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Understanding current and future issues in collaborative consumption: A four-stage Delphi study

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ABSTRACT

Sharing activities underpinned by the technologies of the Internet have become dominant in the activities of individuals, business and governments. Recently, such sharing activity has grown from information and media content to wider resources, including money, physical goods and services – coined collaborative consumption. Sustainability is often cited as a key driver, underpinned by economic, social and environmental benefits. If successful, the sharing of such resources is likely to have a potentially disruptive impact on incumbents in traditional supply chains. However, given the embryonic state of its development, it is perhaps not surprising that collaborative consumption is not well understood in research or practice. With this in mind, this study undertook a four-stage Delphi study with 25 experts in order to identify the key drivers, inhibitors and likely future developments in collaborative consumption over the next 10 years. A key finding was that environmental concern (sustainability) was considered of minor importance. The paper rounds-off with conclusions and implications for practice and further research.

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1. Introduction

Recent global economic, social and environmental problems have drawn attention for the need to develop radical solutions. Technologies of the Internet and more recently social media have provided some new directions for these solutions. Collaborative consumption websites offer peer-to-peer marketplaces where unused space, goods, skills, money, or services can be shared. Time magazine has suggested collaborative consumption as one of the “10 ideas that will change the world” (Walsh, 2011). Recent developments in these business models have been influenced by the drive for sustainability, including such issues as economic austerity, social development needs, awareness of the wasteful nature of consumerism, and issues of global warming and environmental pollution.

Collaborative consumption could have a strong and disruptive impact on supply chains in many industries due to its global relevance and great potential for growth. Consider the case of car sharing as a business. One example is that of gocarshare.com, a marketplace for empty car seats on specific journeys; reputation is based on Facebook membership and website feedback while revenue is based on commission from a passenger's travel fee and targeted website advertising. Members are typically able to travel more cheaply than other modes of car transportation, in a personalized way, and do not need to own a car. Consequently, less cars are needed, and fewer cars will need to be manufactured,

along with parts for those cars, fuel, additional supporting services and goods, and so on. [Fremstad \(2014\)](#) estimates that the average US household spends more than \$9000 per annum on shareable goods. Furthermore, 52% of Americans have rented, borrowed or leased the kind of items usually owned, and 83% would do so if this was easy ([Wise, 2013](#)). [PwC \(2015\)](#) estimates that five main sharing sectors (car sharing, staffing, music video streaming, accommodation and finance) will increase in global revenues from around \$15 billion in 2013 to \$335 billion by 2025. In support of this claim, a recent working paper by [Zervas et al. \(2015\)](#) found that the impact of AirBnB on the hotel industry in Austin, Texas was significant, claiming 8–10% of revenue and pushing down prices of incumbents. Consequently, the growth of business within the collaborative consumption paradigm must be of major interest to both industry and service sectors in the near future.

For the purpose of this study, we define collaborative consumption as: “The use of online marketplaces and social networking technologies to facilitate peer-to-peer sharing of resources (such as space, money, goods, skills and services) between individuals, who may be both suppliers and consumers.” As the definition implies, individuals in collaborative consumption are prosumers – both producers and consumers. Collaborative consumption involves access-based consumption of products or services organized via the Internet, typically to share costs. Collaborative consumption is embedded within the “sharing economy,” which involves access-based consumption of products or services that can be online or offline. Little is currently understood about collaborative consumption websites and their wider and future implications for consumers, the economy and society. Such an understanding is not only likely to be of value to

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researchers, entrepreneurs and those in incumbent businesses, but also to Government and other bodies who have an interest in supporting new business development, developing policies for governing activities, including consumer protection and taxation, and in promoting societal benefit via the encouragement of business based on principles of environmental consciousness and resource efficiency.

In order to unravel the phenomenon, this study is the first to use a structured empirical approach to inductively understand this new domain in depth. In particular, we apply the Delphi method over four phases with 25 experts involved in collaborative consumption in order to answer the following research question: What are the key drivers, inhibitors and directions for future development of collaborative consumption? The Delphi method is particularly useful in areas that are emerging and exploratory, where knowledge is typically contained within a relatively small pool of experts. The Delphi method is a systematic procedure for capturing and refining expert opinion based on the experiences of those who are actively working in a domain. The Delphi method contributes towards identifying factors associated with collaborative consumption behavior that are likely to be important in the future development of a comprehensive theory.

The structure of the paper is as follows. In the next section we provide some background to the study. This is followed by a section detailing the methodology adopted. The fourth section provides the findings of the study – based on the final rankings and qualitative comments from respondents. Finally, the last section provides the conclusions and implications for future research, practice and policy-making.

