Consumer engagement in the sharing economy: a perspective in the crowdsourced delivery services

Envolvimento dos consumidores na economia da partilha: uma perspectiva nos serviços de fornecimento de serviços de crowdsourcing

DOI: 10.55905/ijsmtv9n6-022

Recebimento dos originais: 02/10/2023
Aceitação para publicação: 07/11/2023

Camila Rocha Tafarello Securato
Doctor in Administration
Institution: Saint Paul Escola de Negócios
Address: R. Pamplona, 1616, Jardim Paulista, São Paulo - SP, CEP: 01405-002
E-mail: camila.securato@saintpaul.com.br
Orcid: https://orcid.org/0000-0003-3550-9352

Claudio Felisoni de Angelo
Doctor of Business Administration
Institution: Faculdade de Economia, Administração, Contabilidade e Atuária da Universidade de São Paulo (FEA – USP)
Address: Av. Prof. Luciano Gualberto, 908, Butantã, São Paulo - SP, CEP: 05508-010
E-mail: cfa@usp.br

Victor Ragazzi Isaac
Doctor of Business Administration
Institution: Centro Universitário Senac - Campos do Jordão
Address: Av. Frei Orestes Girardi, 3549, Capivari, Campos do Jordão - SP, CEP: 12460-000
E-mail: victor.ragazzi@gmail.com
Orcid: https://orcid.org/0000-0001-6838-6956

ABSTRACT
The sharing economy (SE) is becoming increasingly popular, yet it is not fully theorized. SE is defined as an activity whereby a platform provider links a consumer that aims to temporarily utilize assets with a peer service provider who grants access to these assets and with this delivers the core service, replacing ownership, the SE is projected to grow from $15 billion in 2014 to $335 billion in 2025. This article examines consumer engagement in the context of service sharing, more specifically, crowdsourced delivery platforms via an interpretive study of the leading Brazilians platforms, iFood, Rappi, and other shared services. This articles’ primary objective is to demonstrate that consumer engagement in crowdsourced delivery services may vary along with the consumer demographics, convenience, brand value, engagement with special offers, and consumer engagement towards other SE services. We propose a framework for the crowdsourced
delivery service ecosystem and a conceptual framework for consumer engagement in the crowdsourced delivery service. The statistical results and discussions show that brand value, consumer engagement in other SE services, delivery security, and product quality as the most significant variables with positive and negative impacts on consumer engagement in the Crowdsourced Delivery Services (CDS). The paper also investigates the COVID-19 pandemic impact on consumer engagement for crowdsourced delivery service firms in Brazil.

**Keywords:** sharing economy, crowdsourced delivery service, mobile food apps, COVID-19, consumer engagement.

**RESUMO**

A economia de compartilhamento (SE) está se tornando cada vez mais popular, mas não é totalmente teorizada. SE é definida como uma atividade pela qual um fornecedor de plataforma liga um consumidor que visa utilizar temporariamente ativos com um prestador de serviços de par que concede acesso a esses ativos e com isso fornece o serviço principal, substituindo a propriedade, o SE é projetado para crescer de US $ 15 bilhões em 2014 para US $ 335 bilhões em 2025. Este artigo examina o engajamento do consumidor no contexto do compartilhamento de serviços, mais especificamente, plataformas de entrega via crowdsourcing (uso de conhecimentos coletivos para criar soluções) por meio de um estudo interpretativo das principais plataformas brasileiras, iFood, Rappi e outros serviços compartilhados. O principal objetivo deste artigo é demonstrar que o engajamento do consumidor em serviços de entrega de crowdsourcing pode variar junto com a demografia do consumidor, conveniência, valor da marca, engajamento com ofertas especiais e engajamento do consumidor em relação a outros serviços de SE. Propomos um quadro para o ecossistema de serviços de fornecimento colaborativo e um quadro conceptual para o envolvimento dos consumidores no serviço de fornecimento colaborativo. Os resultados estatísticos e as discussões mostram que o valor da marca, o envolvimento do consumidor em outros serviços de SE, a segurança de entrega e a qualidade do produto são as variáveis mais significativas com impactos positivos e negativos no envolvimento do consumidor nos serviços de entrega colaborativa (CDS). O artigo também investiga o impacto da pandemia da Covid-19 no engajamento do consumidor para empresas de serviços de entrega de crowdsourcing no Brasil.

**Palavras-chave:** economia compartilhada, serviço de entrega via crowdsourcing, aplicativos móveis de alimentação, Covid-19, envolvimento do consumidor.

**1 INTRODUCTION**

While the SE phenomenon has been noted in the literature, a better understanding of consumer engagement under sharing conditions is an area of few studies. In this thesis, we advance our understanding of consumer engagement by researching the service
innovation in the SE, focusing on the Crowdsourced Delivery Services (CDS) market, also defined in the literature as On-demand Delivery Services.

The SE is becoming increasingly popular, yet it is not fully theorized. Defined as an activity whereby a platform provider links a consumer that aims to temporarily utilize assets with a peer service provider who grants access to these assets and with this delivers the core service, replacing ownership (BENOIT et al., 2017), the SE is projected to grow from $15 billion in 2014 to $335 billion in 2025 (PRICE WATER HOUSE COOPERS, 2015).

The SE is rapidly surfacing disruptive innovations in many industries, such as hospitality, transportation, logistics, retail, and more. Airbnb's effect can be more disruptive in the hospitality industry than it might appear at first, with the price of rentals on the platform influencing the demand for hotel rooms being disruptive (BLAL; SINGAL; TEMPLIN, 2018). In the transportation industry, ridesharing has become a disruptive innovation in the taxi industry (COHEN; MUÑOZ, 2016). It is now a disruption in the automotive industry, with Uber valued more than the biggest and most traditional car maker companies, such as GM, Ford, and Toyota. In the logistics industry, the disruption comes from a group of initiatives that refer to the sharing concept in the context of crowdsourced delivery, targeting the carriers and couriers that connect shops and consumers. In retail, the emerging trend of renting instead of buying clothes brings an innovative business model capable of satisfying consumer needs and reducing the environmental burden of the fashion industry at the same time (BECKER-LEIFHOLD, 2018).

