Exploring Sharing Economy Success: Resource-Based View and the Role of Resource Complementarity in Business Value Co-Creation

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Abstract

In recent years, the sharing economy has been grown increasingly as an important means to achieve sustainable competitive advantage. With the support of mobile phone devices and the ubiquitous application of “SOLOMO (social, location, mobile)” concept, the emerging sharing economy hubs increase the pool of potential service providers and sellers by leveraging networked technology to change how market participants engage in a specific transaction. Several successful examples, such as Uber, Airbnb or live streaming platforms, demonstrate that such phenomenon will continue to generate immense interests and receive growing practical and academic attentions for the next decades. In order to meet the needs of heterogeneous network users or buyers, platform owners seek to promote and exploit the network resources from providers and facilitate the transactions. Therefore, the holistic network performance improves and values are co-created when the presence of platform owner complements network members each other. Though the importance of the above mentioned resource complementarity can be well-recognized from many practical evidences and academic studies, the role and empirical evidence of resource complementarity in facilitating the cocreation value and the impact on subsequent performance under sharing economy context is still not well understood. Moreover, sharing economy network is a new and distinct type of organization form and separates from markets and hierarchies, it still requires unique theories and research approaches for providing deeper insights. Value can be co-created by complementary alignment of mutual resources, but the degree to which value generation occurs is still subject to contextual factors. Therefore, the objective of this study is to present a holistic view to illuminate relationships among resource complementarity, relational capabilities (including relational embeddedness and ambidextrous competence), subsequent performance and cooperation continuance intention based on the perspective of resource-based view. 367 respondents from well-known online streaming platform were collected. We find that all hypotheses are supported, except that relational embeddedness has no any significant effect on financial performance. From this study, we hope to contribute nascent knowledge for sharing economy phenomenon and value co-creation with online marketing and information management disciplines scholarly, and provide fruitful insights to the design of an effective value-creating ecosystem application platform through our study for practitioners.

Keywords: Sharing Economy, Resource Complementarity, Resource-Based View, Relational Capabilities, Cooperation Continuance Intention.
1. Introduction

In recent years, the sharing economy, also known as collaborative consumption or peer economy, has been grown increasingly as an important means to achieve sustainable competitive advantage. Sharing Economy is defined as a socio-economic system built around the sharing of human and physical assets (Malhotra and Van Alstyne, 2014). With the support of mobile phone devices and the ubiquitous application of “SOLOMO (social, location, mobile)” concept, the emerging sharing economy hubs increase the pool of potential service providers and sellers by leveraging networked technology to change how market participants engage in a specific transaction. Such peer-to-peer sharing or rental schemes enable people to share cars, accommodation, bicycles, household appliances or even people’s talent or personal show, connecting owners of underused assets with others willing to pay to use them (The Economist, 2013).

Uber, the most successful, controversial and representative example for sharing economy, is currently valued at $62.5 billion relative to Hertz at $4.2 billion and Avis at $2.6 billion (Bowman, 2016). In the past, when customers needed to get somewhere, hailing a taxi could be an annoying problem. People might either stand outside and wave hand until they could hail a cab, or another way is to call a taxi dispatch (with specific telephone number) and wait for 20 minutes until a car arrived. However, Uber is completely changing the way getting private transportation in several key ways. It plays the role of matchmaker, connecting a self-employed driver with a customer looking for a ride through Uber’s mobile phone application (APP) integrated with Google maps. so that customers can see how far away the nearest cars are, set a meeting point on the screen, and hail a car to meet them there. Consequently, Uber redefines transportation by tapping a whole new business model, and it has disrupted the monopoly of taxi cab transportation that exists in many cities and reinvented the experience from top to bottom (Lashinsky, 2016).

