

Benefits and Concerns of the Sharing Economy: Economic Analysis and Policy Implications[†]

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This paper economically analyzes the benefits and concerns of the sharing economy and derives policy implications that could help to achieve the expected benefits and respond appropriately to any concerns. Primary benefits anticipated from the sharing economy are the creation of new transactions and promotional and market testing opportunities, and the main concerns include the crowding out of existing transactions as well as transaction and social risks. How these benefits and concerns are being realized in Korea is empirically examined by conducting a survey on participation experiences with the sharing economy. The sharing economy is expected to contribute to the enhancement of social welfare with its wide range of benefits if risk factors can be properly controlled. Accordingly, an institutional framework is needed to support the stable growth of the sharing economy, and the unique characteristics of non-professional, peer-to-peer transactions should be reflected in tandem with regulatory equity between existing and sharing economy suppliers. To do this, transaction-volume-based regulations are recommended. Furthermore, to secure regulatory effectiveness and to alleviate transaction risks, the pertinent obligations must be imposed on sharing platforms.

Key Word: Sharing Economy, Peer-to-peer (P2P) Transaction,
Non-professional Supplier, Regulatory Equity
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I. Introduction

The “sharing economy,” a term used to describe the renting of private assets online to others, has achieved explosive growth since the global financial

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crisis. Indeed, two sharing economy titans, Airbnb and Uber, were valued at \$30 billion and \$80 billion as of 2016, outranking global hotel chains such as Hilton and traditional carmakers such as Volkswagen and GM.¹ Considering that the assets required for transactions are not owned by the sharing economy firms, their growth is quite surprising.

As of yet, there remains no clear-cut definition of the sharing economy. In this paper, it is defined as an economy in which consumers of a particular service and suppliers who own idle assets that create a particular service become involved in market transactions through mediation by an ICT-based sharing platform, following Kim *et al.* (2016). Suppliers and consumers search for each other via a platform, and when a match and deal are made, the former provides the latter with access rights to the idle asset at the market price. What should be noted here is the reference to idle assets, which are assets that the owners have acquired for their own use but are not in use. In other words, assets that were bought for the purpose of renting are not regarded as idle assets. Hence, in the sharing economy, transactions basically occur between non-professional individuals. This definition may seem somewhat limited,² but the focus here is on the transaction pattern, which differs from those seen in the existing service industry and in e-commerce and thus requires a new policy approach. As shown in Table 1, the sharing economy can be classified into several sectors depending on the type of asset utilized.

Peer-to-peer transactions using privately owned assets are nothing new, but these transactions have increased dramatically in volume due to technological advances, typified by the internet and smart devices, and have grown into an industry. While the proliferation of the sharing economy is now an undeniable trend, it raises many issues with respect to current governmental systems and procedures due to differences with existing industries. This study thus economically analyzes key issues pertaining to the sharing economy, and based on the results, implications are presented for government policies to support its stable growth. In particular, empirical analyses of the benefits and concerns of the sharing economy are conducted to derive

TABLE 1—MAJOR SECTORS OF THE SHARING ECONOMY

| Sector | Idle assets | Consumer | Supplier |
|---------------------------|---|-----------------------|---------------------|
| Accommodation | Vacant house or room | Guest | Host |
| Car | Idle car, spare time | Passenger | Car owner |
| Finance (Crowdfunding) | Surplus money | Fundraiser | Investor |
| Space | Idle space, idle shop | Those who need space | Space holder |
| Talent | Spare time, labor, intellectual property | Those who need talent | Talented individual |

¹Bloomberg, "Uber and Airbnb, It's Time to Get Real," 2016. 11. 7.

²According to the definition above, companies that hold large quantities of assets directly and rent them out to consumers, i.e., B2C-type platforms, are not included.

institutional measures that could help to achieve the expected benefits and respond appropriately to any concerns.

The paper initially discusses the logically anticipated benefits and concerns of the sharing economy and then analyzes how these benefits and concerns are being realized in Korea by conducting an extensive survey regarding the participation experience with the sharing economy. First, primary benefits expected from the sharing economy are the creation of new transactions and promotional and market testing opportunities, as evidenced in the survey results pertaining on reasons for participation. I also estimate an empirical model of the determinants of participation to determine which benefit actually motivates people to participate more in the sharing economy. Next, main concerns include the crowding out of existing transactions and transaction risks. The survey results will show how severe those risks have been in the market, and this is supplemented by a model analysis of participation satisfaction. Lastly, transaction-volume-based regulations are suggested as an institutional framework to achieve the expected benefits and respond appropriately to concerns.

Previous studies of the sharing economy similarly investigate its motivations and constraints using surveys. While most of them (see for example Bellotti *et al.*, 2015; Hamari *et al.*, 2015; Möhlmann, 2015; Tussyadiah, 2016; Böcker and Meelen, 2017; Guttentag *et al.*, 2017) only deal with motivations, constraints are also examined in Tussyadiah (2015), So *et al.* (2018), and Tussyadiah and Pesonen (2018). They analyze how motivations and constraints affect attitudes, behavioral intentions or satisfaction and are mostly limited to the accommodation sharing sector. However, the present paper is distinguished from these earlier studies in how it analyzes the effects of benefits and concerns as they relate to actual participation intensity and satisfaction, comparing the three main sharing economy sectors of accommodation sharing, car sharing and crowdfunding.

The remainder of the paper is organized as follows. Section 2 discusses the types of benefits expected from the sharing economy and presents relevant empirical evidence, including the model analysis results. Section 3 is similarly organized, focusing instead on concerns in the sharing economy. Policy suggestions for the sharing economy are provided in Section 4.

II. Benefits of the Sharing Economy

A. Creation of New Transactions

The sharing economy contributes to enhancing the welfare of its participants by creating new transactions that are based on the efficient use of underused assets, made possible by the reduction of transaction costs using ICT technology. Consumers can enjoy low prices, diverse options and greater convenience while suppliers can earn additional income owing to the low entry barriers. In particular, it can also have distributive value by offering low-income households/individuals opportunities to take part as suppliers. Meanwhile, sharing platforms profit by receiving brokerage fees for matching consumers and suppliers.

TABLE 2—REASONS FOR PARTICIPATING IN SHARING ECONOMY TRANSACTIONS

(UNIT: %)

| Accommodation sharing | | Car sharing | | Crowdfunding | | | | | |
|--------------------------------------|-----------------|--------------------------------------|-----------------------|--------------------------------------|------|--------------------------------------|------|---|------|
| Consumer (Guest) | Supplier (Host) | Consumer (Passenger) | Consumer (Fundraiser) | Supplier (Investor) | | | | | |
| Low price | 62.0 | Additional income | 41.6 | Low price | 42.2 | Curiosity | 36.0 | Appealing backstories or business ideas | 52.7 |
| Cultural experience | 34.0 | Curiosity | 31.9 | Curiosity | 35.4 | Interaction with investors | 28.0 | Curiosity | 38.7 |
| Curiosity | 32.4 | Abundant guest information | 21.2 | Recommendation by friends or reviews | 34.4 | Short fundraising period | 28.0 | High return | 26.7 |
| Diverse selection | 27.8 | Trust in the platform | 18.6 | Convenience in platform use | 27.0 | No other channels possible | 26.7 | Various investment opportunities | 24.3 |
| Recommendation by friends or reviews | 23.2 | No other channels possible | 15.9 | Service quality | 26.0 | Low price (interest rate) | 20.7 | Recommendation by friends or reviews | 16.7 |
| Accommodation quality | 13.2 | Interaction with guests | 15.0 | Trust in the platform | 15.8 | Thick market | 19.3 | Short payback period | 12.7 |
| Interaction with hosts | 12.4 | Recommendation by friends or reviews | 15.0 | Interaction with drivers | 3.2 | Recommendation by friends or reviews | 16.7 | Trust in the platform | 11.3 |
| Trust in the platform | 10.6 | Low user fee | 13.3 | | | Trust in the platform | 15.3 | Convenience in platform use | 10.3 |
| Convenience in platform use | 9.6 | Convenience in platform use | 11.5 | | | Convenience in platform use | 15.3 | Interaction with fundraisers | 9.7 |
| | | | | | | | | Abundant fundraiser information | 7.3 |
| | | | | | | | | Interaction with other investors | 3.3 |

Note: Multiple answers (3 max.) were allowed.

