is required to prepare the regulating policies for accommodation sharing.					
5	It is required to prepare appropriate policies based on local market conditions.					

24. Do you aware whether accommodation sharing can be legal or illegal depending on each city or country?

(1) Yes, I do aware.

(2) No, I do not aware.

25. These following questions are asked about the promoting policies of accommodation sharing.

Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	The enactment of ordinance for promoting the sharing economy is an effective policy.					
2	Establishing the dedicated team in the government to deal with inquiries or complaints is an effective promoting policy.					
3	Publicizing the sharing economy by governments is an effective promoting policy.					
4	The governmental campaign for hosts and guests' etiquette of accommodation sharing is an effective promoting policy.					
5	The trust mark or certificate by the government or accredited institutions is an effective promoting policy.					
6	Developing tourism related products in unpopular areas by the local governments is an effective promoting policy.					
7	Implementing policies based on research results is an effective promoting policy.					

26. These following questions are asked about the regulating policy of accommodation sharing.

Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	It is effective to prepare regulating policies for the appropriate tax.					
2	It is effective to prepare regulating policies to collect fines and penalties for non-transparent (illegal) transactions.					
3	It is effective to prepare regulating policies to establish and comply with safety guidelines about sanitation, firefighting and others.					
4	It is effective to prepare regulating policies for overheated areas.					



5	It is effective to prepare regulating policies to control the registration and compliance with safety guidelines.					
---	---	--	--	--	--	--

27. These following questions are asked about trust-building of accommodation sharing. Please answer each question below.

		Strongly disagreed---- neutral----- strongly agreed				
		1	2	3	4	5
1	The government promoting policies such as promoting ordinance, campaign, trust mark and certificate might improve trust-building.					
2	The government regulating policies such as taxation, penalties, government supervision might improve the trust-building of accommodation sharing.					
3	The reviews and ratings by experienced users might improve the trust-building of accommodation sharing.					
4	The trust mark or certificate offered by the government or accredited institutions may improve the trust-building of accommodation sharing.					
5	The liability insurance prepared by accommodation sharing platform to protect hosts and guests may improve the trust-building of accommodation sharing.					
6	Preparation of insurances to protect for hosts and guests might improve the trust-building of accommodation sharing.					

28. What is your attitude toward accommodation sharing if you use accommodation sharing as guests?

←Strongly Negative		Neutral		Strongly Positive→	
1	2	3	4	5	

29. What is your attitude toward accommodation sharing if you use accommodation sharing as guests?

←Strongly Negative		Neutral		Strongly Positive→	
1	2	3	4	5	

30. What is your overall attitude toward accommodation sharing?

←Strongly Negative		Neutral		Strongly Positive→	
1	2	3	4	5	

31. Please answer your overall satisfaction based on your experience of staying at accommodation sharing.

←Strongly Dissatisfied		Neutral		Strongly Satisfied→	
1	2	3	4	5	

32. Are you willing to use accommodation sharing in the future?

←Strongly Negative		Neutral		Strongly Positive→	
1	2	3	4	5	

33. Are you willing to provide the entire or a portion of your residence (house/apartment) to others (guests) in the future?

←Strongly Negative		Neutral		Strongly Positive→	
1	2	3	4	5	

34. What is your attitude toward accommodation sharing if your neighbors provide accommodation sharing services?

←Strongly Negative		Neutral		Strongly Positive→	
1	2	3	4	5	

35. These following questions are asked about the prospects of accommodation sharing in Korea. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	Accommodation sharing will grow constantly in Korea.					
2	It is expected that accommodation sharing contributes to the development of the tourism industry in Korea.					
3	Accommodation sharing will provide integrated services with other sharing services such as transportation sharing or local experience.					

36. These following questions are asked about the impact of accommodation sharing on existing accommodation industries such as hotels. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	Accommodation sharing might cause conflict with existing accommodation industries such as hotels.					
2	It may improve accommodation service quality by the fair competition between accommodation sharing and existing accommodation industries.					

37. Recently, the Marriott hotel chain announced that they will start the short-term accommodation business after buying thousands of luxury residential housing. Do you think whether this can be considered as accommodation sharing?

- (1) Yes, it can be considered as accommodation sharing because it provides non-hotel residential housing.
- (2) No, it cannot be considered as accommodation sharing because it is a part of hotel business such resorts.

38. These following questions are asked about the scope of sharing economy. Please answer each question below.

		Strongly disagreed---- neutral-----strongly agreed				
		1	2	3	4	5
1	P2P (Peer-to-peer) transactions such as Airbnb correspond to the purpose of the sharing economy.					
2	B2C (business-to-customer) transactions such as Socar correspond to the purpose of the sharing economy.					
3	G2C (government-to-citizen) transactions such as bike-sharing, so-called 'ttaleung-i', correspond to the purpose of the sharing economy.					