On other side, a consumer-centric world where the speed of disruptive innovations changes whole industry landscapes in less than a decade, a deep understanding of consumer behavior and engagement is critical for the future of the organizations and the SE. It is possible to be small and leverage technology to change the globalized world significantly. New firms surpass well-established firms in technology, client satisfaction, and intrinsic value as the world rapidly transforms. Young companies have a disproportionally significant effect on the economy due to i) the large number of jobs it creates, ii) the innovation not-established companies promote, and iii) the rapid economic growth they provide (DAMODARAN, 2013).
The SE is a trending topic in academic research and a relatively new topic in academic literature. While the concept of sharing has been discussed for a long time, only recent research dated in the 2010s has brought the SE as a principal research question. The research on the SE has been predominantly concentrated in the mobility and hospitality sectors, but new sectors, for example CDS, are gaining momentum. In this way, consumer engagement in the SE and in CDS is a significant research question to be answered.

Therefore, we have a lack of studies that seek to show which factors impact the CDS. In that regard, we seek to provide evidence that answer the following research questions: Which factors have a positive or negative impact on consumer engagement in CDS?; and: “How COVID-19 has impacted consumer engagement in CDS?

In this way, our objective is to demonstrate that consumer engagement in crowdsourced delivery services varies along with the consumer demographics, convenience, brand value, engagement with special offers, and consumer engagement towards other SE services. We propose a conceptual framework for consumer engagement in the crowdsourced delivery service. Moreover, the secondary objective is to scrutinize the determinants underlying consumer engagement. To achieve the objectives, we review the literature on the SE with a particular interest in consumer engagement, literature on SE and crowdsourced delivery services, and the literature on consumer engagement.

Lastly, we contributes to research on service innovation and the theoretical understanding of SE, crowdsourcing delivery services, and consumer engagement by proving a conceptual framework for consumer engagement in CDS. Based on our overview of consumer engagement motives, we present a validated, survey-based measurement model that focuses on how attributes such as demographics, platform experience, and frequency of use impact consumer engagement with SE platforms, more specifically CDS platforms. Critical theoretical contributions and practical implications for the SE platforms and providers are discussed.
1.1 SHARED ECONOMY AND CROWDSOURCED DELIVERY SERVICES

Recently we have seen studies that address the SE and its importance in the current market context (e.g. HOSSAIN, 2020; RITTER; SCHANZ, 2019). Netter et al. (2019) understand SE as an umbrella construct for a variety of for-profit and non-profit, business-to-consumer, and peer-to-peer setups that enable the compartmentalization of ownership and the users of resources, translated into goods, skills, and services. Recently, CDS has emerged as a resource increasingly used in the market. In this sense, we define CDS as a fulfillment method that leverages networks of professional and non-professional delivery workers (couriers) to deliver goods to consumers moderated by a platform. While the most commonly shared services are food and grocery delivery, consumer expectations for faster and more flexible delivery widen the scope of such deliveries to practically anything. Today, consumers can order food, groceries, gifts, clothes, furniture, medications, and even money through a CDS platform.

In this context, collaborative use of resources has been facilitated by the widespread availability of Internet services (BELK, 2014) and the increasing popularity of mobile apps that allow faster information exchange between transaction partners (ZHAO; BACAO, 2020a). The Internet and mobile technology advances imply that sharing moves from the traditional private sphere and personal networks to online exchanges among strangers. The new technologies allow sharing models and businesses to experiment with new organizational forms, adding further variety to the already heterogeneous sharing models. (NETTER; PEDERSEN; LÜDEKE-FREUND, 2019)

In other side, all the definitions present Consumer Engagement (CE) as a multidimensional concept related to the behavior of the consumers toward the organization. Today, the three-component perspective of psychological CE (i.e., cognitive, emotional, and intentional [often termed behavioral] dimensions) is widely cited in marketing literature. However, the specific expressions of these generic dimensions may vary. (BRODIE et al., 2013) propose a three-dimensional view, including (a) cognitive processing: a consumer’s level of brand-related thought, processing, and elaboration in a particular consumer–brand interaction representing the cognitive CE dimension, (b) affection: a consumer’s degree of positive brand-related affection in a particular consumer–brand interaction mirroring the emotional side of CE,
and (c) activation: a consumer’s desired level of energy, effort, and time spent on a brand representing the intentional CE dimension. Figure 8 presents the proposed consumer engagement dimensions and sub-dimensions by (DESSART; VELOUTSOU; MORGAN-THOMAS, 2016).

Moreover, Weitzl and Einwiller (2018) define psychological and behavioral CE as the two main components of the complex CE construct, with three dimensions: (a) brand-based, (b) consumer-based, and (c) situational and contextual factors. Brand-based is the relationship between the consumer and the brand itself (high or low-intensity levels of these variables drive positive/negative CE. Attitudinal variables are customer satisfaction, brand commitment, trust, brand attachment, brand identification, brand reputation, and equity and brand performance perceptions reflecting consumer loyalty and experience.

In hospitality, Airbnb consumers are ready to pay a premium price based on individual host listings consistently as essential attributes. The top five, besides the number of people that accommodates and bathrooms: review per month, review score ratings, elevator, wifi, and pool. The study also reveals that listings and guests’ criteria as variable importance for selecting shared accommodation are different from traditional hotels and other cities. (CHATTOPADHYAY; MITRA, 2019).