A survey³ was conducted among 1,563 Korean participants in the sharing economy, consisting of 500 consumers and 113 suppliers for accommodation sharing, 500 consumers for car sharing,⁴ and 150 consumers and 300 suppliers for crowdfunding (see Table A1 for the associated demographic profile). Table 2 shows the results of the survey on reasons for participating in each sharing economy sector. Obviously, certain psychological factors are present, such as curiosity about the sharing economy, as more than 30% of the participants chose “curiosity” regardless of the sector or participant type. However, as noted above, participants are also motivated strongly by the expected benefits, i.e., low prices for

³The survey was conducted online using the Macromill Embrain panel from Oct. 24 to Nov. 7, 2016. Respondents were limited to those aged 19 and older and to those with participation experience as a consumer or a supplier in (at least) one of the three sharing economy sectors listed above. Refer to Kim *et al.* (2016) for further details.

⁴Individuals are not allowed to participate as a car sharing supplier in Korea, and hence no survey information on the supplier side is available.

consumers and additional income for suppliers – prominently for accommodation and car sharing (top-ranked reason). Respondents also chose diverse options (the fourth most popular reason for accommodation sharing consumers and crowdfunding suppliers) and items related to better quality (“accommodation quality,” car sharing “service quality,” and “short fundraising/payback period”) and convenience (“convenience in platform use” in all cases) – all of which contribute to improving participant welfare – as the main reasons behind their participation.

B. Other Expected Benefits

Businesses participating in the sharing economy can also expect promotional and market testing effects. In the rudimentary phase of business, participants are given opportunities to promote and test new goods or business ideas without incurring substantial costs. These benefits are highly anticipated in the sectors of crowdfunding and space and talent sharing, some of which have been realized. Indeed, Table 2 shows that 28% of consumers in the crowdfunding sector chose “interaction with investors and testing and improving business ideas via such interactions” as their main reason for participating, while 53% of suppliers chose “appealing backstories or business ideas.”

In addition, the fact that the actual provision and use of the services transpire offline in most sectors of the sharing economy means that region-based transactions could help stimulate local economies. Examples include Yeosu and San Francisco. Both used to be challenged by a lack of accommodation for travelers. However, when BnBHero (Korea) and Airbnb (US) started offering accommodation sharing services, the two cities were able to secure sufficient accommodation to host the World Expo in 2012 and Super Bowl 50 in 2016, respectively. Other than economic efficiency, the sharing economy is also expected to reduce environmental costs. In particular, car sharing services such as carpooling could reduce air pollutant emissions. Fundamentally, contributions to environmental sustainability can be expected in all sectors of the sharing economy, as it helps conserve finite resources by increasing the utilization rate of produced assets.

C. Empirical Analysis of Participation Intensity

In this subsection, I analyze which benefits actually motivate consumers and suppliers to participate more in the sharing economy. This is done by estimating a model with regard to the determinants of participation intensity based on the survey results. The dependent variable here is how many times the respondents have participated in sharing economy transactions, as reported in Table 3. A significant proportion of accommodation and car sharing consumers (guests and passengers) use sharing economy services repeatedly, but in other cases the respondents mainly consist of novice participants, as more than half of them reported that they have participated in this market only once. Ordered logit models are then used to examine how demographic characteristics and participation reasons (summarized in Table 2) affect actual participation intensity. Tables 4 and 5 report the estimated results for consumers and suppliers, respectively.

TABLE 3—PARTICIPATION INTENSITY

(UNIT: %)

| Instances of participation | Accommodation sharing | | Car sharing | Crowdfunding | |
|----------------------------|-----------------------|-----------------|----------------------|-----------------------|---------------------|
| | Consumer (Guest) | Supplier (Host) | Consumer (Passenger) | Consumer (Fundraiser) | Supplier (Investor) |
| Once | 35.6 | 54.0 | 28.0 | 62.7 | 50.3 |
| Twice | 34.2 | 29.2 | 29.8 | 26.0 | 28.7 |
| Three times and more | 30.2 | 16.8 | 42.2 | 11.3 | 21.0 |

1. Determinants of Participation Intensity for Consumers

An examination of Table 4 reveals that some common demographic variables influence the participation decision of consumers across sectors. Consumers with higher income levels are more likely to participate in the market for accommodation and car sharing, possibly because either they spend more on accommodation and transportation in general or they are more likely to be an early adopter, or both. For crowdfunding, instead, a negative relationship is expected because consumers in this case are actually fundraisers or borrowers (the coefficient is not significant, though). Moreover, as the daily use of SNS increases, they are likely to participate more in accommodation sharing and crowdfunding transactions. Some occupations also affect participation decisions positively despite the fact that detailed patterns differ across sectors. These cases are freelancers and temporary employees (other); health, legal and education professionals; students; self-employed workers; and managers for accommodation sharing. For car sharing, the occupations are science and engineering professionals, while for crowdfunding the occupations are unemployed; and culture, arts and sports professionals. The last result is interesting because donation and reward types of crowdfunding are said to be most active in the culture and art industry. It also implies that crowdfunding is used as a means of financing one's living, especially for the unemployed.

Next, and more importantly, reasons for participating in the sharing economy affect the participation intensity of consumers, except for crowdfunding. For accommodation sharing, the effects of many motivations are found to be positive, in the order of "Convenience in platform use," "Diverse Selection," "Interaction with suppliers," "Cultural experience," "Quality" and "Low price." For car sharing, the benefits related to the platforms of "Trust in the platform" and "Convenience in platform use" are most influential in the positive direction, followed by "Quality" and "Recommendation by friends or reviews." When compared with Table 2, which does not distinguish between initial participation and re-participation, this result shows that motivations or expected benefits encouraging consumers to participate repeatedly may differ. The effect of "Curiosity" is negative and is therefore not a motivating factor in terms of re-participation, which is intuitive. Moreover, the service characteristics inherent to accommodation sharing of "Interaction with suppliers" and "Cultural experience" or the benefits related to car

sharing platforms stand out more than a typical example such as “Low price.” This implies that sharing economy firms should pay more attention to the former factors as the industry matures, with the retention of existing customers becoming more important.

TABLE 4—ESTIMATION RESULTS OF PARTICIPATION INTENSITY FOR CONSUMERS

| Variables | Accommodation sharing | | Car sharing | | Crowdfunding | |
|--|-----------------------|------------|-------------|------------|--------------|------------|
| | Estimate | S.E. | Estimate | S.E. | Estimate | S.E. |
| (Demographics) | | | | | | |
| Dummy for male | -0.047 | (0.199) | 0.121 | (0.220) | -0.027 | (0.501) |
| Age | 0.007 | (0.012) | -0.012 | (0.011) | 0.020 | (0.024) |
| Dummy for being married | 0.164 | (0.301) | -0.597 | (0.311)* | 0.783 | (0.759) |
| Number of children | -0.018 | (0.157) | 0.089 | (0.132) | 0.022 | (0.278) |
| Dummy for high education | 0.287 | (0.280) | -0.279 | (0.247) | 0.438 | (0.669) |
| Income | 0.118 | (0.054)** | 0.145 | (0.062)** | -0.153 | (0.155) |
| Dummies for occupation | | | | | | |
| Student | 0.911 | (0.384)** | -0.218 | (0.390) | 0.800 | (0.978) |
| Self-employed | 0.906 | (0.451)** | -0.014 | (0.351) | -0.179 | (1.015) |
| Manager | 0.808 | (0.376)** | 0.066 | (0.352) | 1.078 | (0.697) |
| Sales and service | 0.605 | (0.397) | 0.112 | (0.404) | 0.338 | (1.034) |
| Blue collar | 0.496 | (0.629) | 0.368 | (0.418) | 0.579 | (1.418) |
| Housewife | 0.291 | (0.335) | -0.353 | (0.366) | -0.393 | (0.734) |
| Business and finance professional | 0.209 | (0.545) | 0.324 | (0.744) | 0.186 | (0.952) |
| Health, legal and education professional | 1.040 | (0.346)*** | 0.020 | (0.474) | 0.457 | (0.855) |
| Culture, arts and sports professional | 0.458 | (0.530) | 0.244 | (0.616) | 1.755 | (1.011)* |
| Science and engineering professional | 0.608 | (0.655) | 2.219 | (1.093)** | | |
| Other | 1.468 | (0.881)* | 0.613 | (0.858) | | |
| Unemployed | 0.719 | (0.461) | 0.296 | (0.586) | 3.393 | (1.612)** |
| Internet use | -0.058 | (0.075) | -0.005 | (0.088) | -0.099 | (0.204) |
| SNS use | 0.210 | (0.068)*** | 0.056 | (0.071) | 0.490 | (0.189)*** |
| (Participation reasons) | | | | | | |
| Curiosity | -0.105 | (0.201) | -0.445 | (0.203)** | -0.060 | (0.462) |
| Interaction with suppliers | 0.531 | (0.276)* | 0.248 | (0.503) | 0.223 | (0.515) |
| Cultural experience | 0.512 | (0.197)*** | | | | |
| Diverse Selection | 0.775 | (0.207)*** | | | | |
| Low price | 0.449 | (0.200)** | 0.300 | (0.188) | 0.061 | (0.564) |
| Quality | 0.508 | (0.269)* | 0.762 | (0.214)*** | | |
| Trust in the platform | 0.478 | (0.298) | 0.972 | (0.269)*** | 0.726 | (0.580) |
| Convenience in platform use | 0.854 | (0.308)*** | 0.962 | (0.218)*** | -0.159 | (0.605) |

