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Value Co-creation Inside the Ridesharing Economy: Evidence from the Chinese Sharing Economy Experiencescape with Set-theoretic and SEM Applications

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Abstract

The study empirically examines value co-creative behaviors within the framework of ridesharing, complexity theory, and fsQCA. A total of 301, questionnaires were acquired through social media and conventional sources in the study. The questionnaires were analysed to validate our proposed hypotheses by using structural equation modelling (SEM) and fuzzy set qualitative comparative analysis (fsQCA), ostensibly to assess the direct (indirect) relationships, and all feasible solutions that defined Equifinality respectively. The SEM results of the study revealed that resources and experiential consumption remain the corner stone of distinct value formation; and the antecedents of commuters' high intention to participate in ridesharing value co-creation. Furthermore, among the dimensions of experiential consumption, escapism was found to be the most influential contributor of commuters' high intention to participate in ridesharing value co-creation. In terms of fsQCA, the results revealed seven (7) recipes of configurations (solutions) for predicting commuters' high intention to participate in ridesharing value co-creation. Arguably, there is a chasm in literature with respect to ridesharing value co-creation. Whiles the study intends to address this chasm, the implications of the study will enhance managerial decision-making on how to combine their scarce resources to design memorable and authentic-laden services that will attract the commuting public for value co-creation. The study narrows the chasm and further deepens the stream of literature on sharing economy through its theoretical provision, and unique focus on value co-creation in the ambit of ridesharing.

Keywords: Value co-creation/destruction, fsQCA, sharing economy, experience economy, memorable experience. S-D logic, complexity theory.

1. Introduction

The sharing economy, otherwise known as collaborative consumption is popularly described as a game changer within the peer-to-peer (P2P) industry in recent times (Abbie-Gayle & Neuhofer, 2017; Cohen & Kietzmann, 2014; Tussyadiah & Pesonen, 2016). The establishment of Servas Int. in 1949, marked the birth of the sharing

economy. Servas Int. as a gift economy model facilitates the concept of lodging and other hospitality services for its global webbed membership (Dredge & Yimóthy, 2015). In 2003, Couchsurfing was founded as a social networking and hospitality platform exclusively for connecting travelers with locals for authentic experience within the framework of collaborative consumption for backpackers and budget travelers. Airbnb - a brokerage company that provides lodging and tourism-related marketplace for online community of travelers was established at San Francisco in 2008, following the success stories of its predecessors. (Cohen & Kietzmann, 2014; Dredge & Yimóthy, 2015; Tussyadiah & Pesonen, 2016; Wosskow, 2014).

Within the transportation industry, Uber as a ride-hailing P2P platform was established in 2009, for the provision of transportation services that were "superior to expensive taxi or unpleasant or inaccessible public transit". There is empirical evidence that its operations have dwarfed and displaced the activities of traditional transport service providers at its operational areas (Chee, 2018; Thor et al., 2018). It has become emblematic for quality, affordable and efficient delivery of services of international repute. Didi Chuxing (simply, Didi) – founded in 2012, and headquartered in Beijing is China's rival internet-mediated transport conglomerate to Uber. Didi's business model was fashioned to provide a continuum of on-demand services - ridesharing, taxi hailing, food delivery, bike (E-bike sharing), car rentals, among others (Guo, Xin, Jia, Barnes, & Wang, 2018). Arguably, Didi is now touted within the global digital utility as the largest hail riding firm. It has become an avatar and incarnation for smart transportation which is greatly laced with AI within its catchment areas. As of 2017, within the enclave of China, it provided transportation services to an estimated number of 480 million people in 400 cities with a workforce of over 21 million drivers (Tukamushaba et al., 2016; Yujie & Qiu, 2019). As part of measures to provide smart transportation to co-create value with the travelling and the commuting public it has emerged that:

[…] has launched smart traffic light, smart transport screen, reversible lane, thermodynamic diagram designated drivers, smart bus, smart traffic report and programs in China. Didi now helps to manage over 300 traffic lights in 20 mainland Chinese cities including Beijing, Jinan, Wuhan and Guiyang (Guo et al., 2018).

Empirical studies opine that the success story of the sharing economy business model is as a result of the failure of the traditional transport providers to provide authentic-laden experiences – escapism, education, entertainment, esthetic, and economic (budget) services to the consuming public (Makarand, Mody, & Lehto, 2017; Mingming & Xin, 2019; Tussyadiah & Sigala, 2018; Volgger, Christof, Stawinoga, Taplin, & Steve, 2018; Zhihua, Chen, Han, & Lu, 2017). The global impact of the sharing economy on the transportation servicescape has been explosive owing to the fact that on-demand ridesharing platforms such as Didi, Uber, Lyft, Citibike, and Drivenow ceaselessly cause remarkable disruption and market stir within their functional territories. This has resulted in the collapse (and threat) of collapse of other brands which were the workhorse prior to the inception of the ride sharing industry (Abbie-Gayle & Neuhofer, 2017; Dredge & Yimóthy, 2015; Kim, Yoon, & Zo, 2015).

The sharing economy has attracted a lot of attention in both academia and industry with pronounced particularization on the accommodation and the tourism subsets – and an obvious neglect of the ridesharing subset to the best of our knowledge. This has arguably created a yawning gap and chasm in literature. Within the framework of the ridesharing ecosystem, apart from anecdotal provisions, there remains a paucity and dearth of research, and this explains the imbalance and the consequential chasm from this stream of research. Prior literature is virtually silence on value co-creative activities among the economic coordination within the ridesharing environment. For instance, Yujie and Qui (2019) analysed the platformization of transport services; Farzad, et al (2019) researched the drivers of ridesharing; and Zack, et at (2018) investigated the reasons for people's involvement in the sharing economy with particularization on Uber.

Apart from the conspicuous gaping hole in literature pertaining to value co-creation in the ridesharing sector, current literature on internet-based marketplaces is overtly riddled with symmetric methodologies, and thus, are emblematic of the identifiable problems of these methods (Chee, 2018; Farzad, Giovanni, Mokhtarian, & Susan, 2019; Zach, Lee, Chan, Balaji, & Chong, 2018; Thor, Chinchih, & Frey, 2018; Valente, Patrus, & Córdova, 2019; Wentrup, Nakamura, & Ström, 2019). In other words, these studies bear the methodological paralysis of symmetric applications such as Unifinality, estimation of net effects predictors on outcome, and sample size restrictions (Dusa, 2010, 2019; Ragin, Shulman, Weinberg, & Gran, 2003; Thiem & Dusa, 2013b). Indeed, symmetric methodologies are touted as the workhorse in most studies until the emergence of asymmetric methodologies – complexity theory and fuzzy set qualitative comparative analysis (fs/QCA) to remediate the resultant drawbacks of symmetric methodologies (Dusa, 2019; Michael & Thiem, 2015; Ragin & Sean, 2009; Thiem, 2010; Thiem, 2011, 2016).

Unlike symmetric methods such as multiple regression which is bias towards net effects and Unifinality, fsQCA

is unique for its multiplicity of pathways (Equifinality) towards an outcome. In other words, fsQCA has the knack for the identification of an outcome through causal recipes and necessary configurations (Dusa, 2019; Michael & Thiem, 2015; Ragin & Rihoux, 2004; Thiem, Spöhel, & Dusa, 2016). It stresses on combinatorial effect instead of net effects, and as such exposes the lacuna in traditional statistics (Ragin & Fiss, 2008; Ragin & Rihoux, 2004).

With the above sketch and ongoing discussion on methodological issues coupled with an overwhelming skewed attention on accommodation, and tourism related studies on sharing economy, the present study is intended to bridge these chasms by focusing on the application of fsQCA and value co-creation in the determination of configuration of recipes for commuters' high intention to participate in ridesharing value co-creation. Our motivation is grounded in the fact that values co-creation and co-destruction are less researched in the ambit of the sharing economy, and also asymmetric applications are relatively neglected in this stream of research. Secondly, the limited studies on sharing economy are bias towards lodging sharing economy (LES) and tourism (Abbie-Gayle & Neuhofer, 2017; Boateng, Kosiba, & Feehi, 2019; Zhu, So, & Hudson, 2017) (Mingming & Xin, 2019; Tussyadiah & Sigala, 2018; Volgger, Christof, Stawinoga, Taplin, & Steve, 2018; Zhihua, Chen, Han, & Lu, 2017) with overemphasis on symmetric methodologies, to the best of our knowledge. Moreover, a sizeable number of these studies focused on the S-D logic and the experiential economy dimensions without extension, and this explains their inability to capture co-destruction within the market coordination (Abbie-Gayle & Neuhofer, 2017). This, therefore, provides a conceptual anchor to set the pace for further intellectual discourse.

