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TRUST IN SHARING ECONOMY

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Abstract

This research explores factors that impact people's trust and subsequently their willingness to participate in the sharing economy and how the factors are different from those identified in e-commerce context. The study was conducted in two phases. The Phase I study was an exploratory study with open-ended questions. The Phase II study will be conducted to test seven hypotheses. The Phase I study revealed that the sharing economy is still in its early stage but is gaining momentum. The results indicated that the biggest inhibitor for the sharing economy might be the physical security. The evidences seem to highlight the importance of enhanced background checks on participating members as well as adoption of additional security measures such as security certificate and safety insurance.

Keywords: Sharing Economy, Trust, Risk Factors, Security, Background Check, Profile, Reputation

1 INTRODUCTION

The term sharing economy refers to a business model where the participants share unused resources among them via a peer to peer services (Böckmann, 2013). Though we find the trace of sharing instinct in human from primitive age, people have dwelled into a more self-centric mindset where sharing practices hardly traverse beyond one's family, friend and relatives since the advent of industrialization. This perception has slowly but surely changed and now more people has taken their social sharing practices beyond their perceived narrow boundaries and put it actually as a business model where everyone can reap the benefits of collaborative consumptions and sharing economy.

According to PWC report (2015), the revenue generated by sharing economy globally is over \$15 billion and is estimated to be up by another \$300 billion within next 10 years. The leader in this market is Airbnb, the pioneer in travel accommodation. The company is believed to be worth \$10 billion, more than well-known hotel chain Hyatt (Zervas, Proserpio, and Byers, 2013). Another successful car sharing company, Uber, is estimated to be worth more than Facebook at around \$51 billion dollars (Demos, 2015). There are still abundant opportunities in this booming market as there are almost \$3.5 trillion dollars' worth resources sitting idle resources according to the Demos study. A recent survey conducted by Frighetto (2014) on 30,000 consumers from 60 countries showed that 68% of global respondents are willing to share or rent personal items. The study also showed that Asia-Pacific respondents are more likely to participate in sharing economy (78% as providers, 81% as receivers) than the respondents in North America and Europe (53% as providers, 44% as receivers). In the study by PWC (2015), they found that 19% of the total US adult population has engaged in a sharing economy transaction.

The sharing economy has four drivers (Lea, 2015): social, economic, environmental, and practical. However, no matter which motive is behind the sharing, trust is the key to sustain sharing economy's growth and success (Botsman and Rogers, 2011).

According to a survey conducted by First Advantage (2015), participation in sharing economy is bolstered when the trust is ensured. PWC (2015) found that 89% of respondents attributed success of their sharing transactions to trust they had on each other. In the e-commerce context, transactions are conducted in the virtual world. A breach of trust may lead to financial loss and reputation damage. However, sharing economy often involves close physical interactions between the two parties. The risks include not only financial loss but also physical harm, even loss of life. Therefore, trust in the context of sharing economy is even more important. Some businesses has failed due to their lack of effectiveness in addressing the trust issues. According to Green (2015), such failure was due to not contextualizing trust with different aspects of trusts. For example, in car sharing business like Uber, deliverability and the integrity are more desired than credibility is in room sharing business like Airbnb. The sharing economy is here to stay but the wide participation in this service and its reach will solely be dictated by the trustworthiness of a stranger (Dheepan, 2015).

Trust issues have been the subject of intensive research in e-commerce (Resnick, Zeckhauser, Friedman, and Kuwabara 2000; Rahman and Hales, 2000; Stolle, 2002; Mui, Mohtashemi, and Halberstadt, 2002; Teo and Liu, 2007; Palvia, 2009; Wasserman, 2013; Lampe, 2012). However, very few empirical studies on trust have been done in the context of sharing economy.

This research explore trust factors that impact people's willingness to participate in sharing economy and how the factors are different from those identified in e-commerce context. The organization of this paper is as follows. We will first examine some important studies on trust in E-commerce and sharing

economy context. Then we will discuss the research methodology followed by data analysis. Finally, the paper ends with summary and conclusions.

2 RESEARCH MODEL AND HYPOTHESES

Many studies have investigated the trust issues in the context of e-commerce (Stolle, 2002; Palvia, 2009; Mui, Mohtashemi, and Halberstadt, 2002; Wasserman, 2013). Trust has been the major driving forces behind the human bonding and social reciprocities. It acts as linking mechanism engaging people into sharing with each other (Stolle, 2002). Trust plays an extremely important role in maintaining long-term sustained good relationship with consumers (Palvia, 2009). E-commerce research have found that trust is a function of several major factors such as system assurance, perceived reputation, informativeness, social presence, and trust propensity. The following sections will discuss these factors and develop the hypotheses.