TABLE 4—ESTIMATION RESULTS OF PARTICIPATION INTENSITY FOR CONSUMERS (CONT'D)

| Variables | Accommodation sharing | | Car sharing | | Crowdfunding | |
|--------------------------------------|-----------------------|---------|-------------|-----------|--------------|---------|
| | Estimate | S.E. | Estimate | S.E. | Estimate | S.E. |
| (Participation reasons) | | | | | | |
| Recommendation by friends or reviews | 0.086 | (0.220) | 0.513 | (0.208)** | -1.129 | (0.712) |
| No other channels possible | | | | | -0.810 | (0.602) |
| Thick market | | | | | 0.547 | (0.520) |
| Short fundraising period | | | | | 0.124 | (0.478) |
| Number of observations | 500 | | 500 | | 150 | |
| Pseudo R ² | 0.0707 | | 0.1061 | | 0.1919 | |

Note: 1) “High education” refers to an education level of college graduation and above. 2) Income, internet use and SNS use are ordinal variables defined as shown in Table A1. 3) The base group for occupation dummies is set to clerks. 4) Regional dummies are also included in the estimation but are not reported. 5) ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

TABLE 5—ESTIMATION RESULTS OF PARTICIPATION INTENSITY FOR SUPPLIERS

| Variables | Accommodation sharing | | Crowdfunding | |
|--|-----------------------|-----------|--------------|-----------|
| | Estimate | S.E. | Estimate | S.E. |
| (Demographics) | | | | |
| Dummy for male | -0.344 | (0.519) | 0.383 | (0.298) |
| Age | 5.98e-06 | (0.034) | -0.008 | (0.015) |
| Dummy for being married | 1.706 | (0.725)** | -0.613 | (0.436) |
| Number of children | -0.507 | (0.358) | 0.186 | (0.215) |
| Dummy for high education | 0.603 | (0.649) | 0.021 | (0.456) |
| Income | 0.026 | (0.154) | -0.031 | (0.079) |
| Dummies for occupation | | | | |
| Student | -2.425 | (1.326)* | -0.523 | (0.568) |
| Self-employed | 1.303 | (0.833) | -0.031 | (0.482) |
| Manager | -0.665 | (1.040) | 0.103 | (0.496) |
| Sales and service | 0.100 | (0.955) | 0.074 | (0.592) |
| Blue collar | 0.624 | (1.240) | -0.082 | (0.762) |
| Housewife | -0.184 | (0.927) | 0.427 | (0.548) |
| Business and finance professional | 1.102 | (1.567) | 0.364 | (0.779) |
| Health, legal and education professional | 0.150 | (0.989) | -0.724 | (0.588) |
| Culture, arts and sports professional | -1.595 | (1.067) | 1.147 | (0.653)* |
| Science and engineering professional | 1.128 | (1.366) | 0.281 | (0.755) |
| Other | | | -0.009 | (0.966) |
| Unemployed | 3.551 | (1.884)* | -1.168 | (0.776) |
| Internet use | 0.161 | (0.237) | 0.272 | (0.125)** |
| SNS use | 0.070 | (0.207) | 0.204 | (0.101)** |

TABLE 5—ESTIMATION RESULTS OF PARTICIPATION INTENSITY FOR SUPPLIERS (*CONT'D*)

| Variables | Accommodation sharing | | Crowdfunding | |
|---|-----------------------|------------|--------------|------------|
| | Estimate | S.E. | Estimate | S.E. |
| (Participation reasons) | | | | |
| No other channels possible | -1.050 | (0.733) | | |
| Curiosity | -1.076 | (0.642)* | 0.814 | (0.276)*** |
| Additional income (High return) | 2.147 | (0.594)*** | 0.888 | (0.345)** |
| Interaction with consumers | -0.363 | (0.756) | 1.151 | (0.426)*** |
| Interaction with other investors | | | 2.037 | (0.657)*** |
| Abundant consumer information | -0.184 | (0.653) | 0.056 | (0.463) |
| Low user fee | -0.584 | (0.738) | | |
| Trust in the platform | 0.475 | (0.713) | 0.271 | (0.382) |
| Convenience in platform use | 1.200 | (0.839) | 0.567 | (0.442) |
| Recommendation by friends or reviews | -0.673 | (0.804) | -0.385 | (0.367) |
| Appealing backstories or business ideas | | | 0.502 | (0.308) |
| Various investment opportunities | | | -0.062 | (0.316) |
| Short payback period | | | 1.293 | (0.404)*** |
| Observations | 113 | | 300 | |
| Pseudo R ² | 0.2157 | | 0.1151 | |

Note: 1) “High education” refers to an education level of college graduation and above. 2) Income, internet use and SNS use are ordinal variables defined as shown in Table A1. 3) The base group for occupation dummies is set to clerks. 4) Regional dummies are also included in the estimation but are not reported. 5) ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

2. Determinants of Participation Intensity for Suppliers

Table 5 shows that some occupational variables affect the participation decisions of suppliers as well. Accommodation sharing suppliers are likely to participate less if they are students but are likely to participate more if they are jobless. The latter finding supports the contention that the sharing economy has the expected benefit of offering low-income households/individuals opportunities to take part as suppliers and thus to earn income. Culture, arts and sports professionals have a greater tendency to participate in crowdfunding, implying that they are more motivated to support fundraisers in the same field. In addition, the use of the internet and SNS increases suppliers’ participation intensity in crowdfunding, as it does for accommodation sharing and crowdfunding consumers.

The benefit motivating accommodation suppliers to participate more is “Additional income,” which was also the top-ranked reason in Table 2. However, the effect of “Curiosity” (which ranked second) is again significantly negative. “Additional income” positively affects participation intensity for crowdfunding suppliers as well, but it is notable that the benefits of interaction with fundraisers or other investors have more prominent effects. “Curiosity” has a positive coefficient in the case of crowdfunding suppliers, contrary to the other cases.

III. Concerns of the Sharing Economy

A. Conflict with Existing Businesses: *Crowding out of Existing Transactions and Regulatory Arbitrage*

One of the most marked issues during the process of introducing the sharing economy is the conflict with existing business sectors. As sharing economy transactions substitute for certain existing transactions providing similar services, this will likely gnaw at the profits of incumbent businesses. Out of this concern, the existing accommodation and taxi industries are strongly opposed to accommodation and car sharing services. Several attempts have been made to analyze the impact of accommodation sharing quantitatively on the existing hotel industry, centering on the prominent Airbnb service (see Zervas *et al.*, 2017; Lee and Kim, 2016). For example, Lee and Kim's (2016) analysis of Korea concluded that there was a loss of approximately 0.16% in the hotel industry's room sales for every 10% increase in the supply of accommodation facilities via Airbnb.