Research findings suggest that travelers do not use Airbnb because of distrust in the providers, platform, and other users and perceived risk and unfamiliarity. Loss of service quality, lack of local experience, legal and regulatory issues, and disinterest prevented consumers from booking Airbnb accommodations. Significant differences based on age confirmed that young travelers are more confident in using SE accommodation platforms (DEL CHIAPPA; PUNG; ATZENI; SINI, 2021).

Overall, positive perceptions of the SE dominated discussions in the research by (CHERRY; PIDGEON, 2018) with participants independently highlighting three-fold benefits of sharing: to reduce carbon footprints and resource use; to enable increased and equitable access to previously unaffordable goods and services; and to strengthen communities and reduce social isolation. However, many deep-seated concerns and issues were also raised, highlighting practical, economic, and social conditions that would need to be met if the SE is viewed as part of an acceptable, feasible, and desirable future.
Satisfaction was the most significant factor and perceived task-technology fit, trust, performance expectancy, social influence, and confirmation have direct or indirect positive impacts on users’ continuance usage intention of Food delivery apps during the COVID-19 pandemic in China. (ZHAO; BACAO, 2020B)

The role of sustainability in the SE is becoming the focus of several publications, and the findings still differ a lot from one another. The consumer preferences, engagement, and decisions to participate in the SE were investigated. Data from interviews with carsharing users indicate that carsharing’s sustainable impact is perceived as a positive side effect than a central argument for sharing. Participants emphasize carsharing services’ flexibility, functionality, and easiness (HARTL; BARBARA; SABITZER; HOFMANN; PENZ, 2018). On the other hand, Consumer's environmental consciousness also plays an intricate role in the SE as some consumers are likely to choose a product/service despite emotional costs, such as a perceived stockout risk, to lower the impact on the environment (AKBAR; PAYAM; HOFFMANN, 2018).

2 HYPOTHESES DEVELOPMENT

Which factors have a positive or negative impact on consumer engagement in CDS?

2.1 DEMOGRAPHICS

Not all customers may exhibit similar associations. Therefore, accounting for customer heterogeneity is essential if individual-level data is available. (PANSARI; KUMAR, 2017). UBS research indicates that “time-starved millennials” are three times more likely to order in than their parents in the SE. Smaller families consume more than larger families that prefer to cook at home. The variable factor demographics include the generation and marital status as variables related to the SE and the CDS more specifically.

The rise of the millennials, people born between the early 1980s and 2000s (Godelnik, 2017), as influential consumers are well documented in the literature. As the first generation born-digital native, today, the millennials are the primary persona when describing the SE, supported mainly by the shift from ownership to access in the car and home industries. For example, a significant difference in how customers from different
age groups perceive the price of fast foods was established (HILMI; MELKIS; MUSTAPHA, 2014). Millennials, mostly singles and working adults, to know what they want. They are less sensitive to prices, and customers in the generation “X” age group, people born between 1965 and 1980 (GODELNIK, 2017) prefer to eat meals that are easy to consume, fast, hassle-free, convenient, cheap, and affordable. Generation X believes the fast-food price is more affordable when compared to cooking meals at home.

There is also a significant difference in how single and married customers perceived service quality, indicating that a product positioning towards a single consumer may require different attributes than those married or with family. (HILMI et al., 2014). We then analyze the influence of demographics on the behavior in CDS. We hence hypothesize:

**H1. Consumer engagement in CDS differs based on the demographics of its consumers**

### 2.2 CONSUMER EXPERIENCE

Customer service can make or break an organization. When consumers reach for customer service, before or after they buy and use a product or service, they are generally looking to solve a problem or answer any doubts. Offering high quality, accessible, and enjoyable experience is part of the customer service area. Admired companies such as Amazon are customer-centric culture are leaders in customer service rankings. Human support in customer service, call centers, and delivery is critical for ensuring a high quality of customer service (ALALWAN, 2020).

Our following hypothesis thus states:

**H2. Consumer Experience has a positive impact on consumer engagement in CDS**

### 2.3 BRAND VALUE

Brand-based consider the relationship between the consumer and the brand itself. High or low-intensity levels of these variables drive CE (positive/negative). In contrast, intermediate levels have no influence) are attitudinal variables reflecting consumer loyalty and experience (WEITZL; EINWILLER, 2018). By using mobile apps, consumers can access order food, groceries, gifts, medications from a wide range of
suppliers at times and locations convenient to the users with enhanced and accurate information about the supplier, delivery time, other consumers ratings, order history, and more. There is evidence that customer conversion relates to mobile apps' features: visual design, information design, navigational design, and collaboration design. (KAPOOR; VIJ, 2018)

One of the most adopted loyalty measures is the Net Promoter Score (NPS)—a metric derived from word-of-mouth likelihood scores by subtracting the proportion with low scores (0–6) from the proportion with high scores (9–10). One advantage of NPS is reducing long and complex surveys to a single concise would-recommend question, decreasing respondent fatigue and the resources spent on research (MECREDY; WRIGHT; FEETHAM, 2018). Questions remain about the accuracy of NPS in measuring loyalty and predicting growth rates. Nevertheless, the metric is widely used in the business environment, so we included it in our study. The higher the brand equity/value of the firm, the higher will be the indirect contribution (referrals, feedback to the company, and discussion on social media) of the consumers (KUMAR et al., 2010). We hence propose that:

H3. Brand value has a positive impact on consumer engagement in CDS

2.4 SPECIAL OFFERS INFLUENCE: DISCOUNTS AND CASHBACKS

The crowdsourced delivery platforms' common practice is the offer of discount coupons and cash-back (offer to return to the digital app wallet a percentage of the amount spent in an order). Such offers aim to make the consumers order more frequently with higher ticket orders through the platform. Both Rappi and iFood have a very aggressive engagement strategy using mainly in-app notifications and SMS messages to deliver such offers almost daily and, in many cases, more than once a day. The research introduces that coupons, discounts, loyalty programs, referral programs, and advertisements are practical customer engagement mechanisms in enhancing the intention to use food delivery apps among consumers (RAY; DHIR; BALA; KAUR, 2019). Single-person household consumers were more concerned with price, product assortment, and relatively high value on discounts than the multi-person household shoppers. (CHO; BONN; LI, 2019). We capture this in the motive of offers in:
H4a. Rappi’s special offers have a positive impact on consumer engagement in CDS

