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Abstract

In recent years, sharing economy has been growing rapidly. Meanwhile, understanding why people participate in sharing economy emerges as a rising concern. Given that research on sharing economy is scarce in the information systems literature, this paper aims to enrich the theoretical development in this area by testing different dimensions of convenience and risk that may influence people's participation intention in sharing economy. We will also examine the moderate effects of two regulatory foci (i.e., promotion focus and prevention focus) on participation intention. The model will be tested with data of Uber users. Results of the study will help researchers and practitioners better understand people's behavior in sharing economy.

Keywords: sharing economy, participation, convenience, risk, regulatory focus theory
1 INTRODUCTION

Sharing economy has become popular in recent years. As a new form of consumption style, it changes how we think about owning and possessing products. Numerous peer-to-peer (P2P) sharing platforms have emerged, making people “sharing, bartering, lending, trading, renting, gifting, and swapping” of goods and services more conveniently (Botsman and Rogers, 2010, p. 30). Business models, which are based on accessing instead of owning products, include car sharing (e.g., Zipcar), bike sharing (e.g., Capital Bikeshare), ridesharing (e.g., Uber), parking slots (e.g., JustPark), and accommodations (e.g., Airbnb). In this study, we focus on P2P ridesharing.

Sharing is as old as humankind, while sharing economy is a phenomenon facilitated by information technologies (ITs) (Belk, 2014). Internet-based P2P sharing platforms allow people to share idle goods and services in a more convenient manner (Andersson et al. 2013). For example, Uber users can share access to cars with others through its website and mobile application (mobile app).

Given that sharing economy is a new research topic in the information systems (IS) literature, research on the determinants of people's participation in this context is scarce. In this study, we refer to participation as the extent to which people will use goods or services in sharing economy (instead of sharing goods). For instance, an individual may want to decide whether to request a ride with Uber’s mobile app. Recent studies have primarily focused on people’s motivations to participate (Möhlmann, 2015; Kim et al., 2015). Hamari et al. (2015) showed that both intrinsic (e.g., sustainability and enjoyment) and extrinsic motivations (e.g., reputation and economic benefits) have significant impacts on participation intention in sharing economy. These motivations highlight the desired benefits that people can attain in this context. According to the desirability-feasibility framework (Jia et al. 2012), if the levels of desirability and feasibility are high, people are more likely to perform an action. Following this perspective, previous studies largely emphasize desirability factors (i.e., motivations) in sharing economy. In contrast, little research has addressed the influence of feasibility factors (the extent to which the process of attaining benefits is feasibility). Note that feasibility factors, such as convenience, are often closely related to ITs, thus are of great interest to IS scholars. To address this research gap, this study focuses on examining the effects of two important feasibility factors in sharing economy: convenience and risk.

In this research, we review the prior literature to identify important dimensions of convenience and risk for the present context (e.g., Featherman et al., 2003; Berry et al., 2002). Investigating different dimensions allows us to scrutinize their relative importance in affecting participation intention. Further, we draw upon the regulatory theory to include the moderating effects of two regulatory foci (i.e., prevention focus and promotion focus) in our research model. This can offer more insights in explicating how convenience and risk may exert differentiated influences on participation intention in sharing economy. The remaining of the paper is structured as follows. First, we discuss the theoretical background of our study. Then, we present the research model and hypotheses. Next, we describe the research method. Finally, we discuss the expected contributions of this study.

2 THEORETICAL BACKGROUND
2.1 Convenience

Convenience can be defined as the perceived time and energy required to accomplish a task (Seiders et al., 2007). In the sharing economy context, convenience is expected to be important in influencing people’s behavior in sharing economy (Nielsen et al., 2015).

Previous service literature mainly examines convenience as a unidimensional construct. Meanwhile, research also points out that there may be different dimensions of convenience that are related to the service progress (Berry et al., 2002). In the retailing context, Seiders et al. (2000) identified four dimensions of convenience. Then, Berry et al. (2002) expanded it to five dimensions: (1) decision convenience, (2) access convenience, (3) transaction convenience, (4) benefit convenience, and (5) post-benefit convenience. Further, Lai et al. (2014) revised the convenience framework by Berry et al. (2002) to assess and manage e-commerce service convenience. Berry et al.’s (2002) five dimensions of convenience are explained in Table 1.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision Convenience</td>
<td>“Consumers’ perceived time and effort expenditures to make service purchase or use decisions” (Berry et al. 2002, p.6)</td>
</tr>
<tr>
<td>Access Convenience</td>
<td>“Consumers’ perceived time and effort expenditures to initiate service delivery” (Berry et al. 2002, p.7)</td>
</tr>
<tr>
<td>Transaction Convenience</td>
<td>“Consumers’ perceived time and effort expenditures to effect a transaction” (Berry et al. 2002, p.7)</td>
</tr>
<tr>
<td>Benefit Convenience</td>
<td>“Consumers’ perceived time and effort expenditures to experience the service’s core benefits” (Berry et al. 2002, p.7)</td>
</tr>
<tr>
<td>Post-Benefit Convenience</td>
<td>“Consumers’ perceived time and effort expenditures when reinitiating contact with a firm for repairs or maintenance after the benefit stage of the service” (Berry et al. 2002, p.8)</td>
</tr>
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</table>