This study also finds empirical evidence that a certain degree of the crowding out effect is taking place in existing businesses through the aforementioned survey. Table 6 shows the impact of the sharing economy on traditional transactions across sectors. When asked which type of existing transactions they have reduced mainly through the use of sharing services, almost 90% of accommodation and car sharing consumers, respectively, reported that they reduced certain existing transactions. These were, for example, hotels at 33.6% for accommodation sharing consumers and taxis at 23.2% for car sharing consumers. The fact that only 11-12% did not reduce their use of existing services suggests that accommodation and car sharing may actually be placing competition pressure on existing businesses. In addition, approximately 60% of crowdfunding suppliers reported they invested less in other financial means after their participating in crowdfunding. The degree of substitutability in crowdfunding appears to be comparatively smaller⁵ than in other areas, but its impact has been confirmed.

These findings imply that concerns over existing business profits are not entirely groundless, but this is not a problem solely limited to the sharing economy. Every innovation arrives with some disruption to the traditional industry. However, the negative impact on existing industries can devolve into fundamental issues when regulations on existing businesses are not applied fairly to new sharing economy suppliers or platforms.⁶ For instance, many 'hosts' on accommodation sharing platforms are not officially registered business operators and hence are not subject to safety and tax-related regulations, unlike existing accommodation suppliers. In fact, some even argue that the sharing economy is not a special innovation but was rather formed and grew because it could take advantage of regulatory loopholes.

⁵Table 2 shows that for crowdfunding, more consumers chose "interaction with investors and verifying and improving business ideas via such interaction" and "no other channels possible" over "low price (interest rate)," and much more suppliers chose "appealing backstories or business ideas" and "various investment opportunities" as their main reasons for participation. This implies that crowdfunding may differentiate from other areas and, rather than crowding out the existing financial market, will eventually help to expand the entire market.

⁶If existing suppliers are socially underprivileged, the decline in their welfare could be a problem in itself and hence policy consideration may be needed.

TABLE 6—IMPACT OF THE SHARING ECONOMY ON TRADITIONAL TRANSACTIONS

(Q: WHICH TYPE OF EXISTING TRANSACTION DID YOU MAINLY REDUCE DUE TO SHARING TRANSACTIONS?)

(UNIT: %)

| Accommodation sharing consumers (Guests) | | Car sharing consumers (Passengers) | | Crowdfunding suppliers (Investors) | |
|---|------|---------------------------------------|------|---------------------------------------|------|
| Type | % | Type | % | Type | % |
| Hotel | 33.6 | Public transportation | 29.8 | Bank saving | 38.0 |
| Bed & Breakfast / Pensions / Guest house | 31.6 | Taxi | 23.2 | Stock | 26.0 |
| Motel / Inn | 12.4 | Own car | 23.0 | Fund | 11.0 |
| Resort / Condo | 11.2 | Rented car | 12.0 | Derivatives / Bond / FX | 10.0 |
| Did not reduce | 11.2 | Did not reduce | 12.0 | Did not reduce | 40.7 |

Note: 1) The survey was presented to participant types who are given a certain or high level of autonomy to choose between sharing and existing transactions, in this case consumers in accommodation and car sharing and suppliers in crowdfunding. 2) With regard to crowdfunding suppliers, multiple answers (max. of two) were allowed.

Indeed, if the sharing economy is distorting competition by exploiting regulatory arbitrage while providing low-quality services, this may lead to a qualitative decline of the overall market and to the deterioration of social welfare. Hence, the government must take into consideration regulatory equity when formulating policies that pertain to sharing economy.

B. Transaction and Social Risks

In most cases, the sharing economy involves non-face-to-face transactions of nonstandardized services between unspecified individuals, meaning there are several transaction risks. Above all, due to the high level of information asymmetry, consumers find it difficult to determine the service quality level while providers also have difficulties in knowing and observing the consumer. This could lead to moral hazard, and depending on the sector, could entail property damage, criminal activity (e.g., theft, sexual violence), traffic accidents, defaults and other issues. Furthermore, in the event of the actual occurrence of a transaction risk, dealing with the situation may be problematic, as the current institutional foundations are too weak to provide concrete solutions such as insurance coverage or legal protection. There are also problems with trust when using sharing platforms, as they play a significant role in mediating the transfer of money and information.

If the sharing economy triggers negative external effects beyond the scope of the participants, it could even endanger social safety: in accommodation sharing, the negative external effects could include noise pollution, fire and housing instability;⁷

⁷Housing prices may rise due to the increased demand for new residential buildings or 'office-tels' (multi-purpose buildings with residential and commercial units in Korea) for the primary purpose of accommodation sharing. Moreover, renters may decide to evict existing tenants, preferring a sharing arrangement. San Francisco,

TABLE 7—EXPOSURE TO TRANSACTION AND SOCIAL RISKS

(UNIT: %)

| Sector | Type | Transaction / social risk | Percentage of experience |
|-----------------------|----------------------|---------------------------|--------------------------|
| Accommodation sharing | Consumer (Guest) | Fire, crime | 4.4 |
| | Supplier (Host) | Property damage | 25.7 |
| | | Noise, crime | 17.7 |
| Car sharing | Consumer (Passenger) | Accident, crime | 5.4 |
| Crowdfunding | Supplier (Investor) | Delay, default | 14.3 |

in car sharing, there could be more car accidents; and in crowdfunding, there could be the risk of large-scale financial insolvency.⁸

Table 7 presents the percentage of participants who actually experienced transaction and social risks using sharing economy services. Thus far, the experience rate for consumers remains at about 5%, which does not appear to be very high. However, that for suppliers is quite high, in double digits, meaning that damage to supplier assets or local communities caused by consumer moral hazard may be a serious issue that cannot be overlooked.

C. Empirical Analysis of Participant Satisfaction

In this section, I analyze how the satisfaction of participants is affected by their sharing economy experiences, especially by the experience of exposure to transaction risks. This will be supplemented by a model analysis of the impact of satisfaction on intention to participate again. Table 8 compares the degree to which participants were satisfied after having used sharing economy services, which will be used as the dependent variable (an ordinal variable that has a value of 1=very dissatisfied to 5=very satisfied), and their intention to participate again in the corresponding sharing economy sector. Variables related to their situations of use (summarized in Tables A2-A6) are included as explanatory variables in addition to demographic characteristics and participation reasons, and ordered logit models are estimated. The estimation results for consumers and suppliers are reported in Tables 9 and 10, respectively.

New York and Berlin recently tightened regulations on accommodation sharing mainly in relation to housing instability.

⁸When sharing involves human assets (e.g., talent sharing and car sharing), this could raise employment instability issues. To prepare for the emergence of such sharing transactions in Korea, the government must be equipped with legal interpretations regarding the relationship between the platform and the supplier and policy countermeasures.

TABLE 8—SATISFACTION AND INTENTION TO PARTICIPATE AGAIN

(UNIT: %)

| Sector | Type | Satisfaction | | | | | Intention to participate again |
|-----------------------|-----------------------|--------------------|---------------|---------|-----------|----------------|--------------------------------|
| | | Very dis-satisfied | Dis-Satisfied | Average | Satisfied | Very satisfied | |
| Accommodation sharing | Consumer (Guest) | 1.0 | 7.0 | 37.2 | 45.2 | 9.6 | 91.2 |
| | Supplier (Host) | 0.9 | 16.8 | 61.1 | 17.7 | 3.5 | 83.2 |
| Car sharing | Consumer (Passenger) | 0.6 | 4.2 | 43.4 | 43.4 | 8.4 | 88.6 |
| Crowdfunding | Consumer (Fundraiser) | 4.7 | 30.7 | 50.0 | 13.3 | 1.3 | 58.0 |
| | Supplier (Investor) | 1.3 | 9.7 | 50.0 | 35.3 | 3.7 | 83.3 |

1. Determinants of Consumer Satisfaction

The focus of this section is on the effects of experience situations, including exposure to transaction risks, on satisfaction, which will be discussed first. A common finding in both the accommodation and car sharing markets is that consumers are more satisfied with their sharing economy experiences abroad than at home. Also, it is noteworthy that the experience of exposure to transaction risks negatively affects the satisfaction level. If combined with the analysis results in Table A7, which showed that the intention to participate again is significantly determined by satisfaction, transaction risk experience has an indirect negative impact on intention to participate again as well (no direct impact was found in separate estimations). This means that transaction risks not only affect transaction participants but also may affect the sustainability of the market itself. For crowdfunding consumers, transaction risks are not well defined and are therefore not included in the estimation. Instead, successful fundraising experiences have a positive impact on satisfaction, as expected.