39. Please select your gender.

- (1) Male
- (2) Female

40. Please select your occupation.

- (1) Agriculture, fishing, forestry (including family workers)
- (2) Self-employed (small businesses with less than 9 employees, family workers, taxi drivers)
- (3) Sales/ service staff (store clerk, salesman, etc.)
- (4) Skill/ skilled worker (driver, lathe, woodworker, etc.)
- (5) General work positions (on-site work, civil service level, etc)
- (6) Office/ technical job (general company office job, technical job, elementary/ middle/ high school teacher, etc.)
- (7) Management (high-level civil servants of 5 or higher level, corporate managers or higher, principal, etc.)
- (8) Professional/ freelancer workers (professor, doctor, lawyer, artist, etc.)
- (9) Housewife (women who mainly work at home)
- (10) Student
- (11) Unemployment
- (12) Retire
- (13) Other ( )

41. Please select your age group.

- (1) 21 years old ~ 24 years old
- (2) 25 years old ~ 29 years old
- (3) 30 years old ~ 34 years old
- (4) 35 years old ~ 39 years old
- (5) 40 years old ~ 44 years old
- (6) 45 years old ~ 49 years old
- (7) 50 years old ~ 54 years old

- (8) 55 years old ~ 59 years old
- (9) 60 years old ~ 63 years old
- (10) more than 65 years old

42. Please select your final education.

- (1) Middle school graduate or below
- (2) High school graduate
- (3) 2-year associated degree or enrolled
- (4) Bachelor's degree or enrolled
- (5) Master's degree or enrolled
- (6) Ph.D. or enrolled

43. Please select your marital status.

- (1) Married
- (2) Unmarried
- (3) Divorce/ bereavement

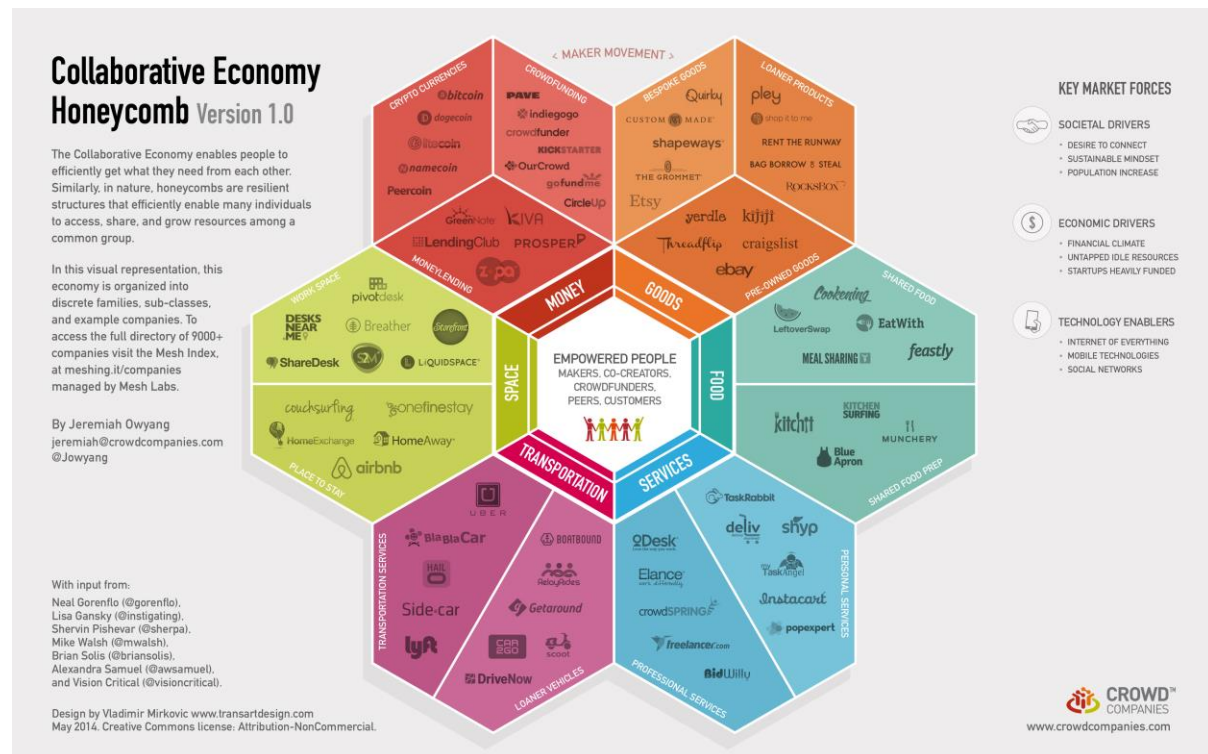
44. Please select the range of your annual salary.