Drawing upon the original schema of the S-D logic, experiential economy, complexity theory, and fsQCA, we have broadened the debate by capturing distinct value formation, ostensibly to examining commuters' intention to partake in value co-creation within the context of sharing economy. Specifically, the following research questions guided our study:

RQ1: What are the configurations of resources, experiential consumption dimensions and distinct value formation that will lead to authentic experience and intentions to partake in ridesharing marketplace?

RQ2: Which of the dimensions of experiential economy impact greatly on commuters' intentions for value co-creation through authentic experience in the ridesharing marketplace?

To the best of our knowledge, the study is the first measure to utilize asymmetric modeling - complexity theory and fsQCA within the framework of ridesharing. The study abates the existing chasm on value co-creation. Particularly, it addresses the conspicuous absence of asymmetric methodologies in internet-mediated marketplaces. Findings of the present study contribute to the line of studies on fsQCA, value co-creations, and experience (sharing) economy.

The remainder of the paper is arranged as follows: context of the study, theoretical background and hypotheses development, measures, analyses, discussion, and conclusion.

2.Theoretical background and hypotheses development

2.1 Complexity theory and fsQCA

Complexity theory encapsulates phenomena that are beyond the boundaries of simple theories or systems. It is a field of study that involves how coherent systems independently emerge from a chaotic and complex environment. Simple theories (like in the cases of structural equation modeling and multiple regression) are characterized by assumptions of linearity (i.e. directional relationship), addictive effects, and causal symmetry among the regressor and the regressand variables – making systems predictable (Ragin & Fiss, 2008). The estimation of net effects of predictors (regressors) on the basis of regressand is a commonplace in simple theories (Kourouthanassis, Mikalef, Pappas, & Kostagiolas, 2017; Liu, Mezei, Kostakos, & Li, 2015; Vis, 2012; Wu, Yeh, Huan, & Woodside, 2014).

The very nature of simple theories makes it bound for Unifinality outcome (Ragin & Fiss, 2008; Woodside, 2013a, 2013b, 2015; Woodside, Prentice, & Larsen, 2015; Wu et al., 2014). Unifinality is basically anchored on the assumption that there is a single optimal configural design that is best fit for a specific outcome. However, in the real world, not all phenomena behave in this fashion. Simple theories lack the oomph for analyzing combinational recipes that are equally effective in attaining a desired outcome. In other words, the trade mark of simple theories, does not make it fit for counterfactual analysis.

A score of behavioral science studies rely heavily on multiple regression and structural equation modeling and as a result fail to leverage on complex system. "… researchers in the behavioral and management sciences using

symmetric tests (e.g., correlations and regression coefficients) stop their analysis after finding statistical support significant for directional relationships" (Woodside, Garbor, & Megehee, 2017). Such reportage leaves much to be desired due to its inherent lacuna (Ragin & Fiss, 2008; Wu et al., 2014) and its failure to address anomalies of traditional methodologies.

Complex theory, with its embedded Equifinality idiosyncrasy advances the principle of non-linearity among the regressor and regressand variables. Complex theory advocates that in reality, the existence of extremely high symmetric link between the regressor and regressand variables are factually rare. It goes beyond symmetric approaches (i.e. net effects, and model fit diagnostic measures) by establishing a configuration of recipes that map to an outcome (Ragin & Fiss, 2008; Ragin & Sean, 2009; Woodside, 2015).

FsQCA – asymmetric in nature, and a case-oriented technique is anchored in the grand scheme of Complexity theory. It is a hybrid of fuzzy logic and fuzzy set (Dusa, 2019; Ragin & Rihoux, 2004; Ragin & Sean, 2009; Thiem & Dusa, 2013a). It was invented as a cure to the "paralysis" of symmetric methodologies – Unifinality idiosyncrasy, large Ns, and net effect (Cronqvist & Berg-Schlosser, 2009; Woodside, 2013b; Woodside et al., 2015; Wu et al., 2014). "… QCA starts by assuming that causation is complex, rather than simple. Most conventional techniques assume that causal conditions are "independent" variables whose effects on the outcome are both linear and additive. "…QCA sees cases as configurations of conditions and uses truth tables to represent and analyze causal configurations" (Ragin & Sean, 2009). Relative to simple theories, the case-oriented nature of fsQCA, lends itself for counterfactual analysis with

its truth table idiosyncrasy. A truth table is able to catalogue all the logical possible configuration of causal links and their resultant outcome (Dusa, 2019; Thiem et al., 2016).

The present study therefore, leverages on fsQCA as a case-oriented option to understand how value co-creation is undertaken within the ambit of ride sharing marketplace. Antecedents of customers behavior are critical in a technologically-bias environment such as ride sharing due to its degree of complexity. Consumers are defined by their distinct uniqueness relative to their behavioral outcomes. Therefore, a complete knowledge of differing configuration of behaviors for a set of outcomes is essential for optimal value co-creation. As demonstrated in Fig.1. our study employed the constructs - resources (res), experience consumption(exc.), and distinct value formulation (dvf) as the fundamental antecedents of value co-creation in the ridesharing economy.

A configuration of the dimensions of experience consumption and resources at the disposal of the agents within the economic coordination ignite value co-creation activities through distinct value formation which in tend shapes the purchasing intentions of consumers. Evidentially, economic value is co-created when operant and operand resources are applied together (Abbie-Gayle & Neuhofer, 2017). Contrary to Simple theory, a set-theorem condition (Fig.1), presents a configuration of conditions that lead to an outcome – intention (int).

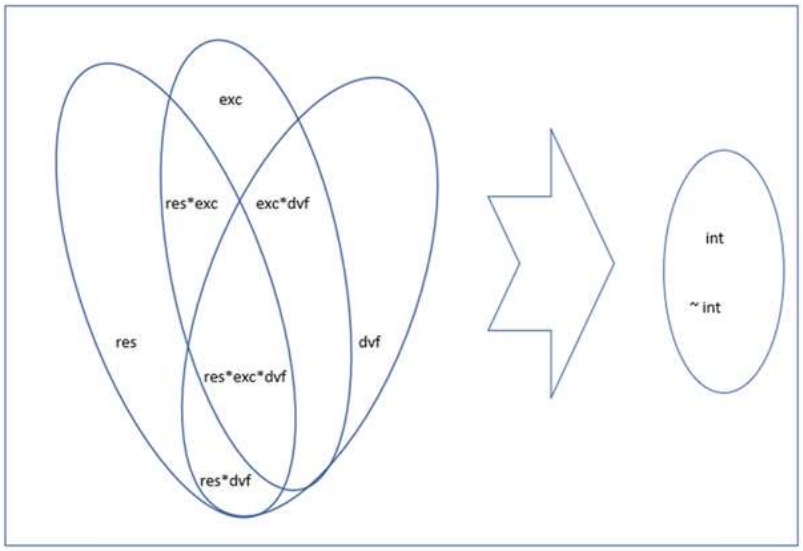

Fig.1. Configurations of complex systems based on the nexus of set of causal conditions about equifinality. Note: res = Resources (Operant and Operand); exc = Experience; dvf = distinct value formulation (Constructive and Destructive); int = Behavioral Intention.

2.2 *Experience economy and value co-creation*

An experience economy is defined as one in which offerings are patronized on the basis of effect they have on the lives of people. "Experiences are commercial offerings that engage customers in memorable ways – they are distinct form of economic output, and as such hold the key to promoting future economic prosperity" (Pine II & Gilmore, 2011). Experiential consumption, therefore, means buying an offering due to the practical impression about it. Stasiak (2013), succinctly, espoused that "… basic goods offered on advanced economy markets are not ordinary material commodity or service, but emotions, impressions and sensations connected with them". Following Stasiak (2013), we advance that the ride-hailing digital economy is 'selling experience' to the commuting and travelling public rather than a mere means of transportation services. Experience derived from an offering of any kind leaves a lasting impression that morphed into a cognitive response for distinct value formulation – a catalyst for co-creation and a pathway toward necessary and sufficient conditions for consumers' behavioral outcomes.

Service management literature advance that positive experience crystalizes into value co-creation activities Current users with a deep sense of positive experience about an offering attract new users through word-of-mouth communications, and reviews that are made on the offering, whiles existing users deepens their patronage. The converse is also true (Pine II & Korn, 2011).