Regarding consumer satisfaction, demographic characteristics have little influence on it, as reported in Table 9. However, the impact of participation reasons remains present. Participation reasons that have a significantly positive coefficient largely overlap with those in the participation intensity estimation for accommodation and car sharing. With reference to crowdfunding, several reasons for participation now have a significant impact on satisfaction, in this case those related to crowdfunding platforms “Trust in the platform” and “Convenience in platform use,” and the benefit of a “Thick market.”

2. Determinants of Supplier Satisfaction

Supplier satisfaction is influenced by few variables pertaining to demographics and participation reasons; therefore, only the effects of experience situations are discussed here (Table 10). In the case of accommodation sharing, suppliers providing certain types of accommodation are less satisfied than others, specifically those providing part of a house or an entire office-tel when these spaces are the

TABLE 9—ESTIMATION RESULTS OF PARTICIPATION SATISFACTION FOR CONSUMERS

| Variables | Accommodation sharing | | Car sharing | | Crowdfunding | |
|--|-----------------------|------------|-------------|------------|--------------|-----------|
| | Estimate | S.E. | Estimate | S.E. | Estimate | S.E. |
| (Accommodation sharing) | | | | | | |
| Dummy for overseas destination | 0.442 | (0.206)** | | | | |
| Dummy for tourism and recreation purpose | -0.153 | (0.356) | | | | |
| Travel period | 0.190 | (0.148) | | | | |
| Dummies for companion type | | | | | | |
| Family | 0.766 | (0.332)** | | | | |
| Friend/Lover | 0.405 | (0.305) | | | | |
| Colleague at work | 0.654 | (0.472) | | | | |
| Dummy for transaction risk experience | -1.448 | (0.495)*** | | | | |
| (Car sharing) | | | | | | |
| Dummy for overseas location | | | 1.446 | (0.469)*** | | |
| Dummies for purpose | | | | | | |
| Commuter | | | -0.528 | (0.585) | | |
| Travel | | | -0.036 | (0.226) | | |
| Duration | | | 0.078 | (0.111) | | |
| Dummy for transaction risk experience | | | -1.096 | (0.419)*** | | |
| (Crowdfunding) | | | | | | |
| Dummies for crowdfunding type | | | | | | |
| Donation | | | | | -1.082 | (0.459)** |
| Reward | | | | | 0.286 | (0.446) |
| Lending | | | | | 1.002 | (0.429)** |
| Equity | | | | | 0.331 | (0.496) |
| Dummies for fundraising purpose | | | | | | |
| Business | | | | | -0.186 | (0.693) |
| Medical expenses | | | | | -0.489 | (0.703) |
| Education expenses | | | | | -0.326 | (0.718) |
| Living expenses | | | | | 0.405 | (0.622) |
| Marriage preparation | | | | | 0.794 | (0.833) |
| Deposit | | | | | 0.132 | (0.950) |
| Property purchase | | | | | 0.051 | (0.814) |
| Conversion of loan | | | | | -0.793 | (0.884) |
| Other | | | | | -0.821 | (1.439) |
| Average target amount | | | | | -0.178 | (0.161) |
| Dummy for success experience | | | | | 1.030 | (0.544)* |

Note: 1) Travel period for accommodation sharing and Duration for car sharing are ordinal variables defined as shown in Table A2 and Table A4, respectively. 2) The base group for the companion-type dummies is set to “alone.” 3) The base group for purpose dummies for car sharing is set to “everyday life.” 4) ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

TABLE 9— ESTIMATION RESULTS OF PARTICIPATION SATISFACTION FOR CONSUMERS (CONT'D)

| Variables | Accommodation sharing | | Car sharing | | Crowdfunding | |
|--|-----------------------|------------|-------------|------------|--------------|-----------|
| | Estimate | S.E. | Estimate | S.E. | Estimate | S.E. |
| (Demographics) | | | | | | |
| Dummy for male | -0.184 | (0.207) | -0.287 | (0.222) | -0.111 | (0.495) |
| Age | 0.015 | (0.013) | -0.008 | (0.012) | 0.004 | (0.025) |
| Dummy for being married | -0.492 | (0.325) | -0.169 | (0.316) | 0.202 | (0.767) |
| Number of children | -0.076 | (0.169) | 0.032 | (0.132) | -0.112 | (0.271) |
| Dummy for high education | -0.410 | (0.284) | 0.006 | (0.248) | 0.418 | (0.667) |
| Income | 0.048 | (0.055) | 0.040 | (0.060) | -0.009 | (0.151) |
| Dummies for occupation | | | | | | |
| Student | 0.290 | (0.388) | 0.187 | (0.378) | -0.153 | (0.898) |
| Self-employed | 0.045 | (0.440) | -0.311 | (0.359) | 0.553 | (0.855) |
| Manager | 0.265 | (0.399) | -0.395 | (0.371) | 0.939 | (0.718) |
| Sales and service | 0.066 | (0.418) | -0.783 | (0.425)* | 0.298 | (1.022) |
| Blue collar | 0.486 | (0.672) | -0.535 | (0.423) | 2.540 | (1.412)* |
| Housewife | 0.048 | (0.356) | -0.078 | (0.380) | -0.661 | (0.759) |
| Business and finance professional | -0.739 | (0.552) | -2.024 | (1.002)** | -1.122 | (1.013) |
| Health, legal and education professional | 0.150 | (0.353) | 0.603 | (0.493) | 0.788 | (0.921) |
| Culture, arts and sports professional | -0.770 | (0.578) | 0.067 | (0.628) | 1.735 | (0.993)* |
| Science and engineering professional | -0.467 | (0.683) | 0.135 | (0.635) | 2.301 | (1.784) |
| Other | 0.349 | (0.881) | 0.195 | (0.790) | | |
| Unemployed | 0.380 | (0.499) | 0.150 | (0.578) | 2.910 | (1.775) |
| Internet use | 0.100 | (0.078) | -0.075 | (0.088) | -0.302 | (0.195) |
| SNS use | 0.050 | (0.071) | 0.099 | (0.074) | 0.151 | (0.175) |
| (Participation reasons) | | | | | | |
| Curiosity | 0.147 | (0.205) | 0.124 | (0.209) | 0.315 | (0.464) |
| Interaction with suppliers | 1.112 | (0.288)*** | -0.114 | (0.521) | 0.554 | (0.544) |
| Cultural experience | 0.678 | (0.205)*** | | | | |
| Diverse Selection | 0.588 | (0.212)*** | | | | |
| Low price | 0.827 | (0.209)*** | -0.067 | (0.190) | 0.584 | (0.555) |
| Quality | 1.178 | (0.290)*** | 1.133 | (0.219)*** | | |
| Trust in the platform | 0.820 | (0.318)** | 0.340 | (0.269) | 1.496 | (0.600)** |
| Convenience in platform use | 0.578 | (0.318)* | 0.827 | (0.217)*** | 1.078 | (0.629)* |
| Recommendation by friends or reviews | 0.963 | (0.230)*** | 0.248 | (0.213) | 0.392 | (0.641) |
| No other channels possible | | | | | -0.833 | (0.570) |
| Thick market | | | | | 0.963 | (0.561)* |
| Short fundraising period | | | | | 0.058 | (0.504) |
| Number of observations | 500 | | 500 | | 150 | |
| Pseudo R ² | 0.1085 | | 0.1074 | | 0.2352 | |

Note: 1) “High education” refers to an education level of college graduation and above. 2) Income, Internet use and SNS use are ordinal variables defined as shown in Table A1. 3) The base group for occupation dummies is set to clerks. 4) Regional dummies are also included in the estimation but are not reported. 5) ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

suppliers' own residences. The former seems to capture the inconvenience caused by the sharing of one's personal space with guests. Moreover, crowdfunding suppliers are more satisfied when they have participated in reward-type crowdfunding. It is important to emphasize here that exposure to transaction risks (property damage for accommodation sharing and delays or defaults for crowdfunding) negatively affects satisfaction and hence intention to participate again for sharing economy suppliers as well (again, not directly but indirectly). This result indicates that transaction risks can indeed be a real concern in the sharing economy.