H4b. iFood's special offers have a positive impact on consumer engagement in CDS

2.5 CONSUMER ENGAGEMENT WITH OTHER SE PLATFORMS

The SE phenomenon became globally known and spread by the rise of the two most prominent players: Uber, in the mobility industry, and Airbnb, in the hospitality industry. Both were key to molding the SE as it is and to promoting the sharing lifestyle. While firms such as Uber and Airbnb have received much attention in academic literature, social media, and traditional media, the sharing phenomenon seems to have expanded and now encompasses an increasing array of sectors in society (GEISSINGER et al., 2018). It is fair to question whether consumers that are already engaged in the traditional players of the SE are more involved with the crowdsourced delivery services, we thus hypothesize that:

H5. Increased consumer engagement with other SE platforms has a positive impact on consumer engagement in CDS

2.6 LACK OF SECURITY OR QUALITY

Regarding urban equity, ride-sourcing further amplifies the digital divide and raises concerns over the issues of discrimination and data privacy and security (JIN; KONG; WU; SUI, 2018). Among the critical impediments to purchasing in SE platforms, the two most substantial offenders were data breach and damaged goods at the delivery, followed by lousy conduct from intermediate (driver or delivery person). We thus hypothesize that:

H6. Lack of security or quality has a negative impact on consumer engagement in CDS

2.7 HOUSEHOLD SIZE

The household size helps organizations position their product offers for several services and product categories better. In the SE, the focus is generally on the individual
using the service rather than the household per se. For example, in a household of 4 people, there may be four individuals Uber user accounts. However, in CDS of meals or groceries, the focus shifts from the individual to the whole household. One or two people in the home are responsible for planning and ordering the meals and ordering the groceries. Overall, online grocery shopping is still a woman’s world, with the female adult at least to some extent involved in this task in 89.8% of the couples and 66.3% of the female is in sole charge of the ordering. However, children’s presence does not seem to impact whom couples perceive to be the main responsible (VAN DROOGENBROECK; VAN HOVE, 2020). The frequency, preferences, and habits of bigger households tend to variate, as people who live alone tend to cook less and order more. Single-person homes prioritized quality attributes for various food choices, price, and trustworthiness. Comparatively, multi-person houses placed most importance upon ‘design,’ ‘convenience,’ and ‘trustworthiness’ (CHO et al., 2019). Although single-person households were found to do less grocery shopping, they are identified as a heavier user of food delivery services to order food (LEHMANN, 2016). We hence propose that:

H7. Consumer engagement in CDS differs based on the household size

2.8 CONVENIENCE

Convenience is defined by (PANSARI; KUMAR, 2017) as the time and effort consumers invest in purchasing a product, influencing customer evaluation and purchase behavior (SEIDERS; VOSS; GREWAL; GODFREY, 2005). Convenience is associated with reduced time or effort in purchases and could be presented in the form of extended operating hours or credit availability and location. Convenience has a positive effect on riders’ usage of Uber. Uber can be more convenient as compared to the traditional taxi systems. Customers can order a ride at their convenience, and they do not necessarily have to stand at the roadside to board the car. It also offers interactive communication and more flexibility. (BOATENG; KOSIBA; OKOE, 2019). Online shopping saves consumers time, avoids queuing, and requires less effort. Found convenience is one of the most critical factors that drive people to partake in the SE. We hence propose that:

H8. Convenience has a positive impact on consumer engagement in CDS
2.9 LEVEL OF INVOLVEMENT

Kumar and Pansari (2015) points that low involvement products tend to be products bought more often, as a routinized response behavior or as a habit, and a higher frequency of purchases and accumulated experience influences positively customer. Additionally, low involvement products are repeatedly purchased, like consumer-packaged goods. Most CDS platforms started their business with food delivery, bringing value to consumers looking for restaurant variety, options, centralized information, and ease of order. In the last couple of years, CDS apps began offering an increased variety of products and services to maintain their competitiveness and to increase the frequency of purchases. Now consumers can have the delivery of groceries, drugstores, money, and any whim they may have. They also have access to delivery services, membership programs, and digital wallets. Therefore, we propose that:

**H9. Level of involvement has a positive impact on consumer engagement in CDS**

2.10 COVID-19 IMPACT

Crowdsourced delivery services platforms like DoorDash, Uber Eats, and Grubhub has experienced dramatic sales growth during the lockdown. In some areas, almost 50% of restaurants on DoorDash were added recently after the outbreak (ZHAO; BACAO, 2020b). The pandemic has impacted the crowdsourced delivery ecosystem, generating many opportunities and new challenges. Before quarantine, SE ethos, price-value, food quality, ease of use, and confirmation of beliefs significantly impacted satisfaction. In contrast, food quality, service speed, ease of use, and assurance of ideas during the quarantine were significant (BELARMINO; RAAB; TANG; HAN, 2021). In the fashion rental service form, attitudes towards the service depend on contamination concerns and the predicted adoption intentions. Contamination concerns moderate the relationships between values and attitudes and attitudes and intentions (BAEK; OH, 2021). The Covid-19 has affected all sectors, particularly the SE sector, whose service providers are among the most vulnerable. Customers have also lost some money and missed opportunities to travel, but their exposure is less than that of service providers (HOSSAIN, 2021)
On the other side of the SE sector negatively impacted by the Covid-19 pandemic, especially mobility and travel-related firms, the CDS sector was positively impacted. Between March and June 2020, iFood registered restaurants grew 32%, and breakfast orders grew around 125%. A survey by Mobills found that spending on significant delivery apps focused on food delivery (Rappi, iFood, and Uber Eats) increased 103% in the first half of 2020.