Authentic experience is the spine of the demand for offerings. Empirical evidence indicates that regardless of the offering – commodity, good, service, experience or transformation, customers will judge it based on whether or not they view it as authentic. That is, whether or not it conforms to their own self-image. (Pine II & Gilmore, 2000). Following Wiles and Alleah (2017) we posit that authenticity in the ridesharing industry is the quality of service that emanate from special treat extended by the drivers that are completely absent from conventional transportation service providers (Wiles & Alleah, 2017). According to Gultentag "products that lack traditionally favored attributes but offer alternative benefits can, overtime transform a market and capture mainstream consumers" (Guttentag, 2015). Thus, the need to explore the underpinning experiential dimensions of service offerings, especially, in the ride sharing marketplace where no study has been conducted.

Pine and Gilmore (1999) identified four dimensions of offering in their seminal schema on experience economy, viz, services, commodities, goods and experience. Services were classified as intangible offerings extended to specific users. One unique aspect of service is that production and usage are carried out simultaneously. Goods were defined as those tangible outputs of firms, and commodities were described as those substitutable endowment of nature. Pine and Gilmore (1999) posit that experiences are the engagements that serves as classical conditioning (i.e., it evokes and conjures images of authenticity and extraordinary memorability). People are willing to pay for experience because they classify it as an alternative economic offering, and the basis for distinct value formation. By extension, meeting the experience needs of consumers has, therefore, become the spine of the architecture of service delivery (Pine & Gilmore, 1999). Following Pine & Gilmore (1999) we hypothesize that:

H_1: There is a significant positive nexus between experiential consumption and distinct value formulation within the ridesharing industry.

2.3 S-D logic and economic value co-creation the ridesharing ecosystem

The paradigm shift from the goods-dominant(G-D) to service-dominant (S-D) logic has birthed a new dawn of transformative experience through the evolution of collaborative consumption which is powered by the Internet of Things (IoT). Difficulties in data acquisition and communication challenges have been greatly dwarfed by smart technologies (Abbie-Gayle & Neuhofer, 2017; Vargo et al., 2008). In effect, bricks-and-mortar stores are succumbing to the disruptive and pervasive nature of online marketplaces as a result of its great deal of convenience, budget pricing, and their knack for customization and digital marketing personalization (Abbie-Gayle & Neuhofer, 2017; Makarand et al., 2017; Tussyadiah & Pesonen, 2016; Vargo et al., 2008). The economic agents of online marketplaces leverage on technology to effectively exchange information.

Consumer centricity has emerged as the corner stone of service and product life longevity (Vargo & Lusch, 2004, 2016). The S-D logic is famed for its elaborations on inter-firm coordination, producer-consumer affinity, and firm's purpose. The tenets of the S-D logic is grounded in the culture of economic value co-creation, "value-in-use" in a sharp contrast to G-D logic idiosyncrasies (Oana-Maria, 2017; Vargo & Lusch, 2016). The concept of value co-creation as elucidated by the service-dominant (S-D) logic is the spine of service management. It is now the reference point for actualizing the exclusive goal of creating value among service

providers. Value co-creation is anchored in the claim that contemporary service providers do not have the exclusive keys to value creation.

The proponents of value co-creation are explicit on the indispensable role of consumers in the product life cycle (Chathoth, Altinay, Harrington, Okumus, & Chan, 2013; Chathoth, Ungson, Harrington, & Chan, 2016; Harrington, Rhonda, Ottenbacher, Chathoth, & Marlowe, 2019; Vargo & Lusch, 2016). Interaction and continuous involvement of potential users of offerings are critical ingredients for an outstanding market performance. A score of research indicates that service providers who are able to effectively inculcate consumer feedbacks in their marketing mix architecture receive a massive positive response in terms of high consumer patronage, and vice versa (Parasuraman, 2002; Kotler & Pfoertsch, 2007). Customer-centric services are laced and intertwined with relational bonding with consumers instead of transitional ties. Achieving customers' satisfaction has become the holy grail of service providers. It is also serves as a gold standard for success. Again, a corporate culture of strategic goals involving customer-first-in-mind disposition, and a long-term supplier-customer dyad are common in extant literature (Oana-Maria, 2017; Vargo & Lusch 2016; Abbie-Gayle & Neuhofer, 2017).

[…] transition from product-centricity to having a full customer focus is in line with the evolution of collaboration. "Alliances … established to improve some aspect of a good or service, networks and ecosystems are devoted to managing relationships and encouraging co-evolution" (Oana-Maria, 2017).

Consumers direct participation in term of time, psychological input, knowledge and skill in value creation deepens their level of satisfaction and utility. Value co-creation gives a deeper sense of customization and personal selling - i.e. a paradigm shift from general production for the attainment of transformative experience (Paul,2014, 2015a, 2015b).

The ridesharing marketplace is a formidable avenue for collaborative value creation among service providers and the commuting public. The commuting public constantly nurse the idea of memorable experiences that are not offered by the traditional transport services. These include convenient, accessibility, affordability, escapism, education, entertainment and estheticism. (Abbie-Gayle & Neuhofer, 2017; Hung, Lee, & Huang, 2016; Kim, Brent, & McCormick, 2012; Tukamushaba et al., 2016). The assurance of these service qualities deepens commuter's satisfaction, and also serves as the reference point for post-purchase behaviors. Drawing upon the conceptual framework of Vargo & Lusch (2004, 2016), we posit that value in the ridesharing ecosystem is co-created through the configurations of operant/operand resources and the dimensions of experiential economy.

Operand resources are classified as physical resources. In a typical G-D logic environment, operand resources are deemed as the firm's basic assets. It functions as a classical conditioning. More specifically, operand resources impact greatly on the cognitive and internal reactions of commuters by evoking authentic memorability (Abbie-Gayle & Neuhofer, 2017). Also, the dexterity of service providers' competencies and skills when rewarded by consumers via positive post-purchase behavior is exemplified as operant conditioning. For example, operand resources in the context of the ridesharing sector may include the quality of cars, excellent road network and efficient traffic management systems. In contrast, operant resources refer to human resources. That is knowledge and skills that act upon operand resources to create value. Following the S-D logic initial framework, we advance that in the settings of the ridesharing sector, the skills and knowledge of drivers and the commuting public to transact business are considered as operant resources for effective value co-creation. Operand resources are not in the position to create value in isolation. They are dependent on the effective interaction between operant resources such as driver's dexterity in driving, hail-riding apps, road sign, and front-line service competencies (Vargo & Lusch, 2004, 2016; Vargo et al., 2008).

In similar fashion, commuters must complement the effort of drivers in value co-creation by exhibiting skills and competencies in the usage of ridesharing apps and respond promptly to the terms of conditions thereafter. Since drivers (car owners) of ride-hailing platforms liaise between the commuting public and apps providers, the latter must always endeavor to create a harmonious atmosphere of trust and security to eschew potential value co-destruction. Negative memorial experience of commuters leaves traces of service avoidance. Therefore, drivers whose attitude contradicts ride sharing platforms' values proposition must be disengaged from the service. Again, ride sharing apps must have a high-quality disposition for user-friendliness. Service management literature are explicit on value co-creation as a function of experience consumption. Again, several studies show a positive link between resources, and distinct value formulation. (Abbie-Gayle & Neuhofer, 2017; Morosan & Defranco, 2016; Pera, 2017; Tingting et al., 2018; Vargo et al., 2008). We therefore, hypothesize that:

H_2: There is a significant positive nexus between resources and experience

consumption.

H_3: There is a significant positive nexus between resources and distinct value formulation.

H_4: There is a significant positive nexus between experiential consumption and behavioral intention.

H_5: There is a significant positive nexus between resources and behavioral intention.

2.4 *The stimulus-organism-response theory*

The stimulus-organism-response (S-O-R) theory is deeply rooted in environmental psychology. It has attracted a score of attention from academia and industry with particularization on the reactive disposition of agents within the ecosystem with respect to their interactions. Fundamentally, the S-O-R was theorized to explore the input-output process amongst economic actors (Bagozzi, 1993; Chang, Eckman, & Yan, 2011; Makarand et al., 2017).

Drawing upon the S-O-R theory, the present study intends to understand how ridesharing participants are satisfied and thus, are willing to co-create value with service providers based on the dimensions of experiential economy (i.e., escapism, education, entertainment, and estheticism) (Pine & Gilmore, 1999) and the available resources as indicated in Fig.2. There are scores of evidences in literature that point experience as the fulcrum of the service industry (Abbie-Gayle, 2016; Tussyadiah, 2016; Tussyadiah & Pesonen, 2016).