TABLE 10—ESTIMATION RESULTS OF PARTICIPATION SATISFACTION FOR SUPPLIERS

| Variables | Accommodation sharing | | Crowdfunding | |
|--|-----------------------|-----------|--------------|-----------|
| | Estimate | S.E. | Estimate | S.E. |
| (Accommodation sharing) | | | | |
| Dummies for accommodation type | | | | |
| One's own residence, part of the house | -1.733 | (0.852)** | | |
| One's own residence, whole detached house | -0.741 | (0.778) | | |
| One's own residence, whole apartment | -0.151 | (0.786) | | |
| One's own residence, whole office-tel | -1.305 | (0.763)* | | |
| Not one's own residence, part of the house | -1.469 | (0.976) | | |
| Not one's own residence, whole detached house | -1.073 | (1.194) | | |
| Not one's own residence, whole apartment | -0.997 | (1.117) | | |
| Not one's own residence, whole office-tel | 1.655 | (1.279) | | |
| Registered accommodation | -0.444 | (1.200) | | |
| Average daily room charge | 0.315 | (0.342) | | |
| Total period of accommodation offering during last year | -0.112 | (0.383) | | |
| Total income from accommodation sharing during last year | 0.448 | (0.410) | | |
| Dummies for transaction risk experience | | | | |
| Property damage | -1.665 | (0.755)** | | |
| Noise or crime by guests | 0.680 | (0.894) | | |
| (Crowdfunding) | | | | |
| Dummies for crowdfunding type | | | | |
| Donation | | | -0.053 | (0.270) |
| Reward | | | 0.587 | (0.268)** |
| Lending | | | 0.336 | (0.323) |
| Equity | | | -0.528 | (0.324) |
| Average investment amount | | | 0.125 | (0.152) |
| Total investment amount | | | -0.100 | (0.145) |
| Share of crowdfunding in total financial assets | | | 0.221 | (0.146) |
| Dummy for transaction risk experience | | | -0.842 | (0.372)** |

Note: 1) Average daily room charge, Total period of accommodation offering and Total income from accommodation sharing are ordinal variables defined as shown in Table A3. 2) Average investment amount, Total investment amount and Share of crowdfunding in total financial assets are ordinal variables defined as shown in Table A6. 3) ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

TABLE 10— ESTIMATION RESULTS OF PARTICIPATION SATISFACTION FOR SUPPLIERS (CONT'D)

| Variables | Accommodation sharing | | Crowdfunding | |
|--|-----------------------|-----------|--------------|------------|
| | Estimate | S.E. | Estimate | S.E. |
| (Demographics) | | | | |
| Dummy for male | -0.618 | (0.616) | -0.297 | (0.296) |
| Age | -0.008 | (0.037) | -0.016 | (0.015) |
| Dummy for being married | -0.307 | (0.784) | 0.062 | (0.433) |
| Number of children | -0.081 | (0.399) | 0.112 | (0.219) |
| Dummy for high education | 0.040 | (0.717) | -0.305 | (0.427) |
| Income | 0.396 | (0.156)** | -0.007 | (0.081) |
| Dummies for occupation | | | | |
| Student | 0.460 | (1.154) | 0.477 | (0.552) |
| Self-employed | -0.650 | (0.931) | 0.789 | (0.476)* |
| Manager | -0.377 | (1.280) | -0.514 | (0.491) |
| Sales and service | -1.893 | (1.199) | 0.374 | (0.567) |
| Blue collar | 0.969 | (1.396) | 0.172 | (0.729) |
| Housewife | 0.626 | (1.063) | 0.566 | (0.543) |
| Business and finance professional | -3.095 | (2.114) | -0.394 | (0.751) |
| Health, legal and education professional | -0.539 | (1.091) | -0.500 | (0.530) |
| Culture, arts and sports professional | -0.724 | (1.053) | 0.356 | (0.785) |
| Science and engineering professional | -1.113 | (1.730) | -1.314 | (0.789)* |
| Other | | | 0.478 | (0.986) |
| Unemployed | 0.482 | (2.168) | -0.189 | (0.753) |
| Internet use | 0.568 | (0.261)** | 0.040 | (0.124) |
| SNS use | -0.143 | (0.232) | 0.198 | (0.105)* |
| (Participation reasons) | | | | |
| No other channels possible | 0.944 | (0.799) | | |
| Curiosity | 0.198 | (0.782) | 0.129 | (0.278) |
| Additional income (High return) | -0.247 | (0.583) | | |
| Interaction with consumers | 0.099 | (0.844) | 0.590 | (0.423) |
| Interaction with other investors | | | 0.648 | (0.656) |
| Abundant consumer information | 0.609 | (0.752) | 0.341 | (0.466) |
| Low user fee | -0.576 | (0.835) | 0.352 | (0.341) |
| Trust in the platform | -1.139 | (0.826) | 0.274 | (0.380) |
| Convenience in platform use | 0.695 | (1.006) | -0.371 | (0.435) |
| Recommendation by friends or reviews | -0.121 | (0.901) | 0.265 | (0.353) |
| Appealing backstories or business ideas | | | 0.908 | (0.302)*** |
| Various investment opportunities | | | 0.382 | (0.335) |
| Short payback period | | | -0.253 | (0.411) |
| Number of observations | | 113 | | 300 |
| Pseudo R ² | | 0.2606 | | 0.0890 |

Note: 1) “High education” refers to an education level of college graduation and above. 2) Income, Internet use and SNS use are ordinal variables defined as shown in Table A1. 3) The base group for occupation dummies is set to clerks. 4) Regional dummies are also included in the estimation but are not reported. 5) ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

IV. Policy Suggestions

The paper discussed anticipated benefits and concerns as they pertain to the sharing economy and provided empirical evidence of how these benefits and concerns are being realized in Korea by analyzing survey results regarding the participation experience of both consumers and suppliers.

The sharing economy is accompanied by diverse expected benefits. Through the creation of new transactions, consumers can enjoy low prices, diverse options and better quality and convenience, and suppliers can earn additional income, all of which contribute to the welfare of the participants. The empirical analysis of participation intensity shows that service or platform characteristics inherent to the sharing economy motivate consumers to re-participate more than low prices, providing managerial implications for sharing economy firms. Businesses participating in the sharing economy can also benefit from promotional and market testing opportunities, which is highly anticipated in the sectors of crowdfunding and space and talent sharing. Moreover, other expected benefits include vitalization of the local economy and reduced environmental costs.

However, there are also concern factors. The sharing economy could crowd out certain existing transactions that provide similar services. The empirical evidence suggests this is likely to be more pronounced in accommodation and car sharing than in crowdfunding. It is also discussed that the crowding out effects will exacerbate when regulations are applied unfairly to suppliers from existing and sharing businesses. In addition, the sharing economy encompasses several transaction risks, including information asymmetry, uncertainty in ex-post handling and weak trust in the platforms. Thus far, the experience rate of transaction risks is considered to be high only for suppliers, but it negatively affects intention to participate again through satisfaction for both consumers and suppliers, implying that transaction risks must be considered in the sharing economy.

Those concern factors should be controlled properly for the sharing economy to contribute to the enhancement of social welfare with its wide range of benefits. To this end, the government must lay the institutional foundation to support the stable growth of the sharing economy, which will entail a new approach that takes into account its uniqueness. Although each sector differs in terms of development status, prospects and key issues, as examined throughout the paper, and each therefore requires specific action plans, here I intend to suggest a general policy direction that could be applied across the spectrum.