- (1) Below KRW 10,000,000
- (2) More or equal to KRW 10,000,000 ~ below KRW 20,000,000
- (3) More or equal to KRW 20,000,000 ~ below KRW 30,000,000
- (4) More or equal to KRW 30,000,000 ~ below KRW 40,000,000
- (5) More or equal to KRW 40,000,000 ~ below KRW 50,000,000
- (6) More or equal to KRW 50,000,000 ~ below KRW 60,000,000
- (7) More or equal to KRW 60,000,000 ~ below KRW 70,000,000
- (8) More or equal to KRW 70,000,000

Thank you for participating this survey.

## B. Collaborative Economy Honeycomb

Owyang (2014) attempt to classify the sharing economy start-ups and developed his ideas to later version of honeycomb.



Source: <http://www.web-strategist.com/blog/2014/05/05/framework-collaborative-economy-honeycomb-osfest14/>

## C. Reclassification the property types

: the original property types were 94 types and categorized to the seven property time (house, apartment, bed and breakfast, guesthouse, hotel, hostel, and others).

No	Property	Seven grouping	Residential/Commercial	8 grouping
1	Aparthotel	hotel	commercial	Hotel and Hostel
2	Apartment	apartment	residential	Apartment & house
3	Barn	other		others
4	Bed & Breakfast	bed and breakfast		Bed & Breakfast
5	Bed and breakfast	bed and breakfast		Hotel and Hostel
6	Boat	other		others
7	Boutique hotel	hotel	commercial	others
8	Bungalow	other		others
9	Cabin	house	residential	others
10	Camper/rv	other		others
11	Cave	other		others
12	Condominium	house	residential	others
13	Cottage	house	residential	condominium
14	Dorm	other		others
15	Earth house	house	residential	others
16	Entire apartment	apartment	residential	others
17	Entire bed & breakfast	bed and breakfast		others
18	Entire bed and breakfast	bed and breakfast		Apartment & house
19	Entire boutique hotel	hotel	commercial	Bed & Breakfast
20	Entire condominium	house	residential	Bed & Breakfast
21	Entire guest suite	guest house	commercial	Hotel and Hostel
22	Entire guesthouse	guest house	commercial	condominium
23	Entire hostel	hostel	commercial	Guesthouse
24	Entire house	house	residential	Guesthouse
25	Entire in-law	house	residential	Hotel and Hostel

26	Entire loft	house	residential	Apartment & house
27	Entire pension	other		others
28	Entire place	house	residential	Loft
29	Entire serviced apartment	apartment	residential	others
30	Entire townhouse	house	residential	others
31	Entire treehouse	house	residential	others
32	Entire vacation home	house	residential	others
33	Entire villa	house	residential	villa
34	Flat	house		others
35	Guest suite	guest house	commercial	others
36	Guesthouse	guest house	commercial	Guesthouse
37	Hostel	hostel	commercial	Guesthouse
38	Hotel	hotel	commercial	others
39	House	house	residential	Hotel and Hostel
40	In-law	house	residential	Hotel and Hostel
41	Loft	house	residential	Apartment & house
42	Minsu (taiwan)	other		others
43	Nature lodge	other		others
44	Other	other		others
45	Pension	other		Loft
46	Pension (Korea)	other		others
47	Pension (South Korea)	other		others
48	Pension (south korea)	other		others
49	Place	house		others
50	Plane	other		others
51	Private room	other		others
52	Private room in apartment	apartment	residential	others
53	Private room in bed & breakfast	bed and breakfast		others
54	Private room in bed and breakfast	bed and breakfast		others
55	Private room in boutique hotel	hotel	commercial	Apartment & house
56	Private room in cave	other		Bed & Breakfast
57	Private room in condominium	house		Bed & Breakfast
58	Private room in dorm	other		Hotel and Hostel
59	Private room in guest suite	guest house	commercial	condominium
60	Private room in guesthouse	guest house	commercial	others
61	Private room in hostel	hostel	commercial	Guesthouse
62	Private room in house	house	residential	Guesthouse
63	Private room in loft	house	residential	Hotel and Hostel
64	Private room in pension (korea)	other		Apartment & house
65	Private room in pension (south korea)	other		Loft
66	Private room in serviced apartment	apartment	residential	others
67	Private room in tiny house	house		others
68	Private room in townhouse	house	residential	others
69	Private room in vacation home	house	residential	others
70	Private room in villa	house	residential	villa
71	Private room in yurt	other		others
72	Room in aparthotel	hotel	commercial	Hotel and Hostel
73	Room in boutique hotel	hotel	commercial	Hotel and Hostel
74	Room in hotel	hotel	commercial	Hotel and Hostel
75	Serviced apartment	apartment	residential	others
76	Shared room	other		others
77	Shared room in apartment	apartment	residential	Apartment & house
78	Shared room in bed & breakfast	bed and breakfast		Bed & Breakfast
79	Shared room in bed and breakfast	bed and breakfast		Bed & Breakfast
80	Shared room in cave	other		others
81	Shared room in condominium	house		condominium
82	Shared room in dorm	other		others
83	Shared room in guest suite	guest house	commercial	Guesthouse
84	Shared room in guesthouse	guest house	commercial	Hotel and Hostel
85	Shared room in hostel	hostel	commercial	Apartment & house
86	Shared room in house	house	residential	others
87	Shared room in loft	house	residential	villa
88	Shared room in serviced apartment	apartment	residential	others
89	Shared room in villa	house	residential	others
90	Tent	other		others
91	Tiny house	house	residential	others
92	Townhouse	house	residential	villa
93	Vacation home	house	residential	Hotel and Hostel
94	Villa	house	residential	Apartment & house