Another emerging example or sharing economy phenomenon is the rising of live streaming platform. Twitch, for example, is a platform for gamers (so-called live streamers) to broadcast their gameplay in real time while other users could watch and actively interactive with chat (Evans, 2015). According to the report provided by SuperData Research, Twitch not only integrates live streamers and users, but the video game content industry as well. As a result, live streamers became content creators and earned approximately $2.9 billion in 2015 from sponsorships and advertising (the latter of which accounts for 77% of all game content revenue), with the remaining $890 million coming from donations and paid subscriptions (Brouwer, 2015). In China, leading live streaming platforms includes YY, Douyu, Inke and so on, and these live streaming platforms become emerging places and tools for people’s self-expression, making money, or even become places for “talent development and scout for famed celebrities”. Besides, live streaming platforms in China use diverse gamification mechanisms for entertainment and revenue creation. For example, in Douyu.tv, viewers can buy digital gifts, such as flowers, cars, necklaces, diamonds and so on, for live streamers as incentives, ranging from a few cents to several hundred U.S. dollars (Chan, 2016).

In fact, according to the report issued by PwC, the world’s top sharing economy sectors could generate around $335 billion in revenue by 2025, from $15 billion today. That’s an exponential jump of over 2,000 percent, and Asia is in prime position to benefit (Ann, 2014). For example, in China, Xiaozhu.com has a growing clout of visitors to its site which rents out homes for short periods. Malaysia-based Plateculture.com offers home-cooked meals for visitors who want to experience a taste of dining at a local’s dinner table. And Singapore has private car rental marketplace iCarsClub and PandaBed which provides short-term rentals. Given that the success and the huge growth of sharing economy application platforms, it is not surprising that such phenomenon will continue to generate immense interests and receive growing practical and academic attentions for the next decades.

The application of sharing economy, such as Uber, Airbnb (for rooming sharing), or live streaming, is one important type of alliance network facilitated by platform-based technologies (e.g., mobile APPs). Often, there is a central hub firm (or so-called platform owner) playing the intermediary role, in which multilateral transactions among the network members (providers vs. buyers) are facilitated by the network (Jones et al., 1998). As such, alliance network, such as sharing economy platform, is rationally constructed and designed to accomplish the instrumental aims of the platform owner and network members (Koza and Lewin, 1999). For example, in order to meet the needs of heterogeneous network users or buyers, platform owners seek to promote and exploit the network resources from providers and facilitate the transactions. Moreover, platform owners could also deepen providers’ existing product or marketing capabilities or efficiency improvements, or even to have an experiment or exploration on new customer markets, assets or capabilities. The holistic network performance
improves and values are co-created when the presence of platform owner complements network members each other (Ceccagnoli et al., 2012). Consequently, this approach of resource complementarity and value co-creation has given rise to the model of a sharing economy network ecosystem.

Despite a burgeoning body of academic works has started to theorize about how such sharing economy networks are formed and their implications for platform owners, providers and users, there are still several gaps in our understanding that need more research effort. Though the importance of the above mentioned resource complementarity can be well-recognized from many practical evidences and academic studies, the role and empirical evidence of resource complementarity in facilitating the cocreation value and the impact on subsequent performance under sharing economy context is still not well understood. Likewise, platform owners and their complementors have no systematic means to investigate what types of complementary resources generated or provided in such value co-creation process. In this study, we take one step toward addressing this gap. We argue two types of resource complementarity, namely outside-in and inside-out ones, could facilitate the process of value co-cocreation between platform owner and their complementors or providers, and then increase subsequent performance and partner’s intention for continuous usage, based on the perspective of resource-based view. For providers joined in a sharing economy network ecosystem, “outside-in” resources are supported externally from platform owner, which are critical and valuable that providers are hard to invest or create. In contrast, “inside-out” resources are provided by network partners which could augment platform owner’s service capacity and development collectively. These two sets of resources, both inside-out and outside-in ones, brought in by platform owner and its partners respectively, when combined appropriately under the right conditions, can lead to substantial value for the platform owner as well as the partners (Sarker et al., 2012).