Table 1: Dimensions of convenience.

2.2 Perceived Risk

Perceived risk has been defined as “the expectation of losses associated with purchase and acts as an inhibitor to purchase behavior” (Peter et al., 1976, p.185), and “the potential for loss in the pursuit of a desired outcome of using an e-service” (Featherman et al., 2003, p.454). Based on the above definitions, we refer to perceived risk as the potential for losses in the pursuit of desired results when people participate in sharing economy.

Previous studies have applied perceived risk to investigate people’s decision-making, and further identified its multiple dimensions (Park et al., 2004). For instance, Featherman et al. (2003) identified six dimensions of perceived risk for using e-services, namely (1) performance risk, (2) privacy risk, (3) social risk, (4) financial risk, (5) time risk, and (6) psychological risk. Because e-services are less likely to involve any harm to people’s physical safety, physical risk was not considered in Featherman et al.’s work. Based on their work and other studies, this study explains all the seven dimensions of perceived risk in Table 2.
<table>
<thead>
<tr>
<th>Dimension</th>
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<tr>
<td>Performance Risk</td>
<td>“The possibility of the product malfunctioning and not performing as it was designed and advertised and therefore failing to deliver the desired benefits” (Featherman et al., 2003, p.455)</td>
</tr>
<tr>
<td>Physical Risk</td>
<td>“The probability that a purchased product results in a threat to human life” (Lee 2009, p.131)</td>
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<tr>
<td>Privacy Risk</td>
<td>“Potential loss of control over personal information, such as when information about you is used without your knowledge or permission” (Featherman et al., 2003, p.455)</td>
</tr>
<tr>
<td>Social Risk</td>
<td>“Potential loss of status in one’s social group as a result of adopting a product or service, looking foolish or untrendy” (Featherman et al., 2003, p.455)</td>
</tr>
<tr>
<td>Financial Risk</td>
<td>“The probability that a purchase results in loss of money as well as the subsequent maintenance cost of the product” (Featherman et al., 2003, p.455)</td>
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<tr>
<td>Time Risk</td>
<td>“Consumers may lose time when making a bad purchasing decision by wasting time researching and making the purchase, learning how to use a product or service only to have to replace it if it does not perform to expectations” (Featherman et al., 2003, p.455)</td>
</tr>
<tr>
<td>Psychological Risk</td>
<td>“Potential loss of self-esteem (ego loss) from the frustration of not achieving a buying goal” (Featherman et al., 2003, p.455)</td>
</tr>
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Table 2: Dimensions of perceived risk.

2.3 Regulatory Focus Theory

Drawing on previous motivation research that distinguishes between different types of needs and goals, Higgins (1998) proposed the regulatory focus theory to explain two separate motivational orientations: promotion focus and prevention focus. Promotion focus is related to aspiration and accomplishment, which is driven by nurturance needs and goals. Meanwhile, the prevention focus is related to safety and responsibilities, which is driven by security needs and goals (Shah et al., 2001). Shah et al. (1998) showed that promotion focus emphasizes positive outcomes, whereas prevention focus emphasizes negative outcomes. Shah and Higgins (1997) indicated that the two regulatory foci can be understood as personal characteristics or situational tendencies which are influenced by environmental stimuli. An important practical implication of this theory is that different regulatory foci can be easily activated with various approaches, such as marketing tools and campaigns (Jia et al. 2012; Zhao and Pechmann 2007). For instance, marketers may design advertising campaigns to emphasize advantages instead of losses (Aaker & Lee, 2001), and grab people’s attention to accomplishment rather than safety concerns (Dholakia et al., 2006).