The authentic experience encased in the value propositions of the ridesharing sector makes it a major competitor in the transportation industry. The situation has become more pronounced as a result of the transitioning from a product-and-service focus orientation to an experience-bias paradigm (transformative experience). “Experience” is now commoditized, priced and sold to the consuming public as physical commodities. Thus, businesses offering experience charge customers for improvements in their well-being and the feelings they derive from them (Tussyadiah & Pesonen, 2016).

Choong-Ki, et al (2018) defined authentic experience “as a new consumer sensibility that involves perceptions on the extent to which novel, real, original, exceptional, unique experiences, services, or products are genuine” (Myung, Choong-Ki, & Jung, 2018). It is formed through a sequential cognitive process of sensory perception, emotions, experience and meaningful experience. Intuitively, sensory perceptions encapsulate the application of sensory elements – touch, smell, taste, sight and hearing to create experiences, and a chain of reactions corresponding to emotions are accordingly established. Emotion, acting as an evaluative procedure and a stimulus to experience translates into either “approach” (i.e., constructive distinct value formation) or “avoidance” (destructive value formation) dispositions of economic actors (i.e., post-purchase outcomes) (Gilmore & Pine, 2002; Pine II & Korn, 2011; Pine & Gilmore, 1999). Drawing upon the S-O-R framework, we hypothesize that:

H_6: Resources, experiential consumption and distinct value formulation are linked positively to behavioral intentions.

3. Measures

3.1 *Survey development*

The study was conducted among those who patronize the Didi ridesharing services with particularization on the vibrant international study community of China. The choice of Didi was as a result of the fact that it remains the major competitor in the ridesharing marketplace of China. Arguably, Didi is positioned as the global market leader in the ridesharing economy following a series of acquisitions (Guo et al., 2018; Yujie & Qiu, 2019). A total of 301, respondents were used for the study. This was after a thorough data screening exercise to discard unengaged respondents. That is those whose questionnaire answering trend fell below acceptable threshold.

A five-point Likert scale measurement tool, ranging from strongly disagree (1) to strongly agree (5) was developed from the constructs of our study – resource, experiential consumption, distinct value formation and behavioral intention. These constructs were coded as RES, EXC, DVF, and INT, respectively for the purpose of the study. The questionnaire was professionally carved to efficaciously measure both the constructs and subconstructs of the study with respective to respondents’ preparedness to partake in ridesharing economic value co-creation. The questionnaires were deployed in the month of January, 2019, via social media (WeChat and WhatsApp) platforms and was augmented by other conventional methods. China’ position as a competitive

global economic powerhouse, and its current Road and Belt economic partnership initiative have attracted a score of educational opportunities to many people across the globe. Many of such people are coming from socio-economic settings where ridesharing and other sharing economic offerings are not common. Therefore,

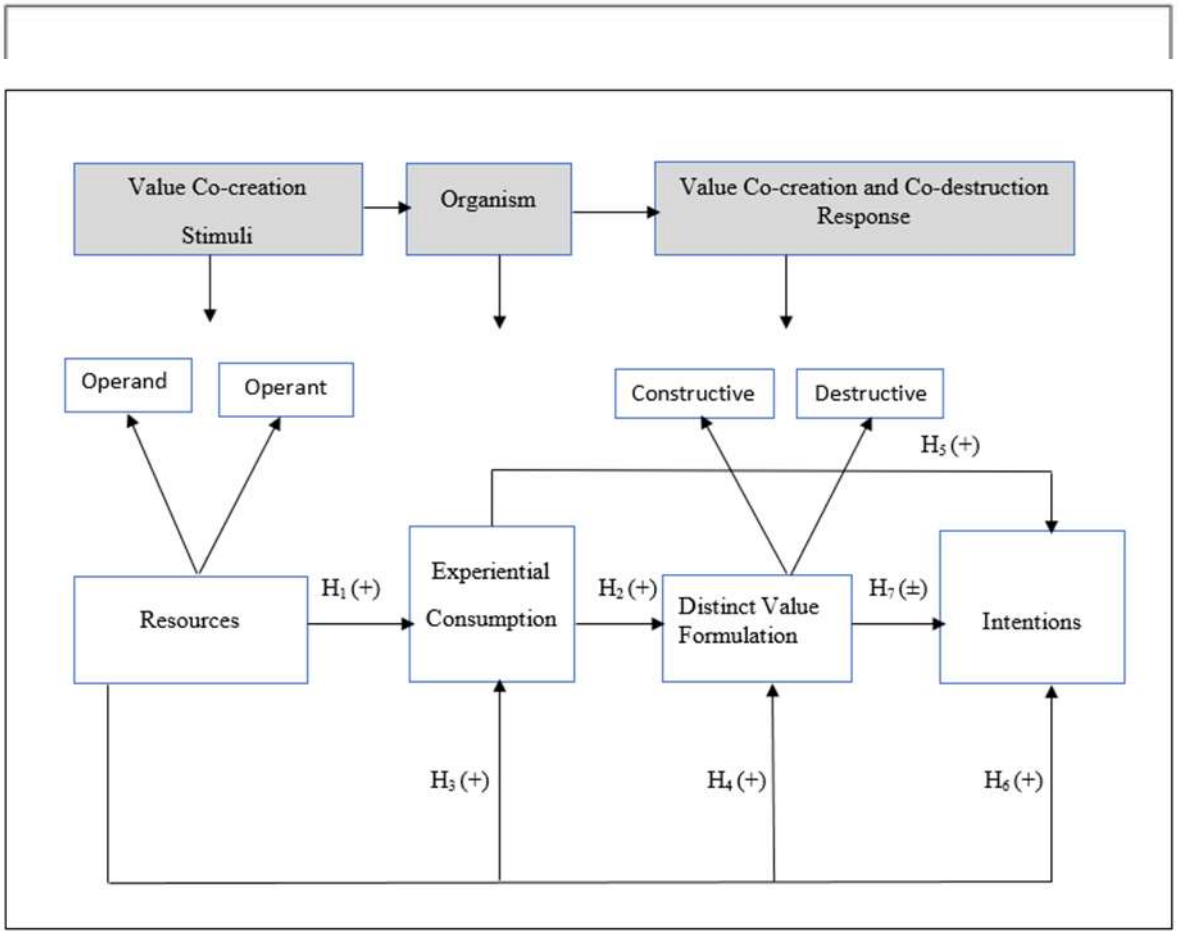

Fig. 2: Conceptual Framework

The motivation for leveraging the international students' community for the study are twofold. First, a score of studies indicates that technology adoption is anchored on a certain level of education. The technology-savvy segment of every population (generation Y) is mostly found to challenge traditional offerings by adopting digital packages (Godelnik, 2017). Obviously, students highly mirror the foregoing description. Second, as pointed out earlier, we were motivated by the socio-economic and the demographic context of the international student community. To many, China is their first place of encounter with ridesharing and thus, their affinity to ridesharing comes with a remarkable and extraordinary experience. Aside the students' body, the entire "international community" highly patronizes ridesharing more than other competing offerings. This is because of the accessibility and convenience nature of the ridesharing industry.

In order to fully understand the process of values co-creation outcome among economic agents, we extended the S-D logic and the S-O-R theory and applied fsQCA (Ragin & Rihoux, 2004) to examining all configurations of recipes – logically possible combination, ostensibly, to establish equifinality trajectories which define commuters' intention to participate in ridesharing. The constructs of the study were operationalized from related literature. Specifically, constructs measuring authentic experience were operationalized from Pine and Gilmore (1999) debut studies on experience economy (Table 1).