The objective of this study is to present a more holistic view to illuminate relationships among resource complementarity, relational capabilities (including relational embeddedness and ambidextrous competence), subsequent performance and continuance usage intention based on the perspective of resource-based view. By doing so, we hope to contribute nascent knowledge for sharing economy phenomenon and value co-creation with online marketing and information management disciplines scholarly, and provide fruitful insights to the design of an effective value-creating ecosystem application platform through our study for practitioners.

2. Theoretical Background and Hypotheses

Figure 1 identifying the key constructs and main relationships will be examined in the study. The following section elaborates on these relationships and explains the theoretical underpinning of these hypotheses.

2.1 Resource-Based View and Resource Complementarity

The resource-based view (RBV) emphasizes heterogeneous firm resources are the main driver of firm performance (Teece et al., 1997; Melville et al., 2004). RBV adopted an inward-looking view (Lavie, 2006), depicting companies as a collection of resources and capabilities required for product or market competition. Resources are the basis for and facilitate the implementation of firm strategy (Hitt et al., 2001). They can be physical capital resources (e.g., financial assets and technology), human capital resources (e.g., managerial skills), or organizational resources (e.g., reputation, culture) (Barney, 1991). Because resources which are needed, chosen and implemented by companies are heterogeneously distributed across firms and these firm differences remain stable over time (Barney, 1991), they tend to survive competitive imitation when protected by isolating mechanisms such as time-compression diseconomies, path dependence, embeddedness and causal ambiguity (Peteraf, 1993).
According to the RBV, firms can develop isolating mechanisms or resource-position barriers that secure their economic rents. Therefore, conventional RBV studies have assumed that value-creating resources are owned and controlled by the focal firm (e.g., Amit and Schoemaker, 1993). However, as Lavie (2006) argued, the proprietary assumption of the traditional RBV does not pose a limitation to the extent that the competitive environment is populated by independent firms. However, in recent years, evidence has accumulated suggesting that resources of alliance partners transferred via direct interfir interactions have a considerable impact on firm performance. These resources can be referred to as network resources that extend the opportunity set of the firm (Gulati, 1999). In support of this claim, for example, Saxton (1997) found that firms benefited from their alliance partners’ reputation. Singh and Mitchell (1996) demonstrated that firms in the hospital software systems industry failed when their partners went out of business or formed other alliances. Stuart (2000) found that the technological capabilities of partners contributed to the sales growth and innovation rates of semiconductor firms. These studies suggest that the resources of alliance partners influence the competitive advantage of the interconnected firm. These results suggest that firm valuation or performance should be based not only on the resources of the firm but also the resource endowments of its alliance partners.

Furthermore, although the heterogeneous resources each partner brings to the relationship are at the core of strategic alliances, it is the nature of alignment or complementarity of these resources in the alliance that determines success in terms of value cocreated (Das and Teng, 2000). Lambe et al. (2002) define alliance resource complementarity as the degree to which partner firms are able to eliminate deficiencies in each other’s portfolio of resources and thereby bolster each party’s ability to achieve business goals. The synergistic benefits arising from resource combinations were more likely to be private or uniquely valuable when based on resource complementarity, rather than similarity (Deitz et al., 2010). For example, a company that has a strong technological team may seek an alliance with another company with excellent marketing skills relevant to tapping the market for its technological product. Therefore, complementarity represents an enhancement of resource value and arises when a resource produces greater returns in the presence of another resource than itself (Milgrom et al., 1991). Resources rarely act alone in creating or sustaining competitive advantage, and this is particularly true of any tangible or intangible resources that, in almost all cases, act in conjunction with other firm resources to provide strategic benefits (Ravichandran and Lertwongsatien, 2005).

In line with Sarker et al. (2012), we argued that there are two types of resource complementarity brought and perceived by service providers in the context of sharing economy ecosystem for our study, namely “outside-in” and “inside-out” resource complementarities. From the standpoint of network service providers participated in a sharing economy ecosystem, “outside-in” resources are more externally oriented and include components such as the brand effect of platform owner, potential market demand, network community interaction, loyalty program for customer relationship management and so on. Such “outside-in” resources cannot be generated individually by network service providers, and these resources can only be obtained from the efforts or relationship-specific
investments that are intentionally committed and jointly possessed by the sharing economy platform owner.