The rise of sharing economy is partially driven by technology development. For example, the business model of transportation network companies such as Uber and Lyft is based on a smartphone app that supports the transaction processes anytime and anywhere. The reliability and security of this mobile platform is essential for sustained business growth. Kini and Choobineh (1998) argued that the security and dependability of the technology platform that e-commerce consumers use are critical in developing and maintaining consumers' trust.

H1: The system assurance of a sharing company's transaction processing platform is positively related to the level of members' trust in the company.

Background check is an important means for security in sharing economy. It showcases the reliability and the quality benchmark of the company providing the services. TaskRabbit, a peer to peer task service based sharing company go through four background screening processes for users of their services (Employeescreen.com, 2015). Such background screening not only ensures the quality, safety, and the legal accountability of the service but also creates the credibility and the commitment amongst the parties involved, which can lead to a web of trust. However, recent high profile incidents of shootings by an Uber driver in Michigan (Kauzlarich, 2016), an apartment robbery that Airbnb hosted (Arrington, 2011), and shut down of HiGear after the car theft (Perez, 2012) have raised the overall level of concerns on the quality of background checks on sharing members. The background screenings vary from company to company. Some companies such as Uber do not require fingerprints for background check. Opponents argue that such practice makes background checks incomplete and will put consumers at risk.

H2: Background screening is positively related to the level of trust in a member.

In sharing economy, members involve in more direct interactions with each another as oppose to the E-commerce. Since services must be consumed first in order to verify their quality, members' reputation and trust on each other is integral part in the system (Ert, Fleischer, and Magen, 2015). According to the research by Jin, Tu, Han, & Liao (2005) on community-based trust model, recommendation from related communities and peers can increase the reputation of an agent. They concluded that recommendation from agent's direct acquaintances (family or friends) plays vital role in trusting other agents which in turns increases the reputation of the agents in the network. Similarly, a study conducted by forester research (Wasserman, 2013) revealed that 70% of consumers trust brand recommendations from friends, but only 10% trust advertising. More than 46% people trust the consumer reviews. In Consumer to

Consumer and Business to Consumer markets, reputation systems determine the trustworthiness of a seller or buyer by analyzing the feedbacks received for both parties (Resnick, Zeckhauser, Friedman, and Kuwabara, 2000). It follows that:

H3a: Perceived reputation of a sharing company is positively related to the level of members' trust.

H3b: Perceived reputation of a sharing company is positively related to the willingness to participate in a transaction.

Mui (2002) in his trust model extrapolated the trust issue in sociological point of view and how social informativeness determines agent's reciprocities in trusting interactions. They mentioned how sociological background of both parties (buyers and sellers) determines their co-operation with each other. In society where the positive responses are expected after a positive exchange of services and negative responses for negative services, this reciprocity norms can be derived from the sociological informativeness. Gao and Wu (2010) in their paper on cognitive model of trust postulated informativeness on agents positively increases trust in E-commerce. They found that user's perceived trust of an E-commerce site changes positively if the website is more informative. They went on to relate how informativeness can contribute to customer's change in perception on vendors integrity, benevolence, and competency. The same perception in sharing economy is expected where a member has to put more trust on strangers who are invited in to share a room or rent a car. Having complete profiles of both members in a sharing transaction will lead to more trust on each other. Thus, it follows that:

H4a: Perceived informativeness of a member is positively related to the level of trust in the member.

H4b: Perceived informativeness of a member is positively related to the willingness to participate in a transaction.

In e-commerce, the sociological presence as an individual seems to play vital part in encouraging consumer's trust (Grefen and Straub, 2004). Mui (2002) in his computational trust model suggested that social profile plays deciding role in determining the cooperativeness between two complete unknown strangers.

H5: Social presence positively increases the trust in a member

Propensity to trust is the general willingness to trust other people. Rotter (1967) was among the first to discuss trust as a form of personality. He defines interpersonal trust as a generalized expectancy to rely on others' words or promises. Kee and Knox (1970) argued that trust depends not just on past experience but also on disposition factors such as personality.

H6 Trust propensity is positively related to the level of members' trust in sharing economy.

According to Theory of Reasoned Action (TRA), attitude is closely related to behavioral intentions (Ajzen and Fishbein, 1980). Higher level of consumers' trust in e-commerce enhance their intention to further engage in e-commerce activities (Walton et al., 2008). Thus we put forward the following hypothesis:

H7: Member trust in each other is positively related to willingness to participate in sharing economy.

Table 1 presents the differences between e-commerce and the sharing economy and summarizes some of the existing research on trust factors in e-commerce context. Figure 1 illustrates the research model. The model is partially based on the work by Gao and Wu (2010).