Table 1: Definitions of constructs

Constructs	Operational definitions	Adapted from
Operant resource	Skills and knowledge requirement of ridesharing service providers and commuters for effective business transaction	(Abbie-Gayle & Neuhofer, 2017; Vargo & Lusch, 2004, 2016; Vargo et al., 2008)
Operand resource	Physical resources needed for the effective operation of ridesharing services	(Abbie-Gayle & Neuhofer, 2017; Vargo & Lusch, 2004, 2016; S. Vargo et al., 2008)
Education	Learning on the basis of the experience gained from service offerings.	(Oh, Fiore, & Jeoung, 2007; Pine & Gilmore, 1999)
Entertainment	Improvement in wellbeing and the feeling of fun and joy accompanying the usage of a service or a product.	(Oh et al., 2007; Pine & Gilmore, 1999)
Escapism	The ability to escape from a difficult and unpleasant situation through the adoption of alternative offerings.	(Oh et al., 2007; Pine & Gilmore, 1999)
Esthetics	The physical atmosphere or the servicescape within which a product or a service is offered.	(Oh et al., 2007; Pine & Gilmore, 1999)
Behavioral intention	Commuters' continuity intentions in ridesharing marketplace.	(Makarand et al., 2017; Myung et al., 2018)

Prior to the final deployment of the questionnaire, a pilot survey was undertaken to assess the efficacy of the questionnaire instrument. The necessary modifications were made to the original draft following the feedbacks we received. The questionnaires were analysed in stages. First, IBM SPSS (version 22) was used to analyse the demographic statistics of respondents, validity test and component analysis.

Secondly, Tosmana and fsQCA (fs/QCA 2.5) (Dusa, 2007; Marx & Dusa, 2011; Ragin & Sean, 2009; Thiem, 2010) software tools were used during the advance techniques involving the determination of all logical combinations (i.e. raw coverage, unique coverage, overall solution consistency and coverage) for equifinality outcome. Analysis of Moment Structure (AMOS) graphics was used as a complementary tool for model fit measures and diagnostic checks.

3.2 *fsQCA and Data Fuzzification*

As already pointed out, the present study leverages the superior advantages of fsQCA over symmetric methodologies to empirically understand value co-creative processes in the ridesharing marketplace of China. One unique feature of fsQCA is the concept of data fuzzification - mostly referred to as data calibration. It encompasses the preparatory works that involves the transformation of raw data (base variable) values into a reduceable form of either 0 or 1, in the case of crisp set qualitative comparative analysis (csQCA); or in the range of 0 and 1, inclusive, for a fuzzy set condition (i.e. fsQCA). Basically, data calibration is identical to data recoding; it is subjective and it is strictly informed by the number of qualitative thresholds – i.e. anchors (Dusa, 2019; Ragin & Fiss, 2008; Ragin & Sean, 2009).

Specifically, in a crisp set condition, the variables – condition and outcome are dichotomized. However, in fsQCA they are not dichotomized. The purpose of data calibration is to obtain the appropriate data structure for the implementation of fs/QCA program. Admittedly, fs/QCA program is conditioned for qualitative analysis after data calibration (Dusa, 2019; Ragin, 2014). Thus, we calibrated our outcome variable – post purchase intentions, and the conditional variables – resources, experiential economy, and distinct value formation accordingly.

The data calibration process is subjective, and it follows a set-theoretic rhythm of levels of membership (Dusa, 2010; Michael & Thiem, 2015; Ragin & Fiss, 2008; Thiem, 2016; Thiem & Dusa, 2013b) relative to a specific outcome. In particular, an assignment of 1, depicts full-membership or perfect membership, and 0, shows a condition of non-membership (non-perfect membership). Intuitively, the proximity of a number to 1, shows the degree of membership for fuzzy set cases. The reverse also holds. The data calibration process can be done in two ways namely, direct and indirect assignments. In detail, for direct assignment, fuzzy set membership scores are subjectively allotted from the raw data exclusively on expert's advice. Since it is a subjection exercise, it follows that, different experts or researchers will arrive at different results. In other words, the assignment of membership scores is done on the principle of what one deems fit (Dusa, 2007, 2019; Ragin & Fiss, 2008; Ragin & Rihoux, 2004; Thiem, 2014; Thiem et al., 2016).

Three unique qualitative breakpoints are selected for the direct assignment to specify the three anchors of calibration - full membership, non-membership and crossovers (Ordanini, Parasuraman, & Rubera, 2013; Pappas, Kourouthanassis, Giannakos, Chrissikopoulos, 2015; Pappas, Kourouthanassis, Giannakos, & Lekakos, 2016; Ragin & Fiss, 2008). The indirect assignment is such that:

"…base variable values are mapped into the unit interval with the help of continuous functions for which only minimal information is provided by the researcher" (Thiem & Dusa, 2013b).

Following Ragin and Sean (2009), Emmenegger, et al (2011), Dusa and Thiem (2019), the full set membership anchor of the present study was pegged at 5. Also, the non-membership and crossovers were pegged at 1 and 3, respectively, based on our 5-point Likert scale (Dusa, 2019; Emmenegger, 2011; Ragin & Sean, 2009).

3.3 *Truth table*

The truth table is a data matrix structure that holds the empirical information of the study. More specifically, it is designed for the logical minimization process, and as such, it is deemed as the spine and an indispensable tool for the formal analysis of fs/QCA (Cronqvist & Berg-Schlosser, 2009; Ragin, 2009; Ragin & Rihoux, 2004; Rihoux & Heike, 2006; Scneider & Grofman, 2006). In principle, truth table is intended to establish the sufficient and necessary conditions for the attainment of an outcome. In detail, given a condition variable X, and an outcome variable Y, the condition X, is said to be necessary "if whenever the outcome Y, is present, the condition X, is also present." (Dusa, 2019; Ragin & Fiss, 2008; Scneider & Grofman, 2006). In essence, Y cannot occur in the absence of X. That is given ~X, it is impossible for Y to occur) (Dusa, 2019; Marx & Dusa, 2011; Michael & Thiem, 2015; Ragin & Fiss, 2008; Ragin & Sean, 2009; Thiem & Dusa, 2013a; Thiem et al., 2016).

Algebraically, the necessary condition is stated as: $X \leftarrow Y$ (or $X \geqslant Y$, in a more formal context for all cases) (i.e., Y is a subset of X, or Y implies X, or if Y, then X) (Dusa, 2019; Ragin & Fiss, 2008; Scneider & Grofman, 2006). On the other hand, given a condition variable and an outcome X and Y, respectively, X is said to be sufficient condition for the occurrence of Y, such that, whenever X occurs across cases, the outcome (Y) also occurs in each of the cases in question. That is, every occurrence of X, evokes the occurrence of Y (i.e., $X \rightarrow Y$). By given the definitions of the two variables, we can express their relationship algebraically as $X \leqslant Y$, for all cases. Both necessity and sufficient conditions are emblematic of asymmetric circumstances (Dusa, 2019; Ragin & Fiss, 2008; Ragin et al., 2003; Scneider & Grofman, 2006).

The truth table, in essence, serves as a tool for tracing conjunctural causalities (necessary and sufficient conditions) systematically. Specifically, in a bivalent condition defining a csQCA, the truth table's composition of value is strictly, 0s and 1s. In the case of fsQCA, the truth table assumes a continuous scale from 0 and 1, inclusive – defining the degree of membership. Sufficient condition is analyzed by truth table algorithm following the conversion of the data matrix into truth table. Subsequently, each of the rows of the truth table is categorized in one of the following: consistent for an outcome, not consistent for an outcome or logical reminder. On the basis of the aforesaid procedure, a logical minimization procedure is executed (Dusa, 2019; Ragin & Fiss, 2008; Ragin & Sean, 2009; Ragin et al., 2003; Scneider & Grofman, 2006).

The next step after the calibration of the data is the execution of the fsQCA algorithm. The fsQCA algorithm is necessary for the achievement of a truth table whose structure is of the form 2k. Where k denotes the number of conditions and 2, denotes the bivalent state – present or absent. This implies that k number of causal conditions yields 2k logically possible configurations toward as outcome (Clark, Larson, Mordeson, Potter, & Wierman, 2008; Dusa, 2019; Goertz & Mahoney, 2010; Ragin & Sean, 2009; Rihoux & Gisele, 2009).

Empirically, what differentiates fs/QCA as an asymmetric methodology from symmetric methodologies is its equifinality property (Ragin & Fiss, 2008; Ragin & Sean, 2009; Ragin et al., 2003). The row – the logical

possible combination in truth table is unique in a way that each of them represents a set of different configurations which can either produce an outcome. For instance, a problem involving three conditions will produce a structured truth table of the form 2^4 = 16 rows (i.e., 16 logically possible cases). Intuitively, the number of logically possible configurations is exponentially linked to increment in k (Dusa, 2019; Ragin et al., 2003; Thiem & Dusa, 2013b).

In principle, a minimum membership which explains the degree of association between each case and its unique configuration is computed. Subsequently, row specific examination is conducted on the grounds of consistency and frequency (i.e., the number of observable counts for each configuration). (Cronqvist & Berg-Schlosser, 2009; Dusa, 2019; Ragin & Fiss, 2008; Ragin & Sean, 2009). Frequency computation is governed by a cut-off point principle. More specifically, the cut-off points issue a caveat on the number of observations intended to be used in the formal analysis.