## D. The list of concepts for Airbnb for all listing types: entire homes, private rooms, shared rooms

### Ranked Concepts

Word-Like	Count	Relevance						
place	5163	100%	<div><div></div></div>	food	502	10%	<div><div></div></div>	
stay	3838	74%	<div><div></div></div>	feel	495	10%	<div><div></div></div>	
clean	2752	53%	<div><div></div></div>	family	480	09%	<div><div></div></div>	
host	2721	53%	<div><div></div></div>	places	477	09%	<div><div></div></div>	
location	2511	49%	<div><div></div></div>	during	476	09%	<div><div></div></div>	
nice	2137	41%	<div><div></div></div>	visit	471	09%	<div><div></div></div>	
house	2046	40%	<div><div></div></div>	walking	454	09%	<div><div></div></div>	
apartment	1963	38%	<div><div></div></div>	wonderful	453	09%	<div><div></div></div>	
station	1771	34%	<div><div></div></div>	distance	436	08%	<div><div></div></div>	
room	1736	34%	<div><div></div></div>	warm	419	08%	<div><div></div></div>	
recommend	1661	32%	<div><div></div></div>	space	415	08%	<div><div></div></div>	
subway	1519	29%	<div><div></div></div>	view	411	08%	<div><div></div></div>	
time	1503	29%	<div><div></div></div>	helped	404	08%	<div><div></div></div>	
comfortable	1276	25%	<div><div></div></div>	shopping	389	08%	<div><div></div></div>	
helpful	1262	24%	<div><div></div></div>	love	388	08%	<div><div></div></div>	
convenient	1231	24%	<div><div></div></div>	airport	366	07%	<div><div></div></div>	
easy	1084	21%	<div><div></div></div>	bathroom	351	07%	<div><div></div></div>	
everything	1052	20%	<div><div></div></div>	price	342	07%	<div><div></div></div>	
area	1005	19%	<div><div></div></div>	stayed	336	07%	<div><div></div></div>	
walk	954	18%	<div><div></div></div>	use	313	06%	<div><div></div></div>	
friendly	909	18%	<div><div></div></div>	building	309	06%	<div><div></div></div>	
home	884	17%	<div><div></div></div>	days	306	06%	<div><div></div></div>	
need	840	16%	<div><div></div></div>	check	289	06%	<div><div></div></div>	
clubs	799	15%	<div><div></div></div>	nearby	278	05%	<div><div></div></div>	
perfect	785	15%	<div><div></div></div>	provided	271	05%	<div><div></div></div>	
night	766	15%	<div><div></div></div>	bed	233	05%	<div><div></div></div>	
located	727	14%	<div><div></div></div>	water	218	04%	<div><div></div></div>	
super	701	14%	<div><div></div></div>	day	214	04%	<div><div></div></div>	
cozy	691	13%	<div><div></div></div>	luggage	212	04%	<div><div></div></div>	
staying	679	13%	<div><div></div></div>	breakfast	190	04%	<div><div></div></div>	
experience	657	13%	<div><div></div></div>	floor	181	04%	<div><div></div></div>	
best	633	12%	<div><div></div></div>	take	179	03%	<div><div></div></div>	
people	613	12%	<div><div></div></div>	street	160	03%	<div><div></div></div>	
quiet	607	12%	<div><div></div></div>	kitchen	144	03%	<div><div></div></div>	
bus	541	10%	<div><div></div></div>	guests	115	02%	<div><div></div></div>	
amazing	540	10%	<div><div></div></div>	coffee	96	02%	<div><div></div></div>	
trip	506	10%	<div><div></div></div>					