The regulatory focus theory has been applied to various research fields. For example, in the field of organizational behavior, Wallace et al. (2005) found the mediating role of regulatory focus in the relationship between employees’ individual characteristics and job performance. In the marketing literature, Herzenstein et al. (2007) showed that prevention-focused consumers are less likely to buy new goods than promotion-focused consumers. In the clinical area, research shows that regulatory focus mediates the relationship between hedonic food and impulsive eating behavior (Sengupta et al., 2007). In the IS literature, Lee and Koo (2012) posited that the influence of online review valence (i.e., positive vs. negative) on review credibility can be moderated by consumers’ regulatory foci.

3 Research Model and Hypotheses
3.1 Research Model

This study considers convenience and perceived risk as two important feasibility factors in sharing economy, which is consistent with prior studies. For instance, Zhang et al. (2014) used convenience as a feasibility factor that has a significant effect on compulsive smartphone use. Jia et al. (2012) posited that security is a feasibility factor that affects one’s trial intention of self-service technologies. Based on the theoretical background and research context, we identify five salient convenience dimensions: decision, access, transaction, benefit, and post-benefit convenience; as well as five salient risk dimensions: performance, physical, privacy, social, and financial risk, in sharing economy. Time risk and psychological risk are not considered given that they are less likely to be important in this context. Figure 1 depicts our research model. We develop the hypotheses in details below.

Figure 1. Research Model

3.2 Dimensions of Convenience

3.2.1 Decision Convenience

This study defines decision convenience as people’s perceived time and effort to decide which sharing service provider or offering to choose from. For example, a consumer may recognize the need to use a ridesharing service. Faced with many ridesharing service providers and different service plan configurations (e.g., different types of cars), it is possible that the consumer may need time and effort in making the decision. Collier et al. (2010) found that convenience perceptions can increase the speed of transaction and behavioral intention. Thus, the consumer is likely to participate in a ridesharing service if s/he finds it time-saving in the decision making. Therefore, we provide the following hypothesis:

H1: Decision convenience is positively related to participation intention.

3.2.2 Access Convenience

We refer to access convenience as the perceived time and effort expenditures required to initiate the delivery of sharing services. It focuses on the time and effort needed to request sharing services. Jiang
et al. (2013) indicated that access convenience has a positive influence on the online shopping adoption. For example, in the P2P ridesharing context, an individual can request a ride through a ridesharing mobile app, without the constraints of location and time. Thus, this is likely to increase his/her participation intention in the ridesharing service. We propose the following hypothesis:

**H2**: Access convenience is positively related to participation intention.

### 3.2.3 Transaction Convenience

Transaction convenience can be defined as the perceived time and effort to complete a transaction. Research posits that providing convenience during the transaction stage can save consumers’ time and improve their satisfaction (Chang et al., 2012). In the ridesharing context, individuals can use ridesharing mobile apps to complete payments conveniently (e.g. with credit card, Apple Pay, or Alipay). It is thus likely to increase their participation intention. We provide the following hypothesis:

**H3**: Transaction convenience is positively related to participation intention.

### 3.2.4 Benefit Convenience

We refer to benefit convenience as the perceived time and effort to experience sharing services’ benefits. If an individual finds it inconvenient in the service delivery process, this is likely to diminish his/her evaluation about the benefits of using the service. Chang et al. (2012) showed that benefit convenience is the most important determinant factor of behavioral intention in leisure settings. In the context of ridesharing, it is possible that an individual has to wait for a long time before the arrival of the vehicle, which is likely to affect his/her participation intention. Thus, we develop this hypothesis:

**H4**: Benefit convenience is positively related to participation intention.

### 3.2.5 Post-Benefit Convenience

Post-benefit convenience can be defined as the perceived time and effort to reinitiate the connection with a sharing service provider after using the sharing service. There are some issues related to post-benefit convenience, such as service recovery and fixing transaction errors. Colwell et al. (2008) showed that post-benefit convenience can positively affect people’s behavior and perception of service convenience. In the P2P ridesharing context, people experience the convenience of posting comments on drivers through ridesharing mobile apps. Therefore, we also provide the following hypothesis:

**H5**: Post-benefit convenience is positively related to participation intention.

### 3.3 Dimensions of Perceived Risk

#### 3.3.1 Performance Risk

In this study, performance risk refers to the possibility that sharing service providers may not deliver the expected level of services. Luo et al. (2010) showed that performance risk increases one’s overall risk perception toward mobile banking services. In the context of P2P ridesharing, it is possible that an Uber car cannot arrive at an individual’s location in time. This is likely to decrease his/her participation intention. Thus, we propose the following hypothesis:
**H6**: Performance risk is negatively related to participation intention.