H10. The COVID-19 pandemic had a positive impact on consumer engagement in CDS

3 METHODOLOGY

To understand consumer engagement in the SE and the CDS, we run a survey with consumers and potential consumers of shared services. The survey focused on the respondents’ experiences with the most know-shared services (Uber, 99 Taxi) and a more in-depth investigation of the CDS players. In this stage, we chose iFood and Rappi because of their prominence in this category in Brazil. After the primary survey, we run two follow-up surveys to learn how the COVID-19 pandemic has impacted the consumer experience and engagement in the SE.

The surveys were applied in the following periods:

- First Survey: from February 16th, 2020 to March 1st, 2020
- COVID-19 impact surveys:
  - from April 1st, 2020 to April 10th, 2020
  - follow-up: from September 1st, 2020 to September 21st, 2020

3.1 FIRST SURVEY

The first survey consisted of 29 questions divided into five sections, organized as table 6 shows. Respondents took, on average, five minutes and a half to be completed.

We reached over 1,000 respondents of all sorts of consumers and non-consumers in Brazil, mainly from the city of São Paulo, where the SE services are broadly available through the author’s network and social media, primarily WhatsApp, LinkedIn, and Facebook. We collected 1.058 responses, with an 84% completion rate from February 16th, 2020, until March 1st, 2020.
We used the SurveyMonkey electronic form to administer the survey, and we communicated by WhatsApp messages, social media, and email. Automatic emails through the university (FEA-USP) network resulted in 55 responses. LinkedIn resulted in 168 answers and the posts on Facebook 221 responses. Most of the responses were generated via a direct approach through WhatsApp, which resulted in 624 responses.

<table>
<thead>
<tr>
<th>Section</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing Economy apps &amp; Communication Preferences</td>
<td>What other services you are a user of, frequency of use, motivation for the benefit of shared services, reasons not to use, contact preferences from a list</td>
</tr>
<tr>
<td>Demographics</td>
<td>Demographics of the respondents: age, marital status, number of people living in the same house, State and Zip Code</td>
</tr>
<tr>
<td>iFood</td>
<td>Qualification of the use of iFood platform: client of iFood, engagement with iFood over the time, the influence of offer of a discount or cashback on the decision to place an order, ordering frequency, NPS for iFood, iFood App Rating, customer service quality, use of iFood Loop</td>
</tr>
<tr>
<td>Rappi</td>
<td>Qualification of the use of the Rappi platform: client of Rappi, engagement with Rappi over the time, the influence of offer of a discount or cashback on the decision to place an order, ordering frequency, average spending, type of order, NPS for Rappi, Rappi App Rating, customer service quality, use of Rappi Prime and Rappi Pay</td>
</tr>
<tr>
<td>Open-Ended</td>
<td>An open-ended field for any additional comment regarding the respondent experience with the SE platforms</td>
</tr>
</tbody>
</table>

Source: The author

3.2 DESCRIPTIVE DATA: FIRST SURVEY

The first surveyed 1,058 individuals about their experience and engagement with SE platforms. Out of the 1,058 responses we collected, this study excluded 194 incomplete or inconsistent answers. Our qualified sample, thus, totaled 864 individuals, of whom all live in Brazil.

We structured the survey into four parts: consumer demographics, consumer engagement with SE services, Rappi platform’s engagement and experience, and iFood platform’s engagement and experience.

We have selected Rappi and iFood as the surveyed companies in crowdsourced delivery services since they were the two most established and relevant players in Brazil at the time of the Survey.
3.2.1 Demographics

a) Age Range

We have divided the individuals into three major age groups according to their generation by the survey: under 36 years old were labeled as Millennials, from 36 to 59 years old Generation “X” and over 59 years old, Baby Boomers. Generation X represented 69% of the respondents, the Millennials 25%, while the Baby Boomers represented 6%, as detailed in figure 1.

Figure 1. Survey Demographics – Age Range

b) Marital Status

As demonstrated in Figure 2, 71% of the respondents were married, and 29% were not married at the survey time.

Figure 2. Survey Demographics – Marital Status

c) Household Size

We have divided the individuals into three household size groups, considering how many people live in the same household by the time of the survey: households with one person were labeled as Living alone, from 2 to 4 people, average household and over five people, large household. The Average household represented 77% of the
respondents, the Large household 13%, while the Living alone represented 10%, as detailed in Figure 3.

![Figure 3. Survey Demographics – How many people live in the same household](source)

3.2.2 Consumer Engagement

To measure consumer engagement with the CDS e SE platforms, we surveyed the frequency of purchases of the leading players that operate in Brazil by the time of the survey that was the on-demand delivery platforms: iFood, Rappi, Loggi, and Uber Eats, as well the leading mobility players at the time, 99 Taxi, Cabify, Uber, any kind of shared bike and scooters and lastly the hospitality player, Airbnb.

Individuals who never purchased or purchased only once the platform were labeled inactive; consumers who purchased/used eventually were labeled as actives, and those who use at least once a week were labeled lovers. Figure 4 demonstrates the engagement with the leading SE platforms surveyed.

Uber was the most frequently used platform, with 95% of the sample at least active, followed by 99 Taxi with 75% of at least active users and iFood with 72%. The least used platforms were Cabify with 77% of the inactive sample, followed by Shared bikes and scooters with 75%, and Loggi with 68% inactive.

![Figure 4. With which frequency do you purchase/use from the following services?](source)

d) Consumer drivers and impediments for participating in the SE
Among the main drivers that play a significant role surveyed, the two most relevant were convenience and time saving, followed by financial benefits, sustainability, and the desire to display a modern lifestyle, as per Figure 5.