First, we reconsider the definition of the sharing economy. In most cases, suppliers in the sharing economy, unlike those in the traditional economy, are non-professional and engage in transactions temporarily or irregularly. However, the existing regulatory system regards suppliers as professional business operators, and as such, if the same regulations were applied to the sharing economy, non-professional individual suppliers will have difficulties in meeting the regulatory standards, which will in turn force them from the market. This can inevitably cause consumers and suppliers to leave the market sequentially and irreparably damage the sharing economy, as explained in Hwang (2016). Indeed, Table 11 shows that in accommodation sharing and crowdfunding, only half of respondent suppliers answered

TABLE 11—IMPACT OF APPLYING REGULATIONS IDENTICAL TO THOSE OF EXISTING SUPPLIERS ON SHARING ECONOMY SUPPLIERS

(Q: WILL YOU STILL PARTICIPATE IN THE SHARING ECONOMY IN THE FOLLOWING HYPOTHETICAL REGULATORY ENVIRONMENT?)

(UNIT: %)

| Sector | Regulatory situation | Still participate |
|---------------------------------------|---|-------------------|
| Accommodation sharing supplier (Host) | Must pay the same tax as existing accommodation suppliers for the income from accommodation sharing | 52.2 |
| | Must take out compensation insurance for guests | 53.1 |
| | Must follow the same safety regulations, such as installing fire extinguishers, as existing accommodation suppliers | 63.7 |
| | Must register with the government as an accommodation sharing supplier | 51.3 |
| Crowdfunding supplier (Investor) | Must register with the government as an investor | 54.7 |
| | Must periodically report income earned through crowdfunding | 52.0 |

positively about participating as a supplier if regulations become similar to those for existing suppliers. This implies that there is a necessity for the government to differentiate regulations if it intends to bolster the sharing economy.

However, to respond to the concerns of conflicts with existing businesses properly, the government should guarantee regulatory equity so that existing and sharing economy suppliers can compete on a level playing field. When regulatory equity is considered in tandem with the unique characteristics of the sharing economy, regulations must be linked to the volume of transactions, as proposed in Kim *et al.* (2016). In other words, a transaction limit should be set and those who exceed the limit should be categorized as ‘professional, regular operators,’ making them subject to traditional supplier regulations, while those who do not are categorized as ‘non-professional, temporary operators’ and are subject to eased regulations. Existing suppliers wishing for fewer regulations can opt to reduce their transaction volume and new suppliers wanting to become regular operators can do so by meeting traditional regulatory requirements. Transaction-volume-based regulations guarantee the autonomous right of choice to respective suppliers while demanding them to pay the price for the benefit of eased regulations, i.e., a reduced transaction volume.

Major countries such as the US and UK are the frontrunners in the sharing economy, but even they are in the incipient stages of institutionalization. Currently, institutionalization is most active for accommodation sharing, and as shown in Table 12, the process has been mainly carried out at the city level. Accommodation sharing is mostly restricted to residential areas and buildings and to main occupants, and transaction-volume-based regulations are being imposed. In all cases, the host must reside on-site during the guests’ stay (meaning only a part of the host’s residence can be shared) or the total period of renting through accommodation sharing must be limited to 60-180 days per year. Moreover, tax regulations in some countries are linked to the transaction volume and those with fewer transactions are given tax exemptions on their rental income. If their transaction volumes are below

TABLE 12—INSTITUTIONALIZATION STATUS IN MAJOR COUNTRIES: ACCOMMODATION SHARING

| City, Country | Registration · Authorization requirement | Rental period limit | | Income tax on suppliers |
|--|--|----------------------------|-------------------------|--|
| | | Condition ¹⁾ | Permitted days per year | |
| San Francisco, US | Registration required | Host present | Unlimited | |
| | | Host absent | 90 days | |
| Santa Monica, US | Authorization required | Host present | Unlimited | Tax exemption for transaction volume of \$ 40,000 or lower |
| | | Host absent | Illegal | |
| Paris, France | Not required ²⁾ | | 120 days | |
| UK | Not required ³⁾ | | 90 days | Tax exemption for transaction volume of £ 7,500 or lower |
| Amsterdam, Netherlands ⁴⁾ | (Vacation rental) Not required | | 60 days | |
| | (B&B) Registration required | Host present ⁵⁾ | Unlimited | |
| | (Short stay) Authorization required | | 180 days | |
| Hamburg, Germany | Not required ⁶⁾ | Host present ⁷⁾ | Unlimited | |
| | | Host absent | 180 days | |
| Catalonia (Barcelona), Spain ⁸⁾ | Authorization required | | 4 months | |

Note: 1) The conditions of host present or absent indicate whether or not the host resides on site during the guests' stay. Therefore, host present means that only part of the host's residence is shared. 2) Authorization is required for rentals in some regions and for the rental of non-residential facilities. 3) Authorization is required for stays if the maximum number of rental days is exceeded. 4) Short stay corresponds to a rental with a minimum of seven days at a time. In all cases, up to four guests are allowed at a time. With regard to tenants, vacation rentals are possible only with permission from the homeowner. 5) A host must occupy 60 percent or more of the total residential area. 6) Authorization is required for rentals of residential assets other than the primary residence. 7) No limit on rental periods for guests occupying less than 50% of the total residential area. 8) Maximum of two bedrooms for up to five guests per room.

the limit and they are thus classified as a 'supplier in accommodation sharing,' they will be subject to relaxed regulations on registration or authorization requirements, fire safety requirements, taxes and others as compared to existing accommodation operators.

The enforcement of transaction-volume-based regulations involves difficulties. To ensure effectiveness, regulators would need information about the transaction volumes of the respective suppliers. However, sharing economy suppliers have an incentive to under-report their transaction volumes in order to benefit from the eased regulations. Moreover, it is very difficult for regulatory authorities to identify false reports and violations given the very numerous suppliers and to impose meaningful sanctions, as doing so would lead to excessive administrative costs. Even major countries with more advanced systems for accommodation sharing have yet to establish effective enforcement means for transaction-volume-based

regulations. Instead, some cities have simply attempted temporary measures such as reserving accommodation at suspected operators' offerings and conducting surprise inspections.

Accordingly, to strengthen the effectiveness of transaction-volume-based regulations, certain obligations must be imposed on sharing platforms. Because such platforms possess detailed data on all sharing transactions and have a relatively low incentive to report falsely, sharing platforms should be obligated to submit relevant transaction information regularly, on behalf of the suppliers, to the government. Once registration and taxation standards for sharing economy participants are set, sharing platforms can also operate online services through which suppliers can register with the government before initiating transactions, or that enables withholding income and consumption taxes of each transaction. This could significantly cut administrative costs and secure regulatory effectiveness. In San Francisco, where the institutionalization of accommodation sharing is most advanced, the so-called "Airbnb law" was adopted in 2015 and with several revisions since, the city is now imposing some obligation on sharing platforms.

Next, transaction risks can be basically resolved somewhat via market mechanisms such as self-regulation by platforms and collective intelligence. The profit of sharing platforms relies on the transaction volume via the platform, meaning that there is an incentive to create a reliable environment with low transaction risks to safeguard users. In fact, there are a number of studies confirming that sharing platforms and their participants are working together to regulate consumers and suppliers voluntarily and to reduce transaction risks significantly through various means, such as reviews and reputation and ex-ante screening by self-operated or third-party verification agencies.⁹ In this context, when dealing with these risks, government policies need to play a supplementary role while focusing on regulating platforms rather than on participants.

⁹Refer to Kim and Lee (2016), who empirically analyzed the transaction risks and roles of market mechanisms in the market for lending-based crowdfunding in Korea.