Recommendation for the cut-off point is based on the sample size. Unlike symmetric methodologies, fs/QCA is relaxed on sample size prerequisite. Nevertheless, for frequency, a cut-off points of 1 and 3, are recommended for a small and large sample respectively (Dusa, 2019). On the other hand, Ragin and Fiss (2008) emphasized that consistency is ‘‘the degree to which cases correspond to the set-theoretic relationships expressed in a solution” (Ragin & Fiss, 2008). A consistency threshold is therefore, selected in every formal analysis. Ragin and Sean (2009), recommended 0.75, to be the minimum acceptable value for consistency; and thus, we selected a consistency threshold of 0.85, in the present study (Ragin & Sean, 2009).

4. Analyses and discussion

4.1. *Respondent profile and measurement*

The sex distribution of the 301, respondents puts the total of females at 126 (42%), whereas that of males were given as 175 (58.1%). In terms of the age distribution, 159 (58.1%) of the total respondent fell within the age group ‘20 -29’. Again, 93 (31%) and 49 (16%) of the respondents were found to be within the age group ‘30-39’ and ‘40 and above’ respectively (Table 2).

Table 2. Respondents’ profile

Variables	Options	Frequency (f)	Percentage (%)
Sex	Male	175	58.1
	Female	126	42
Age	20 – 29	159	53
	30 - 39	93	31
	40, and above	49	16
Educational Level	Post Doctorate	15	5
	Doctorate	109	36.2
	Masters	152	50.5
	Degree and others	25	8.3

Source: SPSS output from field data

In order to understand the structure of our field data, we first conducted a preliminary analysis in the form of exploratory data analysis (EDA) and confirmatory factor analysis (CFA). In particular, EDA was conducted as a test for model adequacy, reliability and discriminant validity (Haertel, 2006; Iacobucci & Duchachek, 2003; Nunnally & Bernstein, 1994). Secondly, the CFA was done to test the hypothesis of the study, and the underlying Goodness-of-fit measurements. (Haertel, 2006; Iacobucci & Duchachek, 2003; Kline, 2016; Zumbo, 2007; Burne, 2004; Lee, 2007).

Specifically, reliability addresses the consistency of the scale measurement given a repetitive condition (Finch, Immekus, & French, 2016; Nunnally & Bernstein, 1994; Zumbo, 2007). Following Nunnally and Bernstein (1994) we used the Cronbach’s alpha statistic as the metric for reliability (Nunnally & Bernstein, 1994). Relative to the $\geqslant$ 0.70, recommended threshold for reliability (Nunnally & Bernstein, 1994), we observed that each of the Cronbach’s alpha values of our four-factor model was greater than the aforesaid recommended threshold

(Table 3). This gave us an indication of construct validity (Kane, 2006; Nunnally & Bernstein, 1994; Raykov & Marcoulides, 2011; Zumbo, 2007).

Table 3. Exploratory factor analysis result

Scale items	Mean	SD	Cronbach's α	loading	Operationalised from
Experience Consumption			**0.848**		
Education:					(Oh et al., 2007;(J. Pine & Gilmore, 1999)
Didi stimulates my thinking and offers me a genuine transport experience (**EXC1**)	3.95	0.652		0.746	
Entertainment:					(Oh et al., 2007; Pine II & Gilmore, 2011)
Didi provides enjoyable transport service (**EXC2**)	3.76	0.746		0.761	
I really have fun in each moment with Didi (**EXC3**)	4.03	0.665		0.725	
Escapism:					(Oh et al., 2007; Pine II & Gilmore, 2011)
Didi offers me the opportunity to escape the transport difficulties associated with the traditional transport sector (**EXC4**)	3.86	0.760		0.847	
Esthetics:	3.71	0.774		0.565	(Oh et al., 2007; Pine II & Gilmore, 2011)
Didi transport facilities are appealing and fascinating (**EXC5**)					
Resources (Operant and Operand)			**0.937**		(Abbie-Gayle & Neuhofer, 2017; Vargo & Lusch, 2004, 2016; Vargo et al., 2008)
Didi drivers are skilful and knowledgeable in driving (**RES1**)	2.41	0.971		0.804	
Didi apps are user-friendly **(RES2**)	2.42	1.015		0.881	
Didi services always leaves a memorable experience (**RES3**)	2.22	0.845		0.902	
Didi drivers are conversant with traffic regulations (**RES4**)	2.29	0.944		0.854 0.889	
Didi cars are unique and provides authentic and memorable transport experience (**RES5**)	2.25	0.870			
			0.929		
	3.48	0.937		0.885	(Abbie-Gayle & Neuhofer, 2017; Hung, Lee, & Huang, 2016; Kim, Brent, & McCormick, 2012; Kim, Ritchie, Wing, & Tung, 2010; Tukamushaba et al., 2016)
Distinct Value Formation	3.54	0.910		0.841	
Didi provides real value for money (**DVF1**)	3.72	0.826		0.897	
Didi experience improves my wellbeing (**DVF2**)	3.63	0.868		0.761	
Didi's personalized service enhances my daily activities (**DVF3**)	3.70	0.888		0.831	
Didi makes me more efficient in discharging my daily responsibilities					

(**DVF4**)					
Didi provides an affordable service (**DVF5**)					
Behavioural Intention			**0.903**		(Chen & Myagmarsuren, 2011; Makarand et al., 2017; Myung et al., 2018; Parasuraman, 2002; Hsu, Chang, Chu, & Lee, 2014; Lee, Chan, Balaji, & Chong, 2018)
I always sound positive to others about Didi's services (**INT1**)	2.87	0.950		0.768	
I have made repeated recommendations to others to patronise Didi (**INT2**)	2.78	0.966		0.703	
I shall consistently persuade others to patronize Didi (**INT3**)					
Personally, I shall continuously patronize Didi service (**INT4**)	2.97	0.952		0.898	
	3.70	0.975		0.922	

Source: SPSS output from field data

Composite reliability (CR) was used as a measurement for convergent reliability to establish whether the unobserved factors were uniquely loaded or whether the items (subconstructs) really measured their respective constructs. Our preliminary analysis indicates that (Table 3, 4, and 5) all the subconstructs were perfectly loaded, and secondly, each of the loadings fell within the recommended threshold of > 0.7 (Haertel, 2006; Iacobucci & Duchachek, 2003; Kline, 2016). Furthermore, as an indication of sample adequacy and an affirmation of association among the observed constructs, our field data produced a KMO of 0.8883 (which is above the recommended threshold of >0.5) (Nunnally & Bernstein, 1994).

Table 4: Constructs' correlation matrix

Factors	1	2	3	4
RES	**1.000**			
EXC	0.249	**1.000**		
DVF	0.339	0.496	**1.000**	
INT	0.251	0.461	0.269	**1.000**

Source: SPSS output from field data

Table 5: Maximum likelihood covariance matrix structure of constructs

Factors:	1	2	3	4
RES	1.468	1.191	2.296	0.980
EXC	1.191	1.535	1.364	1.149
DVF	2.296	1.364	3.212	1.627
INT	0.980	1.149	1.627	1.667

Source: SPSS output from field data

The prior analysis was intended to achieve the psychometric properties of our four-construct model. Against this backdrop, we went ahead to examining the structure of our model – purposely to test the six hypotheses of the study. More specifically, the direction (and the magnitude) of the regression weight, i.e. the βS (estimates from AMOS) were used in the structural model analysis (Table 6).

Table 6: Regression path and estimates

Hypotheses	Regression paths	Standard Error	CR	Estimates β_S	p-value	Remarks
H_1	EXC→DVF	0.042	3.914	0.253	***	Accepted
H_2	RES→EXC	0.041	5.004	0.341	***	Accepted
H_3	RES→DVF	0.027	3.764	0.254	***	Accepted
H_4	EXC→INT	0.046	6.841	0.505	***	Accepted
H_5	RES→INT	0.031	6.300	0.470	***	Accepted
H_6	DVF→INT	0.026	4.050	0.280	***	Accepted

Note: *** $p < 0.001$. **Source:** AMOS Graphic output from field data

We found support for all the six hypotheses due to the level of the significant positive association demonstrated among the construct (Table 6). In particular, there was a direct relationship between experiential consumption and distinct value formulation; resource and experiential consumption; resource and distinct value formulation; experiential consumption and intention; resource and intention; distinct value formulation and intention as respectively indicated by the regression weights of $\beta = 0.253$ ($p < 0.001$); $\beta = 0.341$ ($p < 0.001$); $\beta = 0.254$ ($p < 0.001$); $\beta = 0.505$ ($p < 0.001$); $\beta = 0.470$ ($p < 0.001$); and $\beta = 0.280$ ($p < 0.001$).