In contrast, “inside-out” resources are brought by network service providers which could augment platform owner’s service capacity and development collectively. For example, in the relationships between an ERP vendor and its partners, these partners can contribute inside-out resources such as R&D development staff (external human resources), client-specific knowledge, reach to clients in a given geographical location and so on to augment the ERP vendor’s (platform owner) development (Sarker et al., 2012). Similarly, in the context of sharing economy ecosystem such as Uber or Airbnb, inside-out resources contributed by network service providers includes service capacity or availability (e.g., numbers of cars or rooms), service quality, customer-specific knowledge (e.g., customer preferences) and so on. These two sets of resources, both inside-out and outside-in ones, brought in by platform owner and its partners respectively, when combined appropriately under the right conditions, can lead to substantial value for the platform owner as well as the partners (Sarker et al., 2012). The co-created values generated by combining or reconfiguring these complementary resources from a given downstream service providers can be captured back by the platform owner in the form of additional and sustained revenue streams for their service providers in return for new or improved services.

2.2 Resource Complementarity and Relational Embeddedness

As indicated from RBV and the above discussions, co-created synergetic benefits only derives from its potential to enable the platform owner and their service providers to draw together complementary resources residing across the sharing economy ecosystem. Therefore, relational advantage accrues to firms best able to invest in key relationships to enhance partner resources and capabilities through inter-firm learning, since inter-firm resource access, development, and integration are dependent on a firm’s ability to cultivate high levels of interorganizational relational embeddedness (Day et al., 2013). Relational embeddedness is defined as defined relational embeddedness as the degree to which the firm’s alliance relationships are facilitated using trust, mutuality, and flexibility (Bonner et al., 2005). Srivastava et al. (1998) suggested that embeddedness creates the market-based asset of relationships that provides both the selling and the buying organizations with the potential to create value by enabling transactions. Since relational embeddedness is an important starting point for understanding the influences of network structures on economic behavior and research on the role of relational content remains underdeveloped (Barden and Mitchell, 2007), this study focuses on relational embeddedness as a critical mediating outcome facilitated by complementary resource endowment from the context of sharing economy ecosystem.

As indicated by Chien et al. (2012), in the context of e-marketplaces that involve transactions between and among several organizations, relational embeddedness is important in reducing e-commerce transaction costs, since members tied to relational social networks tend to develop group cultures and construct an informal governance system that reinforces and safeguards the social bond between partners. By reducing the transactional uncertainty, relational embeddedness helps to increase the level of trust between the exchange partners, and consequently motivates the exchange parties to pursue long-term strategic alliances. Likewise, we argue that resource complementarity could foster higher degree of relational embeddedness between platform owner and service providers in the context of sharing economy. Johnson et al. (1996) suggested that resource complementarity implies both inimitability and symmetry of the parties’ contributed resources, fitting firm needs like pieces in a puzzle. Whereas, inimitability emphasizes the combination of unique resources to attain collaborative advantage, symmetry represents an equitable contribution of resources. Consequently, recognition of resource complementarity, both outside-in and inside-out ones, implies acknowledgement of a partner’s competence and its fairness. The resulting interdependence and reciprocity that arise due to greater resource complementarity should reduce the likelihood of actions taken in self-interest and enhance trust between platform owner and service providers, thereby increasing higher level of relational embeddedness. Based on the above inference, this study generates the following hypotheses:

Hypothesis 1. (H1) Outside-in resource complementarity will be positively associated with relational embeddedness.