### 3.3.2 Physical Risk

We define physical risk as the risk to people’s safety when receiving sharing services. Compared with online environments, it is possible to find situations where personal safety is threatened during the usage of sharing services. For example, Uber car drivers may have insufficient skills and cause traffic accidents. We expect that physical risk inhibits participation intention. We propose this hypothesis:

**H7**: Physical risk is negatively related to participation intention.

### 3.3.3 Privacy Risk

We refer to privacy risk as the potential opportunistic behavior related to the revealing of personal information. Phishing is a new crime by which phishers illegally acquire sensitive information, such as usernames, passwords, and mobile banking information (Reavley, 2005). Phishing not only leads to monetary loss, but also violates people’s privacy, which can be a major concern for many sharing economy users. In the P2P ridesharing context, it is possible that sharing platforms may disclose one’s private information, such as telephone number, mobile bank account, home and company address. In this case, people will be less likely to participate. We therefore provide the following hypothesis:

**H8**: Privacy risk is negatively related to participation intention.

### 3.3.4 Social Risk

Social risk is defined as the possibility that using sharing services may be judged by others and then influences people’s social standing. It is possible that one’s social standing may be strengthened or attenuated, depending on how a sharing service is viewed. Schaefer et al. (2015) provided empirical evidence to explain that social risk negatively affects people’s ownership reduction. In the context of P2P ridesharing, an individual’s social standing and participation may be attenuated if the public have negative perceptions toward ridesharing (Bardhi et al., 2012). We propose the following hypothesis:

**H9**: Social risk is negatively related to participation intention.

### 3.3.5 Financial Risk

In this study, financial risk refers to potential monetary loss due to transaction problems through web payment or mobile payment in sharing economy services. Kuisma et al. (2007) showed that many people are fearful of losing money while performing transactions over mobile devices. In our research context, people usually use websites and especially mobile apps to proceed transactions. Therefore, they will be less likely to participate if they have such concerns. We propose the following hypothesis:

**H10**: Financial risk is negatively related to participation intention.

### 3.4 Regulatory Focus

According to Yeo et al. (2006), people with a promotion focus are sensitive to the positive aspects of behaviors, whereas people with a prevention focus are responsive to negative outcomes. In the present context, we propose that people with a promotion focus will emphasize the convenience of using
sharing services. On the other hand, we expect that people with a prevention focus are more likely to emphasize the risks of using sharing services. Therefore, we provide the following two hypotheses:

**H11:** Promotion focus moderates the effects of the convenience dimensions on participation intention.

**H12:** Prevention focus moderates the effects of the risk dimensions on participation intention.

### 4 Research Methodology

This study will conduct a survey to test the hypotheses in our research model. We will develop an online questionnaire based on the measures of the constructs. All the measures will be adapted from existing studies (e.g., Featherman et al. 2003; Lockwood et al. 2002; Seiders et al. 2007; Venkatesh et al. 2003). Necessary modifications will be applied to ensure that the measures will fit our research context. We will use seven-point Likert scales the items (i.e., 1= strongly disagree, 7= strongly agree).

We plan to collect data by reaching a sample of Uber users. Uber is the biggest P2P ridesharing platform. To reach potential respondents, we intend to distribute the URL of our questionnaire to many instant messaging groups and online forums. To increase response rate, we will provide gift rewards to valid respondents. We plan to employ partial least squares (PLS) to analyze the collected data.

### 5 Conclusions and Expected Contributions

With the increasing prevalence of sharing economy, this study attempts to investigate people’s participation intention in this context. We intend to empirically investigate how convenience and perceived risk can play roles in affecting people’s participation in sharing economy. We believe that this research will provide useful insights for both research and practice. First, this study is one of first ones that highlight the importance of feasibility factors (i.e., convenience and risk) in sharing economy. Examining such factors is expected to bring insights about how to better design ITs to support this area. Second, sharing service platforms may benefit from the potential outcomes of this research. For instance, to attract people to participate in sharing economy, sharing service platforms are advised to increase the various dimensions of convenience in the services, as well as to decrease the different dimensions of perceived risk. Further, when sharing service providers promote advertisements to potential users, it would be important for them to consider message framing and different consumer segments (i.e., consumers with high promotion focus and consumers with high prevention focus).

Nevertheless, there are some limitations in this study. For example, some other important factors may be missing in our research model. Further research can further look at the comparison or interplay between desirability (e.g. economic benefit, environmental benefit) and feasibility factors to enhance our understanding of participation in sharing economy.

### Acknowledgements

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