APPENDIX

TABLE A1—DEMOGRAPHIC PROFILE OF THE SURVEY SAMPLE

| Variable | Category | Proportion (%) | Variable | Category | Proportion (%) |
|--|-------------------------------|----------------|---------------------|--|----------------|
| Gender | Male | 49.3 | Occupation | Student | 14.1 |
| | Female | 50.7 | | Self-employed | 8.2 |
| Age | 20-29 | 32.6 | | Manager | 7.8 |
| | 30-39 | 25.9 | | Sales and service | 5.7 |
| | 40-49 | 17.0 | | Blue collar | 4.1 |
| | 50-59 | 17.3 | | Housewife | 10.8 |
| | 60 and over | 7.2 | | Business and finance professional | 2.4 |
| Marital status | Single | 48.3 | | Health, legal and education professional | 6.4 |
| | Married | 51.8 | | Culture, arts and sports professional | 3.2 |
| Number of children | 0 | 53.1 | | Science and engineering professional | 2.1 |
| | 1 | 14.0 | | Other | 1.1 |
| | 2 | 26.9 | Unemployed | 3.2 | |
| | 3 | 4.4 | Internet use (hour) | Less than 0.5 | 0.9 |
| | 4 | 1.1 | | 0.5-1 | 8.9 |
| | 5 and more | 0.5 | | 1-2 | 23.9 |
| Education | High school and undergraduate | 24.3 | | 2-3 | 28.3 |
| | College degree and above | 75.8 | | 3-5 | 20.7 |
| Monthly household income (10 thousand won) | Under 100 | 3.1 | 5 and more | 17.3 | |
| | 100-200 | 7.6 | SNS use (hour) | None | 5.4 |
| | 200-300 | 15.4 | | Less than 0.5 | 21.1 |
| | 300-400 | 17.5 | | 0.5-1 | 26.7 |
| | 400-600 | 27.8 | | 1-2 | 25.1 |
| | 600-800 | 15.0 | | 2-3 | 12.4 |
| | 800-1,000 | 7.0 | | 3-5 | 5.1 |
| | 1,000 and over | 6.7 | | 5 and more | 4.2 |

Note: This sample includes all 1,563 survey respondents.

TABLE A2—EXPERIENCE SITUATIONS – ACCOMMODATION SHARING CONSUMERS

| Variable | Category | Proportion (%) | Variable | Category | Proportion (%) |
|-------------------------|-------------|----------------|-----------|---------------------|----------------|
| Destination | Domestic | 52.8 | Purpose | Business | 13.6 |
| | Overseas | 47.2 | | Tourism, recreation | 86.4 |
| Travel period (# night) | Less than 3 | 72.0 | Companion | Alone | 14.0 |
| | 4-7 | 22.2 | | Family | 32.0 |
| | 8-14 | 3.0 | | Friend/Lover | 47.8 |
| | 15 and more | 2.8 | | Colleague at work | 6.2 |

Note: Percentage of those who choose each answer among 500 accommodation sharing consumers.

TABLE A3—EXPERIENCE SITUATIONS – ACCOMMODATION SHARING SUPPLIERS

| Variable | Category | Proportion (%) | Variable | Category | Proportion (%) |
|---|---|----------------|--|--------------|----------------|
| Accommodation type | One's own residence, part of the house | 38.9 | Total period of accommodation offering during last year (# days) | Less than 30 | 55.8 |
| | One's own residence, whole detached house | 16.8 | | 30-60 | 26.5 |
| | One's own residence, whole apartment | 21.2 | | 60-90 | 10.6 |
| | One's own residence, whole office-tel | 23.9 | | 90-120 | 4.4 |
| | Not one's own residence, | 13.3 | | 120-180 | 1.8 |
| | Not one's own residence, | 8.0 | | 180 and more | 0.9 |
| | Not one's own residence, | 8.0 | Total income from accommodation sharing during last year (10 thousand won) | Under 10 | 10.6 |
| | Not one's own residence, Registered accommodation | 6.2 | | 10-100 | 56.6 |
| Average daily room charge (10 thousand won) | Under 5 | 23.9 | 100-500 | 23.0 | |
| | 5-10 | 46.9 | 500-1,000 | 7.1 | |
| | 10-20 | 23.9 | 1,000-2,000 | 0.9 | |
| | 20-30 | 2.7 | 2,000-5,000 | 1.8 | |
| | 30 and over | 2.7 | 5,000 and over | 0.0 | |

Note: 1) Percentage of those who choose each answer among 113 accommodation sharing suppliers. 2) For accommodation type, multiple-choice questions were used; hence, the total may not equal 100.

TABLE A4—EXPERIENCE SITUATIONS – CAR SHARING CONSUMERS

| Variable | Category | Proportion (%) | Variable | Category | Proportion (%) |
|----------|---------------|----------------|----------|------------------|----------------|
| Location | Domestic | 95.0 | Duration | less than 1 hour | 16.4 |
| | Overseas | 5.0 | | 1-6 hours | 42.8 |
| Purpose | Everyday life | 40.0 | | 6 hours-1 day | 20.6 |
| | Commute | 2.6 | | 1-3 days | 18.6 |
| | Travel | 57.4 | | 3 days-1 week | 1.6 |
| | | | | 1 week and more | 0.0 |

Note: Percentage of those who choose each answer among 500 car sharing consumers.

TABLE A5—EXPERIENCE SITUATIONS – CROWDFUNDING CONSUMERS

| Variable | Category | Proportion (%) | Variable | Category | Proportion (%) |
|---|----------------|----------------|---------------------|----------------------|----------------|
| Crowdfunding type | Donation | 59.3 | Fundraising purpose | Business | 37.3 |
| | Reward | 46.7 | | Medical expenses | 13.3 |
| | Lending | 46.0 | | Education expenses | 24.7 |
| | Equity | 38.7 | | Living expenses | 34.7 |
| Average target amount (10 thousand won) | Under 100 | 12.0 | | Marriage preparation | 8.7 |
| | 100-200 | 14.7 | | Deposit | 8.7 |
| | 200-500 | 16.0 | | Property purchase | 17.3 |
| | 500-1,000 | 19.3 | | Conversion of loan | 8.7 |
| | 1,000-2,000 | 20.0 | | Other | 2.7 |
| | 2,000-5,000 | 9.3 | | | |
| | 5,000 and over | 8.7 | | | |

Note: Percentage of those who choose each answer among 150 crowdfunding consumers.

TABLE A6—EXPERIENCE SITUATIONS – CROWDFUNDING SUPPLIERS

| Variable | Category | Proportion (%) | Variable | Category | Proportion (%) |
|---|----------------|----------------|---|----------------|----------------|
| Crowdfunding type | Donation | 46.3 | Share of crowdfunding in total financial assets (%) | Under 5 | 65.0 |
| | Reward | 61.3 | | 5-10 | 19.7 |
| | Lending | 31.0 | | 10-20 | 9.0 |
| | Equity | 25.3 | | 20-30 | 3.7 |
| 30-50 | | | | 1.7 | |
| 50-75 | | | | 0.7 | |
| | | | | 75 and over | 0.3 |
| Average investment amount (10 thousand won) | Under 5 | 26.0 | Total investment amount (10 thousand won) | Under 10 | 24.7 |
| | 5-10 | 23.0 | | 10-50 | 21.7 |
| | 10-50 | 16.3 | | 50-100 | 13.0 |
| | 50-100 | 13.3 | | 100-200 | 12.0 |
| | 100-200 | 12.0 | | 200-500 | 12.3 |
| | 200-500 | 5.0 | | 500-1,000 | 8.7 |
| | 500-1,000 | 3.0 | | 1,000-5,000 | 6.7 |
| | 1,000 and over | 1.3 | | 5,000 and over | 1.0 |

Note: Percentage of those who choose each answer among 300 crowdfunding suppliers.

TABLE A7—ESTIMATION RESULTS OF THE IMPACT OF SATISFACTION ON INTENTION TO PARTICIPATE AGAIN

| Variables | Accommodation sharing | | Car sharing | Crowdfunding | |
|------------------------|-----------------------|-------------------|----------------------|-----------------------|----------------------|
| | Consumer (Guest) | Supplier (Host) | Consumer (Passenger) | Consumer (Fundraiser) | Supplier (Investor) |
| Satisfaction | 1.847*** (0.256) | 0.541 (0.374) | 1.103*** (0.215) | 0.757*** (0.236) | 1.147*** (0.236) |
| Constant | -3.434*** (0.746) | -0.009 (1.109) | -1.629** (0.693) | -1.741*** (0.659) | -1.957*** (0.716) |
| Number of observations | 500 | 113 | 500 | 150 | 300 |
| Pseudo R ² | 0.2462 | 0.0216 | 0.0848 | 0.0566 | 0.1023 |

Note: 1) Results of the logit model with the base outcome set to 'not participating again'. 2) ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

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