Figure 5. Consumers factors for participating in the SE

![Figure 5. Consumers factors for participating in the SE](source)

Among the critical impediments to purchasing in SE platforms, the two most substantial offenders were data breach and damaged goods at the delivery, followed by lousy conduct from intermediate (driver or delivery person). The least offender was no longer having discounts or cash backs as per Figure 6.

Figure 6. Key impediments to purchasing in SE platforms

![Figure 6. Key impediments to purchasing in SE platforms](source)

e) Multichannel: Consumer Communication Preferences

Among five communications options, our findings suggest that WhatsApp message and Platform App Notifications are the preferred communications means and telephone calls the least. On the other hand, 21% of the respondents would rather not receive any communication, as Figure 7 demonstrates.

![Figure 7. Multichannel: Consumer Communication Preferences](source)
3.2.3 Rappi platform’s engagement and experience

f) Rappi’s Engagement

As per Figure 16, 46% of the respondents were active consumers of Rappi, and 54% inactive at the first survey run. 18% of the respondents were categorized as lovers, consumers that make purchases at Rappi at least once a week. Over time, 28% of the users increased their use of Rappi, while 31% diminished as per Figure 8 and Figure 9.

**Figure 8. Rappi engagement: purchases frequency**

Source: The author

**Figure 9. Engagement since the first purchase**

Source: The Autor

g) Rappi’s consumers' engagement with special offers: discounts and cashback

When asked about engagement with special offers: discounts or cashback, 49% of Rappi’s users were influenced by a discount or cashback offer, and 42% are influenced...
to use the App at least once a month with such kind of offer, demonstrated in Figures 10 and 11.

Figure 10. How much do discounts or cashback influence your decision to use the Rappi app?

Figure 11. How frequently your use of the Rappi app is driven by discounts or cashback?

h) Rappi’s Consumer Loyalty

One of the most commonly adopted customer loyalty measures is the Net Promoter Score (NPS), a metric derived from word-of-mouth likelihood scores. Reichheld (2003) developed NPS in response to concerns that existing satisfaction and retention measures were poor predictors of company revenue growth. Numerous companies using the NPS metric have become a standard tool for comparisons across organizations and sectors. We have used it as one of the metrics for consumer engagement and experience in this article.

Rappi’s NPS was -1 at the first survey run, which indicates that Rappi has more detractors than promoters, as demonstrated in Figure 12.
i) Rappi’s Consumer Experience

We have also surveyed Rappi’s consumers' experience with Rappi’s mobile app, the central platform for the use of Rappi services, and satisfaction regarding its customer service. 89% of the mobile app users were labeled as favorable reviews as detailed in Figure 13, and 82% of the users were neutral to positive when engaging with its customer services, as shown in Figure 14.

![Figure 13. Rappi’s Mobile App rating](Source: The Autor)

![Figure 14. Rappi’s Customer Service](Source: The Autor)

Rappi offers a yearly or monthly membership known as ‘Rappi Prime’ across Latin America, which guarantees its members free deliveries on all orders placed through the platform, access to exclusive offers, premium customer support 24/7, and R$ 25,00 discounts every month. As of September 2020, the service in São Paulo had a monthly cost of R$ 29,90 or a yearly fee of R$ 299,00. Prime users place 3x more orders per month than other users, and their average spend per order is 10% higher. (Amplitude, 2020). As the first survey run, 23% of the respondents were a member of Rappi Prime, as pictured in Figure 15.
Rappi is a marketplace that connects users who want to purchase prepared foods, groceries, clothes, and virtually anything with independent contractors who can fulfill those needs. As per Figure 16, the on-demand delivery of prepared foods (restaurants) and supermarkets/Groceries are the most consumed services in the platform, while cash and beverage delivery are the least. Individuals who never used or rarely purchased in the platform were labeled as inactive, consumers who use monthly were labeled as actives, and those who use more than once a month were labeled lovers. Figure 17 demonstrates the engagement with the categories surveyed by the first run.

3.2.4 iFood platform’s engagement and experience

e) iFood’s Usage

As per Figure 25, 72% of the respondents were active consumers of iFood, and 28% were inactive. 24% of the respondents were categorized as lovers, consumers that use iFood at least once a week. Since its first use, 26% of iFood’s users have increased their use, and 31% have diminished as per Figure 18.
k) iFood’s consumers' engagement with special offers: discounts and cashback

When asked about its engagement with discount or cashback offers, 53% of iFood users were influenced. 46% were influenced to use the app at least once a month with such an offer, as denoted in Figures 19 and 20.
1) iFood’s Consumer Loyalty

iFood’s NPS was five, which indicates that iFood has more promoters than detractors, as demonstrated in Figure 21.

![Figure 21. NPS iFood](image)

m) iFood’s Consumer Experience

We have surveyed iFood consumers' experience with iFood’s mobile app, the central platform for ordering with iFood, and its customer service satisfaction. 93% of the mobile app users were labeled as favorable reviews as detailed in Figure 22, and 72% of the users were neutral to positive when engaging with its customer services, as shown in Figure 23.

![Figure 22. iFood’s Mobile App rating](image)

![Figure 23. iFood’s Customer Service](image)

In August 2020, iFood launched the iFood Loop Club membership plan, offering 3 to 15 prepaid meals ranging from R$ 12.50 to R$ 11.00 per meal, including the delivery.
service fee. The meal plan is not a recurring subscription. As the first survey run, 1% of the respondents were Loop users, as shown in Figure 24.

![Figure 24. iFood Loop user](source: The Autor)

3.3 COVID-19 IMPACT SURVEY

Our first survey application period was from February 16th, 2020, until March 1st, 2020, the period right before the beginning of the COVID-19 pandemic worldwide. The Ministry of Health declared the first coronavirus-related death in Brazil on March 12th, and the World Health Organization's Pandemic declaration was on March 11th, requiring residents to stay at home to slow the novel's spread coronavirus.