2. Background

The drivers for collaborative consumption appear to fall into five main areas that have all begun to converge to some degree: political, economic, environmental, social and technological. The recent financial crisis has led some to question the problematic outcomes of capitalism (Quental et al., 2011; Roncaglia, 2012; Wright, 2009) and the necessity for consumers to buy and own so many assets, especially during a time of economic austerity. A search for alternatives has sought new mechanisms for people to share what they have to encourage more efficient resource use, improved social benefit, and reduced environmental pollution (Agyeman et al., 2013; Botsman and Rogers, 2011). Unifying these drivers, the notion of sustainable consumption has become popular (Phipps et al., 2013).

Another key factor underpinning collaborative consumption is information technology, which is seen as both an enabler and a driver of collaborative consumption (John, 2013). While the Internet provided a conduit for new digital commercial activities and forms of e-commerce from the 1990s, such as Amazon and eBay, in the 2000s it provided a new platform for digitally-mediated social interaction via social network services (SNS), such as Facebook and Twitter. According to Nielsen (2011), social networking technologies are used by around three-quarters of active Internet users in major economies, including the US, UK, Japan, Germany, France and Brazil. Word of mouth (WOM) – which describes person-to-person communication such as personal recommendations – has been recognized for many years as an important element in distributing product and market information. Such communication tends to have more credibility and believability for consumers than formal marketing (Grewal et al., 2003). Combining converging elements of e-commerce, SNS and WOM, social commerce provides a very new and different value proposition, defined as “an emerging trend in which sellers are connected in online social networks, and where sellers are individuals instead of firms” (Stephen and Toubia, 2010, p. 215).

Business models are emerging that apply social networking technologies to further share goods and services such as cars, bikes, apparel, equipment, tools, residential spaces, money, skills and expertise (Botsman and Rogers, 2011). Collaborative consumption provides peer-to-peer marketplaces where unused resources can be shared and is part of a wider “sharing economy” (Buczynski, 2013; Gansky, 2010)

where the focus of consumption is shifting from product ownership to product access (Bardhi and Eckhardt, 2012; Rifkin, 2000).

Research into collaborative consumption is scarce. One stream of research has focused upon quantifying the economic benefits from sharing activities (Fraiberger and Sundararajan, 2015; Fremstad, 2014). Another stream of research has attempted to model the factors determining the decision of an individual to partake in sharing activities. Such antecedents have included those that are economic, environmental and social (Hamari et al., 2015; Möhlmann, 2015; Tussyadiah, 2015). However, such assessments are simplistic, and, as yet, no study has provided a comprehensive set of drivers of collaborative consumption informed by current practice. Similarly, little is known regarding the factors that are likely to hinder the success of collaborative consumption, or indeed, where the trajectory of this phenomenon is headed in the future. This study attempts to fill this gap in understanding by using a tested technique for capturing and refining expert opinion based on the experiences of those who are actively working in the domain of collaborative consumption.

3. Methodology

3.1. Overview

The study utilizes the Delphi method to identify and hone the key items for each question investigated. The Delphi method dates back to the 1950s when it was developed and applied by the RAND Corporation to the US Air Force for capturing systematically and asynchronously expert input via iterations of questionnaires, typically pertaining to national defense (Linstone, 1999). From an academic perspective, the method was further developed and applied from the 1960s onwards, notably by Harold Linstone and Murray Turoff in TFSC (Turoff, 1970, 1971–2) and their seminal book (Linstone and Turoff, 1975). Since that time, the Delphi method has continued to progress and develop. There are now many variations of Delphi, including Classical Delphi, Policy Delphi, Decision Delphi, Ranking-Type Delphi, and others (Paré et al., 2013; Schmidt, 1997). Underpinning each application should be the fundamental principles of: 1. Anonymity; 2. Iteration; 3. Controlled feedback; and 4. Statistical “group response” (von der Gracht, 2012).

The Delphi method is now accepted as a valuable technique in academic research, and its application in academic studies has grown significantly, particularly from the 1980s onwards (Linstone and Turoff, 2011; Paré et al., 2013; Rowe and Wright, 2011). More recently, there has been considerable progress in terms of providing recommendations and best practice for the procedures of Delphi studies (Hasson and Keeney, 2011; Kalaian and Kasim, 2012; Paré et al., 2013; Schmidt, 1997; von der Gracht, 2012), and these have been useful in this investigation. Recent applications of the Delphi technique to information technology have included IT project management (Kasi et al., 2008; Keil et al., 2013), software project risk management (Schmidt et al., 2001), IT outsourcing (Nakatsu and Iacovou, 2009), the impact of enterprise systems in the supply chain (Akkermans et al., 2003), and finally sustainable supply chain management Seuring and Müller (2008).

3.2. Procedures

Data were collected through the Qualtrics online data collection platform, enabling busy respondents to complete the phases of data collection in their own time. Data were collected from November 2014 to June 2015 in four phases. On average, each data collection phase ran for about a month, with two respondent reminders, with approximately a month between each phase. The phases are summarized in Fig. 1, based on the recommendations of Schmidt (1997) for brainstorming, narrowing-down and ranking. In our study, we combine Likert- and ranking-type Delphi stages in order to benefit from the advantages of

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