## E. The list of concepts for Airbnb for entire homes, private, shared

### Common Concepts among List Types

Concept	Entire	Private	Shared	Total
place	2,697	1,300	1,187	5,184
stay	2,042	970	875	3,887
location	1,553	527	438	2,518
apartment	1,528	343	103	1,974
clean	1,357	742	627	2,726
host	1,320	691	733	2,744
station	1,212	475	328	2,015
recommend	1,013	421	310	1,744
nice	922	649	574	2,145
house	881	498	664	2,043
subway	811	386	306	1,503
convenient	748	281	189	1,218
everything	722	239	173	1,134
room	711	682	356	1,749
helpful	692	252	315	1,259
time	669	404	455	1,528
comfortable	658	356	277	1,291
easy	638	226	160	1,024
walk	631	260	165	1,056
area	569	261	181	1,011
restaurants	559	228	121	908
perfect	516	168	107	791
need	500	205	143	848
located	423	185	119	727
home	393	300	186	879
night	369	196	183	748
super	363	184	125	672
experience	344	171	141	656
staying	336	170	162	668
provided	306	96	79	481
friendly	296	284	311	891
people	295	136	175	606
best	277	164	173	614
bus	272	127	142	541
food	267	120	89	476
places	241	117	115	473
minutes	238	132	36	406
stayed	231	137	129	497
during	227	141	89	457
day	130	130	112	372
take	112	95	85	292
<b>Sub Total</b>	<b>28,069</b>	<b>13,449</b>	<b>11,238</b>	<b>52,756</b>

### Concepts for Only Specific List Types

Concept	Entire	Private	Shared	Total
airport	315			315
distance	308			308
trip	297			297
view	292			292
needed	289			289
questions	273			273
shopping	269			269
nearby	269			269
convenience	251			251
building	250			250
shops	238			238
wifi	211			211
store	204			204
check	197			197
use	183			183
floor	167			167
water	161			161
coffee	137			137
space	130			130
cozy	346	213		559
family	250	149		399
lovely		140		140
walking		111		111
helped		102		102
love		100		100
visit	244		128	372
feel		166	137	303
quiet		149	155	304
warm		126	114	240
breakfast		120	73	193
bathroom		115	85	200
guests			146	146
guesthouse			143	143
bed			128	128
friends			125	125
guest			115	115
<b>Sub Total</b>	<b>5,281</b>	<b>1,491</b>	<b>1,349</b>	<b>8,121</b>
<b>Grand Total</b>	<b>33,350</b>	<b>14,940</b>	<b>12,587</b>	<b>60,877</b>