Secondly, in response to RQ1, among the dimensions of experiential economy, we observed Escapism (EXC4; $\beta = 0.81$, $p < 0.001$) as the highest contributor of commuters' intention to participate in ridesharing, followed by Entertainment (EXC3; $\beta = 0.79$, $p < 0.001$), Education (EXC1; $\beta = 0.77$, $p < 0.001$) and lastly, Esthetics (EXC5; $\beta = 0.57$, $p < 0.001$) as demonstrated in Table 7.

Table 7: Regression path and estimates

Constructs	Subconstructs	Standardised Estimates β_S	p-value
Experiential Consumption	EXC1	0.77	***
	EXC2	0.76	***
	EXC3	0.79	***
	EXC4	0.81	***
	EXC5	0.57	***
Resource	RES1	0.83	***
	RES2	0.81	***
	RES3	0.90	***
	RES4	0.87	***
	RES5	0.88	***
Distinct Value Formulation	DVF1	0.87	***
	DVF2	0.84	***
	DVF3	0.88	***
	DVF4	0.83	***
	DVF5	0.82	***

Note: *** $p < 0.001$. **Source:** AMOS Graphic output from field data

Moreover, the model fit analyses (such as parsimonious model fit, incremental model fit and absolute fit indices) were conducted to evaluate the robustness of our model. Precisely, the mean square of error approximation (RMSEA), Tucker-Lewis index (TLI), standardized root mean square residual (SRMR), parsimony goodness-of-fit index (PGFI), incremental fit index (IFI), comparative fit index (CFI) and normed fit index (NFI) were calculated to establish the fact that our hypothesized model perfectly fit the sampled data (Bentler, 1994; Burne, 2004; Lee, 2007; Steiger, 1990; Thompson, 2004). From the foregoing, we found that all the aforesaid indices (RMSEA = 0.070; TLI = 0.940; SRMR = 0.031; PGFI = 0.682; IFI = 0.949; CFI = 0.949; NFI = 0.917 and x2/df = 2.467) were consistent with the recommended values in literature (Bentler, 1994; Bentler, 1992; Burne, 2004; Lee, 2007; Steiger, 1990; Thompson, 2004). Our empirical support for H_1, demonstrates that commuters are ever willing to co-create value with ridesharing service providers on the basis of their experience. In essence, ridesharing service providers' ability to offer authentic service to the commuting public will complement traveler's decision on service patronage. The reverse will result in value co-destruction. Our H_2, H_3, H_5, and H_6, reveal that a complementarity role of resource, experience, and distinct value formulation will ignite commuters' intention to patronize ridesharing. In particular, if both actors – commuters and ridesharing service providers are able to coordinate their operant resources (car quality and excellent road network) and operant resources (efficient road management system, drivers' dexterity in driving, hail-riding app, road signs, competencies in front-line services, and commuters' promptness to service and their skills/knowledge in hail-ride app) effectively, it will translate into distinct value formation, and subsequently, high intention to participate in ridesharing as a result of co-creation. This implies that the absence of the aforesaid condition will result on co-destruction.

4.2 *fsQCA Results*

A striking idiosyncrasy of complexity theory is the concept of Equifinality. Whereas multiple regression is bound for the twin outcome of Unifinality and net effects, complexity theory and fsQCA on the other hand, inherently, makes it possible for multiple solutions which maps onto an outcome (Ragin & Fiss, 2008; Woodside, 2015; Woodside et al., 2017; Wu et al., 2014). These solutions are basically configuration of conditions (recipes) that lead to the same outcome – a unique property that multiple regression lacks. Table 8, depicts combinations of causal recipes (i.e. complex solutions) that translate into commuters' high intention to participate in value co-creative activities in the ridesharing ecosystem. The results (Table 8) reveal that there are basically seven (7) solutions that are essential for ridesharing value co-creation. These solutions are: res*-exc*dvf; res*-exc*-dvf; -res*-exc*dvf; res*exc*-dvf; res*exc*dvf; -res*-exc*-dvf; -res*exc*-dvf. These solutions answer our RQ1. That is what are the configurations of resources, experiential consumption dimensions and distinct value formation that will lead to authentic experience and intentions to partake in ridesharing marketplace?

In particular, solution 1, combines resources (res), distinct value formation (dvf) and the absence of experiential consumption (-exc) to explain high intention to partake in ridesharing value co-creation. Solution 1, has a consistency of 0.96. It further shows a considerable amount of conditions with high intentions to partake in value co-creation. Its coverage = 0.98. Solution 2, demonstrates that to achieve high intention to partake in value co-creation, the presence of an effective combination of resources (operant and operand) and the absence of experiential consumption and distinct value formulation are required. Solution 2, has a consistency of 0.75, and a coverage of 0.97. Solution 3, shows that, high intentions for value co-creation can be achieved on the basis of the presence of distinct value formation and the absence of resources and experiential consumption. Solution 3 produced a consistency of 0.97, and a coverage of 0.93. According to solution 4, a combination of resources and experiential consumption and the absence of distinct value formation will translate into high intention to participate in value co-creation in the ridesharing industry. The pathway of solution 4, yielded a consistency of 0.97; and a coverage of 0.93.

Furthermore, solution 5, demonstrates that, a combination of resources, experiential consumption, and distinct value formation will result in high intention to participate in value co-creation. The consistency and coverage values of solution 5 are respectively given as 0.99, and 0.92. Again, solution 6, has it that high intention for value co-creation can be achieved in the absence of resources, experiential consumption, and distinct value formation.

The trajectory of solution 6 has a consistency of 0.79, and a coverage of 0.91. Lastly, solution 7, shows that the absence of resource and distinct value formation and the presence of experiential consumption will also have a unique trajectory of high intention to participate in value co-creation. The trajectory of solution 7, has a consistency of 0.99, and a coverage of 0.81 (Table 8).

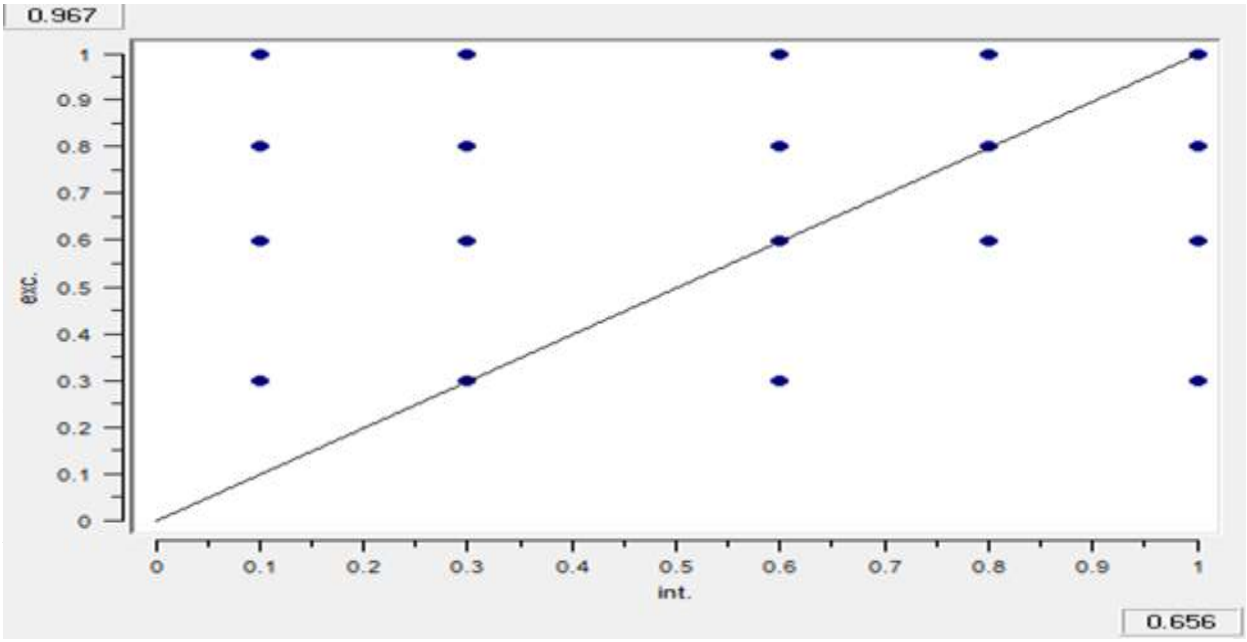

Table 8: Configuration of high intention to patronize ridesharing

Configurations	1	2	3	4	5	6	7
res	●	●	(x)	●	●	(x)	(x)
exc	(x)	(x)	(x)	●	●	(x)	●
dvf	●	(x)	●	(x)	●	(x)	(x)
Consistency	0.960123	0.748908	0.972584	0.972584	0.988160	0.789407	0.985665
Raw coverage	0.978927	0.972746	0.935484	0.933628	0.916090	0.914179	0.810365
Unique coverage	0.713096	0.771007	0.669383	0.644775	0.642067	0.683387	0.635852
Overall solution consistency	0.82135						
Overall solution coverage	0.90142						