Hypothesis 2. (H2) Inside-out resource complementarity will be positively associated with relational embeddedness.
2.3 Resource Complementarity and Ambidextrous Competence

In the cooperation relationship between platform owner and service provider partners under the context of sharing economy, not only do they both need to generate new knowledge associated with new products and services for emerging markets, they also need to leverage current resources or competences and exploit existing products and services (Danneels, 2002). In order to adapt unanticipated situations and rapidly changing environments, firms need to satisfy current demands while simultaneously being prepared for tomorrow’s developments (Eisenhardt et al., 2010). As such, prior studies have argued that organizations with higher ambidextrous competence can generate competitive advantage through the process of exploitation and exploration innovation (Jansen et al., 2009). Ambidextrous competence refers to the routines and processes by which firms mobilize, coordinate and integrate various efforts, and allocate, reconfigure or recombine resources and assets across differentiated exploratory and exploitative processes concurrently (Jansen et al., 2009). Exploratory innovations are designed to pursue new technological and customer knowledges in order to meet the needs of emerging customers or markets. Conversely, exploitation innovations are employed to deepen existing knowledge for refining established technological and customer knowledge in order to meet the needs of existing customers or markets (He and Wong, 2004).

We argue that resource complementarity could foster higher degree of service provider’s ambidextrous competence in the context of sharing economy. For service providers, outside-in resource complementarity, including innovative technological capability, potential market demand, loyalty program supported from platform owner, can facilitate them to achieve higher degree of strategic flexibility and operational efficiency, and explore the innovative way to develop their business in the emerging market under mobile commerce environment. Likewise, higher degree of outside-in resource complementarity should positively increase higher degree of service provider’s ambidextrous competence. Inside-out resource complementarity, such as marketing capacity, service quality, customer-specific knowledge, network community interaction and so on, could also help service providers to leverage their current operational capabilities or service quality through differentiated exploratory and exploitative activities, thereby enhancing the higher degree of service providers’ ambidextrous competences. Therefore, we hypothesize as follows:

Hypothesis 3. (H3) Outside-in resource complementarity will be positively associated with ambidextrous competence.

Hypothesis 4. (H4) Inside-out resource complementarity will be positively associated with ambidextrous competence.

2.4 The Effect of Relational Embeddedness on Financial Performance and Continuance Intention

We argue that greater degrees of resulting relational embeddedness between platform owner and service provider can facilitate positive financial performance and higher cooperation continuance intention for service provider. Medline (2006) defined financial performance as the perceived economic performance of the jointly acting relationship parties, relative to expectations and competitors in the broader network. It is expected that the co-created relational embeddedness can reduce the level of uncertainty and increase transaction efficiency. As such, the co-created relational embeddedness become crucial co-specialized idiosyncratic assets that have the potential to create value for firms, both platform owner and service providers.

In the context of sharing economy for this study, the platform of such ecosystem provides an effective marketing and service capacity channel that enables buyers and sellers to reach efficient transactions and to increase their competitiveness. Through the platform of sharing economy, the business relationship that bonds the sellers (service providers) and platform owner can help them both to better anticipate and fulfill the current and potential business requirements, thereby increasing the opportunity to engage in ongoing transactions and commercial activities, and thus create joint economic benefits (Kaufman et al., 2006). Superior relationship performance occurs when the trading parties develop strong business ties and long-term cooperative relationships, and such relational embeddedness will contribute to the finance performance for the service provider, and thus increase the cooperation continuance intention for service providers within the context of sharing economy ecosystem. Likewise, we posit:

Hypothesis 5. (H5) Relational embeddedness will be positively associated with co-created financial performance.
Hypothesis 6. (H6) Relational embeddedness will be positively associated with service provider’s cooperation continuance intention.

2.5 The Effect of Ambidextrous Competence on Financial Performance and Cooperation Continuance Intention

We also argue that higher ambidextrous competence perceived by service providers with the context of sharing economy ecosystem will be positively associated with financial performance and service provider’s cooperation continuance intention. In fact, several studies have predominantly suggested that organizations pursuing exploration and exploitation simultaneously can obtain superior financial performance (e.g., Lubatkin et al., 2006). Similarly, in the context of sharing economy ecosystem such as Uber or Airbnb, service providers with ambidextrous competence could not only help them to overcome existing barriers for connecting their customers, enhance the exploitation of their optimal service capacity, such co-created competence could also strengthen their capabilities to explore new market, potential customer preference or have an experimentation for providing innovative offerings, thereby improve their operational efficiency, increase financial performance and their cooperation continuance intention toward the sharing economy platform. Based on these arguments, the following is consequently hypothesized:

Hypothesis 7. (H7) Ambidextrous competence will be positively associated with co-created financial performance.