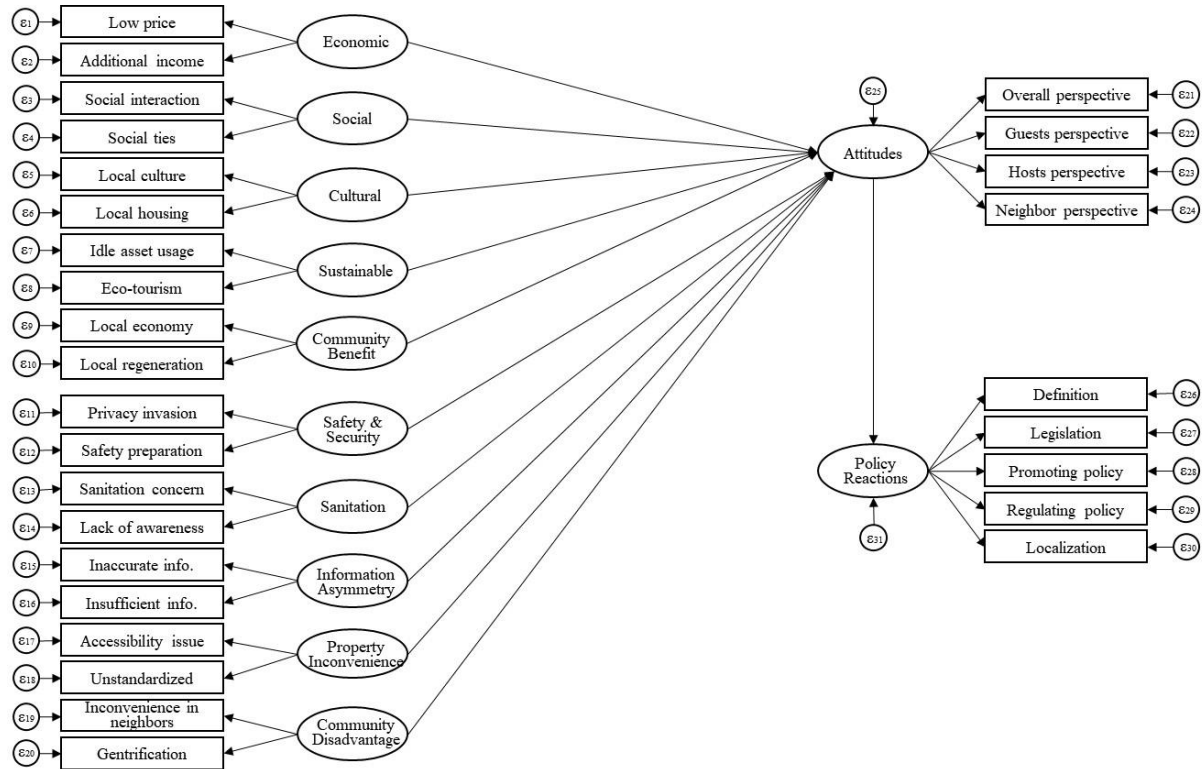


## F. Logistic Regression Analysis

The dependent variable is the status of experiences of accommodation sharing (1: with experience, 0: no experience) and the independent variables are the demographic information including gender, age group in every 10 years, annual income, marital status, occupation, and education.

	Coefficient (z-value-Sig)	Odd Ratio
Gender (2: female)	-.376 (-1.42)	0.686
Age (base 40 years)		
20~29 years old	1.232 (2.89 ***)	3.428
30~39 years old	0.898 (2.41 **)	2.455
50~59 years old	-0.244 (-0.67)	0.784
60 years old above	.306 (0.52)	1.358
Income (base: below 10,000,000)		
KRW 10,000,000 ~ KRW 20,000,000	0.607 (0.72)	1.836
KRW 20,000,000 ~ KRW 30,000,000	0.085 (0.11)	1.089
KRW 30,000,000 ~ KRW 40,000,000	0.844 (1.11)	2.325
KRW 40,000,000 ~ KRW 50,000,000	0.942 (1.23)	2.565
KRW 50,000,000 ~ KRW 60,000,000	1.485 (1.96 *)	4.414
KRW 60,000,000 ~ KRW 70,000,000	1.605 (2.06 **)	4.977
KRW 70,000,000 above	1.459 (1.96 *)	4.301
Married (1:Married)	0.627 (2.43 **)	1.872
Occupation (base of self-employed)		
Service	-0.049 (-0.08)	0.951
General work	0.720 (1.03)	2.054
Office/Technical job	-0.158 (-0.33)	0.854
Management	-0.077 (-0.11)	0.926
Professional	-0.164 (-0.26)	0.849
Housewife	0.032 (0.05)	1.033
Student	-0.381 (-0.44)	0.755
Not working	-1.402 (-1.85)	0.246
Others	1.090 (0.71)	2.974
Education (base: Bachelors' Degree)		
High school graduate	-0.437 (-1.08)	0.646
2-year associated degree	-0.558 (-1.23)	0.573
Master's degree	0.564 (1.49)	1.758
Ph.D.	0.034 (0.05)	1.035