	E-Commerce	Sharing Economy
Dominating Mode	Virtual Transactions	Physical Transactions
Risk Factors	Monetary Loss Loss of Reputation	Life Risk/Monetary Loss Loss of Reputation
Trust Factors	Recommendations (Wasserman, 2013) Informativeness (Gao and Wu, 2010) Sociological Presence (Grefen and Straub, 2004) Background Screening (Ert et al., 2015)	Trust Model for Sharing Economy (Green, 2015)
	Reputation Reporting System (Resnick, Zeckhauser, Friedman, and Kuwabara 2000) Word-of-Mouth (Rahman and Hales, 2000) Reputation Feedback System (Lampe, 2012) Consumers' Trust in E-commerce (Teo and Liu, 2007) System Assurance in e-commerce (Ambrose and Johnson, 1998; Kini and Choobineh, 1998).	

Table 1: The Differences and Summary of Existing Research Studies on Trust

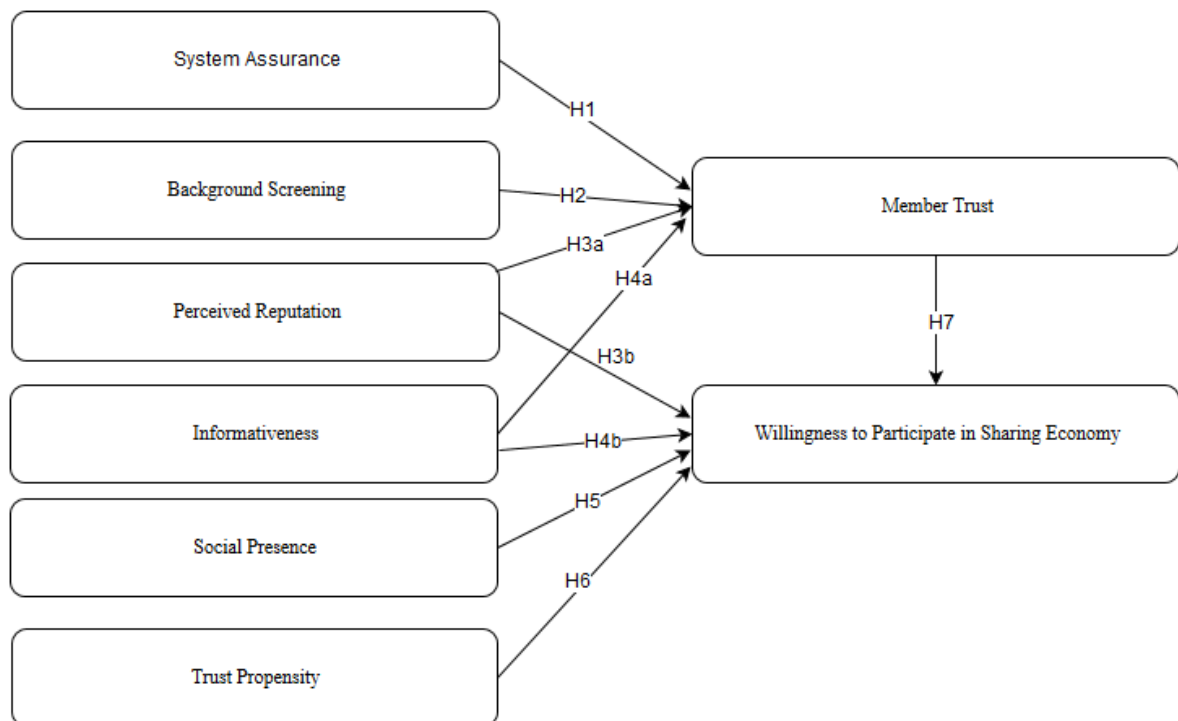


Figure 1: Research Model and Hypothesis

3 METHOD

This research adopts both qualitative and quantitative methods. It is conducted in two phases. In the first phase (Phase I), a survey consisting of open-ended questions was used to elicit respondents' general opinions on sharing economy and perceived trust issues that may determine their willingness of participation in the sharing economy. A small group of randomly selected students (10%) are interviewed to gain in-depth insights on the trust issues.

In the second phase (Phase II), a survey will be developed based on the results from the Phase I study and reviews of existing studies of trust issues in the e-commerce and related fields. The questions in the Phase II survey are closed-ended. All items are on a seven point Likert-type scale ranging from (1) Strongly Disagree to (7) strongly Agree.

The Phase I study was administered among students enrolled in a business school at a mid-western state University. The results will be discussed in the following sections. The Phase II study is still under preparation and will be completed in the next two months.

4 RESULTS

In Phase I, the surveys of twelve questioners were distributed amongst 71 students enrolled in three classes. Two of the classes were graduate level information assurance classes; the third one was an upper level class in information systems field. The collected data were analyzed using IBM SPSS software.