To measure the impact of the imposed quarantine on consumer engagement in the SE, we applied a second survey from April 1st, 2020, to April 10th, 2020. We reached over 1,500 respondents of all sorts of consumer and non-consumers in Brazil, mainly from the city of São Paulo, where the SE services are broadly available through the author's network and social media, primarily WhatsApp, LinkedIn, and Facebook. We collected 1,593 responses, with a 92% completion rate. The survey consisted of 13 questions divided into five sections and took, on average, two minutes and a half to complete.

<table>
<thead>
<tr>
<th>Section</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing Economy apps</td>
<td>What other services you are a user of, frequency of use during the quarantine</td>
</tr>
<tr>
<td>Demographics</td>
<td>Demographics: age, marital status, number of people living in the same house, email for follow up survey</td>
</tr>
<tr>
<td>iFood</td>
<td>Qualification of the use of iFood platform: client of iFood, engagement with iFood during the social distancing period, use of iFood Loop, NPS for iFood</td>
</tr>
<tr>
<td>Rappi</td>
<td>Qualification of the use of the Rappi platform of services: use of Rappi, engagement with Rappi during the social distancing period, NPS for Rappi, use of Rappi Prime</td>
</tr>
<tr>
<td>Open-ended</td>
<td>An open-ended field for any additional comment regarding the respondent experience with the SE platforms</td>
</tr>
</tbody>
</table>

Source: The author
3.4 COVID-19 IMPACT SURVEY: FOLLOW UP

Since its announcement on March 11th, coronavirus cases ramped up quickly worldwide, and as of September 20th, 2020, it reached 31 million. The numbers ramped to around 5 million cases in Brazil, and strong social distancing measures have been imposed since March 2020. We applied a follow-up survey within the same base of respondents of the first COVID-19 impact survey to measure the medium-term impact for COVID-19 on consumer engagement with SE platforms and CDS.

We then sent survey by email to the COVID-19 impact survey respondents in April 2020. We collected 422 responses, with a 96% completion rate, from September 1st, 2020, to September 21st, 2020. The follow-up survey consisted of 15 questions divided into five sections and took, on average, two minutes and a half to complete.

4 DATA ANALYSIS AND RESULTS

The data analysis followed the three-step approach by using Stata 15.1 software. The first step assessed the validity of the variables subsequent Exploratory factor analysis (EFA). Confirmatory Factor Analysis (CFA) was then employed to evaluate each dimension's convergence, the discriminants’ validity, and this study’s constructs latent variables. The third step was a path analysis that generated the structural equation model (SEM) for testing the research hypotheses.

We first analyzed if the variables have sufficient intercorrelations to perform an EFA. Barlett’s Test is significant at 0.000, and the Kaiser-Meyer-Olkin (KMO) of 0.682 indicates overlap, but not to the point of hindering the analysis due to multicollinearity. KMO should be at least 0.50. higher values (HAIR et al., 2010). The variables used to measure consumer engagement was developed through qualitative research and analyzed using exploratory factor analysis (EFA) and coefficient alpha. Validation of the survey’s 63 variables was subject to EFA to reduce the number of variables to the model and understand whether and how the variables connected to the initial hypothesis proposed. Ten factors were generated, and the composite reliability and Cronbach’s alpha scores are above 0.70 for six factors, showing adequate reliability for this construct (ISAAC et al, 2019).
We then employed a CFA to test the model fitness and evaluate the convergent and discriminant validity of each of the six latent constructs that combined some of the factors of the EFA with similar characteristics in one construct, eliminating the variables that were not contributing to the model. We adopted several common criteria to revise the measurement model. The standardized regression weight table of the scale items was inspected, and any item with a factor loading of less than 0.50 was removed (HAIR et al., 2010). Specifically, convergent validity refers to the high theoretical correlations of the scale items where a factor’s loadings exceed 0.7 (HENSELER et al., 2014). Table 4 confirms that all the loadings are qualified. We ended up with 30 variables and the model showed acceptable model fit (pclose = 0.832, TLI = .914, CFI = .926, RMSEA = .048).

Accordingly with the SEM literature, RMSEA (root mean square error of approximation) values < 0.5 are considered indicative of close fit (Stevens & Stevens, 2001). The pclose tests whether the model departs significantly from one that is a close-fit to the data. If significant indicate poor fit, CFI (comparative fit index) and TLI (Tucker-Lewis index) are incremental fit indices. Value >0.95 indicates a very good fit. Values 0.90 or above are considered evidence of acceptable fit (Stevens & Stevens, 2001). Table 6 demonstrate the CFA Goodness of fit statistics of our proposed and adjusted model.
Table 6. CFA Goodness of fit statistics

<table>
<thead>
<tr>
<th>Fit statistic</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood ratio</td>
<td>1823.951</td>
<td>model vs. saturated</td>
</tr>
<tr>
<td></td>
<td>0.988</td>
<td>p &gt; chi²</td>
</tr>
<tr>
<td></td>
<td>1837.004</td>
<td>baseline vs. saturated</td>
</tr>
<tr>
<td></td>
<td>0.984</td>
<td>p &gt; chi²</td>
</tr>
<tr>
<td>Population error</td>
<td>RMSEA</td>
<td>0.046</td>
</tr>
<tr>
<td>90% CI, lower bound</td>
<td>0.045</td>
<td>upper bound</td>
</tr>
<tr>
<td></td>
<td>0.032</td>
<td>Probability RMSEA &lt; 0.05</td>
</tr>
<tr>
<td>Information criteria</td>
<td>AIC</td>
<td>23939.098</td>
</tr>
<tr>
<td></td>
<td>BIC</td>
<td>24693.064</td>
</tr>
<tr>
<td>Baseline comparison</td>
<td>CFI</td>
<td>0.926</td>
</tr>
<tr>
<td></td>
<td>TLI</td>
<td>0.924</td>
</tr>
<tr>
<td>Size of residuals</td>
<td>CD</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: The author

4.1 STRUCTURAL MODEL

The research hypotheses of the conceptual model were all tested in the third stage using SEM. We used the construct Purchases as a direct component of CE (PANSARI; KUMAR, 2017) to test the hypothesis with path analysis. The results of the path coefficient analysis in Table 7 indicated that the main causal paths leading to consumer engagement supported the positive influence of brand value (Brandvalue) and consumer engagement in other SE platforms (SE_CE); and negative influence of lack of security or quality (risks).