**G. The Proposed Model for the Relation between Positive and Negative Factors, Attitudes and Policy Reacts (Phase 1)**

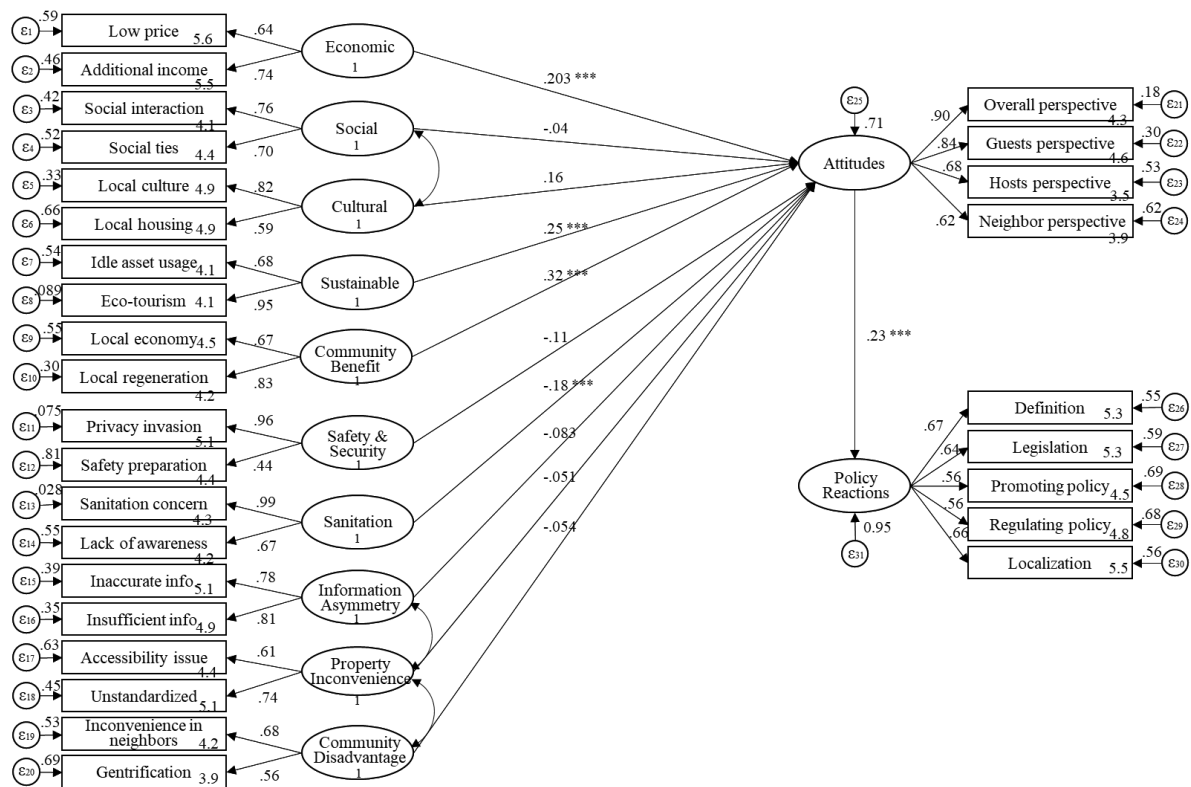


The original model has the convergence problem, so the modified model includes covariance between social and cultural factors, information asymmetry and inconvenience related to property, and the convenience and community disadvantages, in order to succeed in the convergence for the model. However, there are no theoretical reasons to explain the three additional covariances.

The first modified model presents the estimates on the following model and table. The results show that economic (H1a), sustainable (H1d), community benefit (H1e) attributes and sanitation (H1g) are significant to impact on the attitudes toward accommodation sharing and the attitudes significantly influence the perceived necessity of policy reaction (H2) at  $\alpha = 0.01$ , due to the high correlated residual generally occurred between indicators (Kline, 1998).

However, the overall goodness of the first modified model fit shows poorly fit based on RMSEA greater than 0.1. Therefore, this first modified model is also required to be modified.

**The 1 st Modified Structural Equation Model and Estimates of Phase 1**



**The Summary Table of the Modified Structural and Measurement Model Estimates of Phase 1**

	Std.Coeff.	Std.Err	z-value	P-value	Sig.
<b>Structural Model Estimates</b>					
Economic → Attitudes	0.203	0.075	2.72	0.007	***
Social → Attitudes	-0.04	0.162	-0.25	0.803	
Cultural → Attitudes	0.159	0.162	0.98	0.327	
Sustainable → Attitudes	0.249	0.071	3.50	0.000	***
Community Benefit → Attitudes	0.321	0.069	4.64	0.000	***
Safety → Attitudes	-0.111	0.089	-1.25	0.210	
Sanitation → Attitudes	-0.181	0.069	-2.61	0.009	***
Information → Attitudes	-0.083	0.114	-0.73	0.465	
Property → Attitudes	-0.051	0.127	-0.41	0.685	
Community Disadvantage → Attitudes	-0.054	0.096	-0.56	0.574	
Attitudes → Policy Reaction	0.228	0.052	4.41	0.000	***
<b>Measurement Model Estimates</b>					
Economic → Lower price	0.639	0.121	5.28		
Economic → Additional income	0.738	0.138	5.37		
Social → Social interact	0.762	0.037	20.32		
Social → Social ties	0.696	0.038	18.23		
Cultural → Local Culture	0.821	0.042	19.63		
Cultural → Housing Culture	0.587	0.042	13.83		
Sustainable → Environmental protection	0.68	0.080	8.49		
Sustainable → Eco-friendly tourism	0.955	0.106	8.99		
Community Benefit → Local economy	0.671	0.070	9.55		
Community Benefit → Regeneration	0.834	0.082	10.17		
Safety & Security → Privacy invasion	0.962	0.451	2.13		
Safety & Security → Lack of preparation	0.438	0.209	2.10		
Sanitation → Concern about hygienes	0.986	0.150	6.59		
Sanitation → Insufficient awareness	0.668	0.105	6.36		
Information Asymmetry → Different information	0.783	0.039	20.05		