Hypothesis 8. (H8) Ambidextrous competence will be positively associated with service provider’s cooperation continuance intention.

3. Methodology and Research Design

3.1 Sample and Data Collection

The objective of this study is to present a more holistic view to illuminate relationships among resource complementarity, relational capabilities (including relational embeddedness and ambidextrous competence), subsequent performance and cooperation continuance intention based on the perspective of resource-based view, as shown in Figure 1. Douyou TV online streaming platform (斗鱼 TV) was selected for this study since it is one of the biggest online streaming platforms in China and Asia. According to the statistics of Alexa, Douyu TV is now the 300th biggest website in the world, the 50th biggest platform in China, and the number one online streaming platform in China. In 2015, over 5,000 online streamers were headed in Douyu and the visiting users in night peak period are very close to the 80% of ones in Taobao. Now Douyu in 2016 has 12,000,000 daily active users, and there are about 130 to 150 million active users monthly (Baidu, 2016). Online streamers in Douyu TV were invited as the target respondents for this study. A total of 375 online survey responses were collected in 2016/2/1 to 2016/6/10. Since 8 were invalid, 367 valid responses with 97.86% response rate were then retained for data analysis. The brief profiles of these 367 respondents are as follows. Among the 367 respondents, 57.22% were males and 42.78% were females. Most respondents are younger users (age is from 15 to 29). In particular, all respondents were highly educated with more than 70.84% respondents graduated from a university. In additions, 55.59% of respondents launched their online streaming within one year, and there were approximately 46.87% of the respondents admit that their online streaming time ranging from 2 to 4 hours per day. Finally, 35.42% of the respondents showed that their users are below 1,000, however, 23.71% of the respondents claimed that their users are between 1,000 to 10,000, and 19.07% of the respondents said that their users are between 10,000 to 40,000.

3.2 Instrument Development

The measurement items in this study were developed based on prior literature and checked for reliability and validity. For outside-in resources, items measuring Technological capability were adapted from Eng (2008), and measurements for market demand were adapted from Kaufman et al. (2006). Indicators of brand competence were modified from Lau and Lee (1999), and items for loyalty program were from Evanschitzky et al. (2011). For inside-out resources, indicators for marketing capability were from Lee and Zhou (2012), measurements for service quality were from Xu et al. (2013), and items for knowledge sharing were adapted from Sedera and Dey (2013). For relational embeddedness, items were from Chien et al. (2012), and ambidextrous competence were adapted
from Jansen et al. (2009). Lastly, indicators of financial performance were modified from Spralls et al. (2011) and measurements of cooperation continuance intention were from Zhou and Li (2014).

4. Data Analysis and Results

4.1 Instrument Validity

To validate the survey instrument, we analyzed its convergent and discriminant validity. Convergent validity is evaluated by inspecting the standardized path loading, composite reliability (CR), Cronbach’s α, and average variance extracted (AVE) (Gefen et al., 2000). Respecting the criteria recommended by Fornell and Larcker (1981), we evaluated the measurement scales following three criteria: (1) all indicator factor loadings should be significant and exceed 0.5; (2) construct reliabilities should exceed 0.8; and (3) AVE by each construct should exceed the variance due to measurement error for that construct (e.g. AVE should exceed 0.5). The range for factor loadings was 0.709 to 0.873, however, two indicators (BC2 for brand competence and CU4 for continuous usage) are below 0.5 cutoff value, and these items were dropped from thereafter analysis.