Table 7. SEM Model metrics

| Structural Preparedness | Standardized | Coef. Std. Err. | z | P>|z| | 95% Conf. Interval |
|-------------------------|--------------|-----------------|---|---|------------------|
| Brandvalue | .3240775 | .0135556 | .2248225 | .4553226 |
| Demographics | -.0480562 | .0362658 | -1.39 | .167 | -.1701415 | .0740212 |
| Offers | -.0525851 | .0221096 | -2.39 | .016 | -.1072831 | -.0002863 |
| Convenience | -.0510733 | .0338792 | -1.52 | .127 | -.1181623 | -.0099902 |
| SE_CE | .0770895 | .0434665 | .178 | .858 | -.0949485 | .2491274 |
| Risks | -.0680357 | .0393902 | -2.69 | .008 | -.1458873 | -.007796 |

Source: The author

4.2 THE COVID-19 PANDEMIC IMPACT ON CONSUMER ENGAGEMENT IN CDS

Based on the results of the two follow-up surveys, data support the hypothesis that the COVID-19 pandemic positively impacted consumer engagement in CDS. As per Figure 26, both iFood and Rappi increased active and lovers consumers from April 2020 to September 2020, increasing its frequency of purchases in the CDS platform.
4.3 PROPOSED CONCEPTUAL FRAMEWORK OF CE IN THE CROWDSOURCED DELIVERY SERVICES

While the definition of CE may vary, the conceptualization of CE by (KUMAR et al., 2010) is used for the purpose of this study, as it is comprehensive and comprises customer purchases, customer referrals, customer influence, and customer knowledge direct and indirect benefits of CE (PANSARI; KUMAR, 2017). Customer purchasing behavior, whether repeat purchases or additional purchases through up-selling and cross-selling. A field experiment (KUMAR et al., 2010) found several attributes that drive customer referral value. The behavioral drivers include the average time between consecutive purchases and the number of departments the customer purchased from.

The proposed conceptual framework for CE in the CDS (see Figure. 27) in this paper is adapted from the conceptual framework for CE of (PANSARI; KUMAR, 2017), using the tenets of satisfaction and emotion as antecedents, the direct and indirect components of CE and its tangible and intangible outcomes. We also hypothesize how the variables brand value proposed by (PANSARI; KUMAR, 2017) moderate the link between satisfaction and direct contribution of CE in the CDS and added three new variables to the proposed framework: consumer engagement in other SE platforms, the negative influence of lack of security or quality (risks) and the COVID-19 pandemic.
5 CONCLUSIONS

5.1 SUMMARY OF FINDINGS AND CONTRIBUTIONS

The SE is becoming increasingly popular, yet it is not fully theorized. Defined as an activity whereby a platform provider links a consumer that aims to temporarily utilize assets with a peer service provider who grants access to these assets and with this delivers the core service, replacing ownership (BENOIT et al., 2017), the SE is projected to grow from $15 billion in 2014 to $335 billion in 2025 (PRICE WATER HOUSE COOPERS, 2015). This paper examines consumer engagement in the context of service sharing, more specifically, crowdsourced delivery platforms via an interpretive study of the leading Brazilians platforms, iFood, Rappi, and other shared services. We propose a framework for the crowdsourced delivery service ecosystem and a conceptual framework for consumer engagement in the crowdsourced delivery service. The statistical results and discussions show that brand value, consumer engagement in other SE services, delivery security, and product quality as the most significant variables with positive and negative impacts on consumer engagement in the CDS. We also investigate the COVID-19 pandemic impact on consumer engagement for crowdsourced delivery service firms in Brazil.

5.2 PATHS FOR FUTURE RESEARCH

Not yet explored by many reviewed articles, artificial intelligence and machine learning are centered on playing a competitive differentiation advantage in the SE. Seven future research directions that prospective CE authors can pursue to advance and enrich the intellectual structure of past and present CE research, namely reimagining CE through artificial intelligence, virtual reality, augmented reality, corporate social responsibility, storytelling, gamification, and valence (LIM; RASUL; KUMAR; ALA, 2022). In Airbnb, for example, the increased use of artificial intelligence is an effort to support hosts and workers to improve its business performance by attracting more guests and providing a better consumer experience with the platform. However, it is essential to raise their accountability to encourage the hosts’ desired behavior while maintaining algorithmic power (CHENG; FOLEY, 2019). While positively valanced CE has received academic
attention in the past, only a few researchers focus on discussing negative valanced CE to understand better the nature, components, and scope of negative CE.
REFERENCES


BELK, Russell. You are what you can access: Sharing and collaborative consumption online. *Journal of business research*, v. 67, n. 8, p. 1595-1600, 2014.


ERT, Eyal; FLEISCHER, Aliza; MAGEN, Nathan. Trust and reputation in the sharing economy: The role of personal photos in Airbnb. *Tourism management*, v. 55, p. 62-73,
2016.


HARTL, Barbara; HOFMANN, Eva; KIRCHLER, Erich. Do we need rules for “what’s mine is yours”? Governance in collaborative consumption communities. *Journal of business research*, v. 69, n. 8, p. 2756-2763, 2016.