4.1 Demographic profile

About one third of the respondents were male and over one quarter were female, the rest did not report their gender. More than a third of the respondents were 26 year or older. Out of the respondents who reported their status, 38.9% were International and 15% were domestic students. Table 2 summarizes the demographics.

Items	Category	Frequency (%)
Gender	Female	19(26.4%)
	Male	46(63.9%)
Age	<20	1(1.4%)
	<22	9(12.5%)
	<24	16(22.2%)
	<26	13(18.1%)
	>=26	25(34.7%)
Nationality	International	28(38.9%)
	Domestic	11(15.3%)

Table 2: Demographic Profile of Respondents

4.2 Participation in Sharing Economy

In our analysis, over 50% of participants heard about the sharing economy and around 20% of them had participated in some form of sharing transactions. This finding is consistent with the early study by PWA (2015).

4.3 What to Share

When asked what spare resources they would like to share with others for financial gains, knowledge and skills were mentioned 47% of the times. Other top items are cars (20%), electronics (20%), household items (12%), and rooms (11%). Less frequently mentioned items such as furniture, garden equipment are grouped into others category. See Table 3.

4.4 Perceived Risk Factors

When asked what made them unwilling to participate in sharing cars and rooms (including renting room from strangers), the most frequently mentioned factors include risk of physical harm (31%), theft (19.2%), loss of privacy (13.4%), fraud (13.4%), and property damage (11.5%). About two third of the respondents prefer taxi to Uber because of the above cited security concerns. Thirty six percent of the respondents chose Uber, but some of those (35%) did so under the condition that a criminal background check should be done on the Uber driver. Majority of the respondents (87.3%) are willing to give ride to friends and acquaintances for monetary gain, about 39.4% of the respondents are willing to give ride to strangers if certain degree of security assurance is put in place (such as access to some background information of the rider).

On the questions of renting or sharing a room with strangers, 53.5% respondents are willing to share a unused room with strangers, and only 36.6% respondents are willing to stay in a stranger's room. Some of those who refused to share or stay in stranger's room cited security concerns. This indicates that providing a room to strangers is being viewed less risky than renting a stranger's room. Future study should verify this interesting finding.

4.5 Security Measures Desired

The respondents were asked what security assurance measures should be used to increase their likelihood to participate in the sharing economy. Their responses were ranked as follows: criminal background check (32%), access to members' background information (27%), use of security certificate (18%), on-line video chatting before a transaction (12%), and safety insurance (11%), see Table 3.

4.6 Role of Members' Online Profile and Peers' Recommendations

The survey has two questions on the role of sharing members' presence on social networks such as Facebook and peers' recommendations for shared services. Seventy six percent of the respondents think accessing to sharing members' profile on social network would increase their level of trust in the members. Similarly, Ninety percent of the respondents think peers' recommendations have a positive impact on their trust.

Questions	Category	Frequency	Percentages (%)
What Will You Share	Skill	18	23.7
	Knowledge	16	21
	Car	12	15.8
	Electronics	12	15.8
	Household Items	7	9.2
	Room	6	7.9
	Others	5	6.6
	Total	76	100%
What Are the Risk Factors	Loss of Life	16	31
	Theft	10	19.2
	Loss of Privacy	7	13.4
	Fraud	7	13.4
	Property Damage	6	11.5
	Non-payment	4	7.6
	Poor Background Checking	2	3.8
	Total	52	100%
Would You prefer Uber or taxi?	Uber	25	36.2
	Taxi	44	63.8
	Total	69	100%
Will You Share Your Car With Friends/ acquaintances	Yes	62	87.3
	No	9	12.7
	Total	71	
Will You Share Your Car with Stranger	Yes	28	39.4
	No	42	60.6
	Total	70	100%
Will You Share Your Room With a Stranger	Yes	38	53.5
	No	33	46.6
	Total	71	100%
Would You Stay in a Stranger's Room	Yes	26	36.6
	No	45	63.4
	Total	71	100%
Security Assurance You Like to Have	Criminal Background Check	50	32
	Availability of Information	42	27
	Security Certificate	28	18
	Online Video Chat	18	12
	Safety Insurance	17	11
	Total	155	100%

Table 3. Summary of Phase 1 Study Results

CONCLUSIONS

The Phase I study revealed that sharing economy is still in its early stage. One out of five students participated in sharing transactions. The major hindrance for sharing seems to be lack of trust in sharing members. The top three cited risk factors are risk of life loss, theft, and loss of property. Security measures that may increase a member's trust include in descending order criminal background check,

access to member's background information, use of security certificate, online video chatting, and safety insurance. It is interesting to find that no service quality concerns were identified. The results from the survey in the Phase II study will be presented once they are available.

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