Besides, as indicated in Table 1, all AVE estimates are well above the cutoff value (0.5), and CRs and Cronbach’s alpha for all factors exceed the required minimum of 0.8 and 0.7 respectively. Hence, all three conditions for convergent validity are met, and thus suggesting that all measurement scales have convergent validity. Furthermore, discriminant validity is the degree to which the measures of two constructs are empirically distinct (Bagozzi et al., 1991). When the square root of each construct’s AVE is larger than the correlations of that construct with other constructs, the discriminant validity is supported.

Table 1. Reliability, correlation coefficients and AVE Results

| Construct | AVE | Cronbach’s α | CR | Mean S.D. | AC | BC | CU | FP | KS | LP | MD | MAC | RE | SQ | TC |
|-----------|-----|--------------|----|-----------|----|----|----|----|----|----|----|-----|-----|----|----|----|
| AC        | 0.541 | 0.879 | 0.904 | 4.831 | 0.922 | 0.74 |
| BC        | 0.638 | 0.858 | 0.898 | 4.604 | 0.952 | 0.60 | 0.80 |
| CU        | 0.653 | 0.734 | 0.850 | 4.853 | 0.806 | 0.68 | 0.49 | 0.81 |
| FP        | 0.647 | 0.729 | 0.846 | 4.875 | 0.778 | 0.64 | 0.54 | 0.59 | 0.89 |
| KS        | 0.598 | 0.832 | 0.881 | 4.714 | 0.887 | 0.69 | 0.65 | 0.60 | 0.58 | 0.77 |
| LP        | 0.559 | 0.934 | 0.945 | 4.706 | 0.920 | 0.65 | 0.71 | 0.56 | 0.55 | 0.69 | 0.75 |
| MD        | 0.673 | 0.837 | 0.892 | 4.792 | 0.818 | 0.60 | 0.72 | 0.51 | 0.52 | 0.60 | 0.64 | 0.82 |
| MAC       | 0.620 | 0.796 | 0.867 | 4.584 | 0.890 | 0.63 | 0.62 | 0.58 | 0.55 | 0.68 | 0.72 | 0.57 | 0.79 |
| RE        | 0.542 | 0.719 | 0.825 | 4.769 | 0.941 | 0.70 | 0.52 | 0.61 | 0.52 | 0.64 | 0.64 | 0.52 | 0.65 | 0.74 |
| SQ        | 0.696 | 0.781 | 0.873 | 4.708 | 0.735 | 0.61 | 0.59 | 0.54 | 0.51 | 0.63 | 0.63 | 0.53 | 0.56 | 0.56 | 0.83 |
| TC        | 0.586 | 0.658 | 0.895 | 4.603 | 1.008 | 0.60 | 0.66 | 0.51 | 0.51 | 0.56 | 0.68 | 0.73 | 0.60 | 0.57 | 0.47 | 0.77 |

Notes:
- a. The main diagonal shows the square root of the AVE (averaged variance extracted).
- b. Significant at p <.01 level is shown in bold.

4.2 Hypothesis Testing

We use partial least square (PLS) to test the main effects specified in hypotheses, and the analyzed results as presented in Figure 2. First, we hypothesize that the constructs of outside-in and inside-out resources as second-order ones in terms of four and three relevant but separate dimensions, namely, market demand, technological capability, loyalty program and brand competence for outside-in resource, and marketing capacity, service quality and knowledge sharing for inside-out resource. As indicated in Figure 2, we found that all dimensions are significantly related to the construct of outside-in and inside-out resources. For outside-in resource, loyalty program is the most important aspect for forming online streamer’s motivation toward online streaming channel launch in Douyu TV. For outside-in resource, the construct of knowledge sharing is the most influential aspect that online streamer contributed for Douyu TV platform.

Second, we found H5 is not supported and all other hypotheses are supported. That is, it was shown that relational embeddedness has no any significant effect directly to financial performance. However, for other hypotheses, both outside-in and inside-out resources have significant influence on relational embeddedness and ambidextrous competence. However, for relational embeddedness, the effect of
outside-in resource is (beta=0.784) is greater than the one of inside-out resource (beta=0.475). For ambidextrous competence, the effect of inside-out resource (beta=0.462) is greater than the one of outside-in resource (beta=0.336). Lastly, ambidextrous competence has direct effect on financial performance (beta=0.548), and both relational embeddedness and ambidextrous competence are significantly related to online streamer’s continuance usage, and the effect of ambidextrous competence (beta=0.495) is greater than the one of relational embeddedness (beta=0.264).