Information Asymmetry → Insufficient information	0.806	0.039	20.61		
Property-related Inconvenience→ Accessibility	0.611	0.042	14.65		
Property-related Inconv.→ Unstandardized service	0.741	0.044	16.96		
Comm. Disadv. → Inconvenience to neighborhood	0.685	0.092	7.44		
Comm. Disadv. → Gentrification	0.557	0.079	7.02		
Attitudes → overall_attitude	0.904	0.016	57.87		
Attitudes → guest_attitude	0.840	0.018	47.04		
Attitudes → host_attitude	0.682	0.027	25.19		
Attitudes → neighbor_attitude	0.619	0.030	20.40		
Policy Reactions → Necessity of definition	0.669	0.038	17.79		
Policy Reactions → Necessity of legislation	0.642	0.039	16.58		
Policy Reactions → Necessity of promoting policy	0.558	0.043	13.08		
Policy Reactions → Necessity of regulating policy	0.563	0.042	13.36		
Policy Reactions → Necessity of localized policy	0.665	0.038	17.58		

Note:  $\chi^2(363) = 1,963.164$ ,  $P < 0.01$ ; RMSEA = 0.103; CFI=0.671; TLI=0.633

## H. The Summary of Local Government Ordinances

	Districts	Purpose	Definition	Committee	Master Planning	Subsidy	Promotion Strategy	Promotion Education	Support Center
1	Dobong, Seoul	O	O	O		O	O		
2	Dongdaemun, Seoul	O	O	O		O	O		
3	Dongjak, Seoul	O	O	O		O	O		
4	Enpyeong, Seoul	O	O	O		O	O		
5	Gangbuk, Seoul	O	O	O		O	O		
6	Gangdong, Seoul	O	O	O		O	O		
7	Gangseo, Seoul	O	O	O		O	O		
8	Geumcheon, Seoul	O	O	O		O	O		
9	Guro, Seoul	O	O	O		O	O		
10	Gwanak, Seoul	O	O	O		O	O		
11	Gwangjin, Seoul	O	O	O		O	O		
12	Jongno, Seoul	O	O	O		O	O		
13	Junggu, Seoul	O	O	O		O	O		
14	Jungnang, Seoul	O	O	O		O	O		
15	Mapo, Seoul	O	O	O		O	O		
16	Nowon, Seoul	O	O	O		O	O		
17	Secho, Seoul	O	O	O			O		
18	Seodaemun, Seoul	O	O	O		O	O		
19	Seongbuk, Seoul	O	O	O		O	O		
20	Songpa, Seoul	O	O	O			O		
21	Sungdong, Seoul	O	O	O		O	O		O
22	Yangchen, Seoul	O	O	O		O	O		
23	Yeongdeungpo, Seoul	O	O	O		O	O		
24	Yongsan, Seoul	O	O	O		O	O		
25	Anyang	O	O	O	O	O	O	O	O
26	Asan	O	O	O	O	O	O	O	O
27	Busan	O	O	O	O	O	O		O
28	Bukgu, Busan	O	O	O		O	O		
29	Dongnae, Busan	O	O	O		O			
30	Gijang, Busan	O	O	O		O			
31	Haeundae, Busan	O	O	O		O			
32	Junggu, Busan	O	O	O		O			
33	Namgu, Busan	O	O	O		O			

34	Saha, Busan	0	0	0		0			
35	Sasang, Busan	0	0	0		0			
36	Seogu, Busan	0	0	0	0	0		0	
37	Yeongdo, Busan	0	0	0		0			
38	Chungju	0	0	0		0	0		
39	Daegu	0	0	0		0	0	0	0
40	Daejeon	0	0	0	0	0	0	0	0
41	Geochang	0	0	0		0	0		0
42	Guri	0	0	0		0	0	0	0
43	Gwangju	0	0	0		0	0		0
44	Bukgu, Gwangju	0	0	0		0	0		0
45	Donggu, Gwangju	0	0	0		0	0	0	0
46	Gwangsan, Gwangju	0	0	0		0	0	0	
47	Namgu, Gwangju	0	0	0		0	0		
48	Seogu, Gwangju	0	0	0		0	0	0	
49	Gyeonggi	0	0	0	0	0		0	
50	Gyeongsangnam	0	0	0	0	0			
51	Hwaseong	0	0	0	0	0	0	0	
52	Incheon	0	0	0	0	0		0	0
53	Jeollanam	0	0	0	0	0		0	0
54	Jeollbuk	0	0	0	0	0	0	0	
55	Jeonju	0	0	0	0	0	0	0	0
56	Pyeongtaek	0	0	0	0	0	0	0	0
57	Seongnam	0	0	0	0	0	0	0	0
58	Siheung	0	0	0		0	0	0	0
59	Suwon	0	0	0	0	0	0	0	0
60	Ulsan	0	0	0	0	0		0	0
61	Wanju	0	0	0		0	0	0	
62	Yangsan	0	0	0	0	0	0	0	
63	Yeosu	0	0	0		0	0		0