Source: fsQCA/Tosmana output from field data. Note: Solutions 1 – 7, are specified as res*-exc*dvf; res*-exc*-dvf; -res*-exc*dvf; res*exc*-dvf; res*exc*dvf; -res*-exc*-dvf; -res*exc*-dvf, respectively. Again, (●) demonstrates the presence of a condition whereas (x) demonstrates the absence of a condition.

5. Conclusion

The sharing economy business brand is gaining an unflinching popularity and currency nowadays as new and upcoming businesses buy into the idea. The evasive spread of the sharing economy concepts, empirically, has led to the collapse of many traditional businesses (Kibum, Chulwoo, & Jeong-Dong, 2018; Lee et al., 2018; Plenter, 2017; Wiles & Alleah, 2017; Zhu et al., 2017). Comparatively, the sharing economy offers a great deal of flexibility in terms of ownership, acquisition, and retention of economic resources. Again, the sharing economy has proven beyond reasonable doubt that it has really created the avenue and space for efficient use of economic resources (Boateng et al., 2019; Makarand et al., 2017; Plewnia & Guenther, 2018). Wastage is curtailed as underutilized resources owners make them available through the online marketplaces for the utilization of those

who want them. (Abbie-Gayle & Neuhofer, 2017; Zhu et al., 2017).

As an alternative business offering, the sharing economy has attracted a behemoth of attention among researchers due to its immeasurable socio-economic contributions in the lives of its patrons. Even though, there is a lot of empirical studies on the sharing economy from academics and other sources, a great deal of attention has been put only on the tourism and the accommodation subsectors (Koohikamali et al., 2017; Makarand et al., 2017; Plenter, 2017; Tussyadiah, 2016; Volgger et al., 2018). The ridesharing sector has been neglected for no obvious reasons. Another area of great concern is the methodological commonality amongst the sharing economy papers. Evidentially, prior literature on the sharing economy aside been skewed toward the accommodation and the tourism subsectors also have bias for symmetric methodologies (Abbie-Gayle & Neuhofer, 2017; Hung et al., 2016; Zach, Lee, Chan, & Yee-Loong, A, 2018). As such the methodological challenges and limitations - net effect bias and strict sample size requirements have become very common amongst these papers. Thus, the results in prior studies cannot comprehensively mirror the reality on the ground. They only evaluate the net effects to examine the impart of independent factors on the outcome variable (i.e. the dependent variable). In reality, however, a configuration of these independent variables can result in the same outcome (Ragin & Sean, 2009; Thiem, 2016; Woodside, 2013a; Woodside et al., 2017).

The present study addresses the aforesaid literature gap by examining how economic value is co-created through authentic experience within the ridesharing sector of the sharing economy. Also, we have addressed a methodological knowledge gap by proffering an alternative methodology (fsQCA) in research direction pertaining to sharing economy. To the best of our knowledge, this study becomes the first endeavor to apply asymmetric methodology, economic resources, distinct value formation and experiential consumption to understand how economic value is co-created among the economic agents of the ridesharing industry.

In this study, firstly, we empirically examined the causal relationship among resources (both operant and operand), experiential consumption and distinct value formation and their overall impact on decision-making. Consistent with prior studies, we found a positive association between experiential consumption and distinct value formation (Abbie-Gayle & Neuhofer, 2017; Makarand et al., 2017); resources and experiential consumption (Makarand et al., 2017; Volgger et al., 2018); resources and distinct value formation (Abbie-Gayle & Neuhofer, 2017; Makarand et al., 2017). Furthermore, our results confirm the overarching contribution of Escapism, Education, and Entertainment in commuters decision-making. (Abbie-Gayle & Neuhofer, 2017; Makarand et al., 2017; Myung et al., 2018; Pine & Gilmore, 1999; Vargo & Lusch, 2016).

Secondly, in the context of complexity theory and fsQCA, we analysed the set of different configurations that result in high intention to participate in value co-creation with respect to ridesharing in line with (Ragin & Fiss, 2008; Ragin et al., 2003; Thiem et al., 2016; Wu et al., 2014). More specifically, seven solutions within the tenets of fsQCA and complexity theory were identified. Tenet 1, espoused that simple causal conditions, although, may be necessary, does not present sufficient condition for the prediction of high/low cases of the dependent (outcome) variable (Wu et al., 2014). Our results confirm the position in prior studies that there is no single causal condition with sufficient evidence to predict high/low scores for intention to partake in ridesharing value co-creative activities (Table 8) (Wu et al., 2014). Tenet 2, stipulates that to achieve consistency in high level of outcome, there should be a configuration of simple conditions (Wu et al., 2014). Our finding supported Tenet 2, as well. Specifically, each of the seven (7) solutions shows that the prediction of high intention to participate in ridesharing value co-creation calls for the need to have a configuration of simple solutions (Table 8) (Wu et al., 2014).

Tenet 3, of complexity theory and fsQCA addresses the concept of Equifinality. Unlike traditional statistical methods, complexity theory and fsQCA advance that multiple pathways always lead to the same outcome (Ragin & Fiss, 2008; Wu et al., 2014). Table 8, confirm the assertion of Tenet 3. That is there are multiple streams of solutions that lead to high intention to participate in ridesharing value co-creation.Tenet 4, focuses on the principle of causal asymmetry. That is recipes of negation are unique configurations. They do not denote the reversal of the recipes for positive causality (Wu et al., 2014). As a testament of Tenet 4, (Table 8), our results show the unique attribute of all the recipes for causal negativity (and positivity). Tenet 5, stipulates that the contribution of a specific causal condition in a configural recipes is not constant. Specifically, it may be positive or otherwise, depending on the presence (or absence) of other causal conditions in the recipe of configurations (Ragin & Fiss, 2008; Thiem et al., 2016; Wu et al., 2014).

As empirical evidence in prior studies (Wu et al., 2014), in each case of our seven (7) solutions of the study, there was a directional difference (positive or negative). These directional differences were specific to the solution in question (Table 8). Our finding, therefore, provided support for Tenet 5. Lastly, according to Tenet 6, some

recipes are indispensable for high scores in the outcome variable (Y) but not in all cases of configural recipes (Wu et al., 2014). In other words, the coverage metric is never in excess of one (1), for every recipe of configurations. Consistent with prior studies, the XY plot (Fig.3) of our study provided support for Tenet 6 (Wu, et al, 2014).

Essentially, the study was carried out to understand the behavioral intentions of commuters in relations to their preparedness to participate in value co-creative venture in the arena of the ridesharing ecosystem. In particular, it contributes theoretically to knowledge through the application of asymmetric methodology in the ambit of value co-creation and ridesharing. Managerially, given the level of competition among transport service providers, the present study will equip decision-makers on how to combine their scarce resource to redesigned service offerings that will attract the commuting public. The different set of recipes of configurations mean that commuters behave differently to demonstrate their behavioral intentions. The understanding of these schemes of behaviors will equip managers with the needed knowledge to design tailor-made services that will meet the expectation of commuting public.

5.1 *Limitation and direction for future studies*

This empirical investigation is not without limitations. First, the study was confined to the international community of China – international students in particular. As such, generalization must be exercised with caution. Against this backdrop, further research is proposed in a different group or jurisdiction to confirm our findings. Second, the study utilized the three constructs – resources, experiential consumption and distinct value formation to formulate the theoretical underpinnings of commuters' intentions for ridesharing value co-creation. We therefore, recommend that future research should consider other constructs that may also give support for our findings.

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