Figure 2. Hypotheses Testing Results

5. Implications and Conclusions

5.1 Academic Implications

First, as highlighted above, the role and empirical evidence of resource complementarity in facilitating value co-creation and impact on subsequent performance under sharing economy context is still not well understood. As Sarker et al. (2012) indicated, past research has treated the process of value co-creation as a “black box”. In alignment with resource-based view and the important role of resource complementarity in strategic alliance formation, this study attempts to look into the co-creation phenomenon and process in some depth, offering a more penetrative understanding of the concept and the context of sharing economy ecosystem.

Second, this study goes a step further than past studies that have dwelled on the unique concept of resource complementarity by unearthing different sets of resource complementarity, both outside-in and inside-out ones, influence subsequent development for relational embeddedness, ambidextrous capabilities, and subsequent financial performance and cooperation continuance intention. And the above related issues have been minimal in prior co-creation or strategic alliance studies.

5.2 Managerial Contributions

Confiming the significant role of resource complementarity on relational capabilities (including relational embeddedness and ambidextrous competence), subsequent performance and cooperation continuance intention through the lens of RBV could offer new opportunities to enhance value co-creation by engaging customers in service production through the holistic stages of service delivery process. As such, our expected findings may suggest several implications for sharing economy application platform owners to maximize the co-creation value and related outcomes through our study.

First, the findings of this study is expected to guide sharing economy platform owners in fine-tuning their offerings (the outside-in complementary resources) in order to help their service provider partners cultivating their seamless and holistic marketing and customer relationship management capabilities from the platform and mobile application. In contrast, service capacity and service quality from service providers (inside-out complementary resources) can also be integrated through the platform and mobile application, thereby reflecting in the value co-creation and related capabilities.
development process. Therefore, sharing economy platform owners could be more responsive to service provider’s needs for quick and effective identification of technological or other related sources, such as information searching, location-based service, QR-code scanning, comments and photo sharing, online transaction or even the support of virtual reality (VR) /augmented reality (AR), according to the expected insights provided by our study.

Second, resource complementarity serves as the first step to success, however, the synergistic and integrated benefits obtained through the higher degree of relational embeddedness and ambidextrous capabilities will be more crucial for long term benefits and sustained competitive advantage for sharing economy platform owners, since the above relationship and co-created capabilities are important network assets for both platform owner and service providers. Likewise, this study also provides important avenues for platform managers to carefully investigate and monitor the degree of relational embeddedness and ambidextrous capabilities as a means to enhance efficiency and effectiveness for platform operations. In sum, findings and contributions from this study are expected to help enable us to develop a more holistic view of mobile-based value co-creation in the context of sharing economy ecosystem.

5.4 Conclusion, Limitations and Future Research

Although this study has produced useful and meaningful results, there are always limitations to what can be accomplished in a single study. First, this study examines sharing economy and resource complementarity phenomenon through in live streaming context, and this makes it difficult to generalize the findings of this study to other types of sharing economy platforms. Future research should investigate the phenomenon as it relates to other types of sharing economy hubs. Second, as the data are cross-sectional, all the statistically supported relationships can only be viewed as tentative. The research results would be more robust if we could investigate the research model over time rather than at one point in time. Accordingly, a longitudinal study could be conducted in the future to gain more comprehensive results. Lastly, scholars should be cautious in generalizing the findings to different contingencies, since phenomena may vary in different sharing economy platform types (e.g., transportation, online streaming, accommodations, design), different cultures or countries (e.g., US, Europe), or different demographic groups (e.g., gender difference). Thus, cross-group issues and comparisons between different types of sharing economy platforms or countries are suggested for future research.

References


