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Abstract

The sharing economy could be an answer to the challenge of sustainability; it can facilitate the sharing and reuse of resources, create new ways of earning money, and enhance social connections. For example, by reducing the use of natural resources without having to acquire or own everything, the sharing economy can positively affect sustainability. At the core of this type of economy lies trust among users and between users and the platform—the system cannot reach its full potential without trust. In fact, businesses or organizations in the sharing economy can even fail due to trust issues, although more information is needed to make better use of the existing platforms. The aim of this systematic literature review is to study how trust is built in the sharing economy. For this purpose, we introduce 28 solutions to support trust in sharing economy platforms, develop a preliminary model for evaluating trust in this context, and present a few considerations for future research. Platform developers and managers can use our preliminary model to identify trust issues in their platforms.

Keywords: Sharing economy; Systematic literature review; Sustainability; Trust

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Platform's solutions to support trust

Trust and interaction with others

Trust for the platform

Trust for the company / organization

User's trust for the sharing economy platform
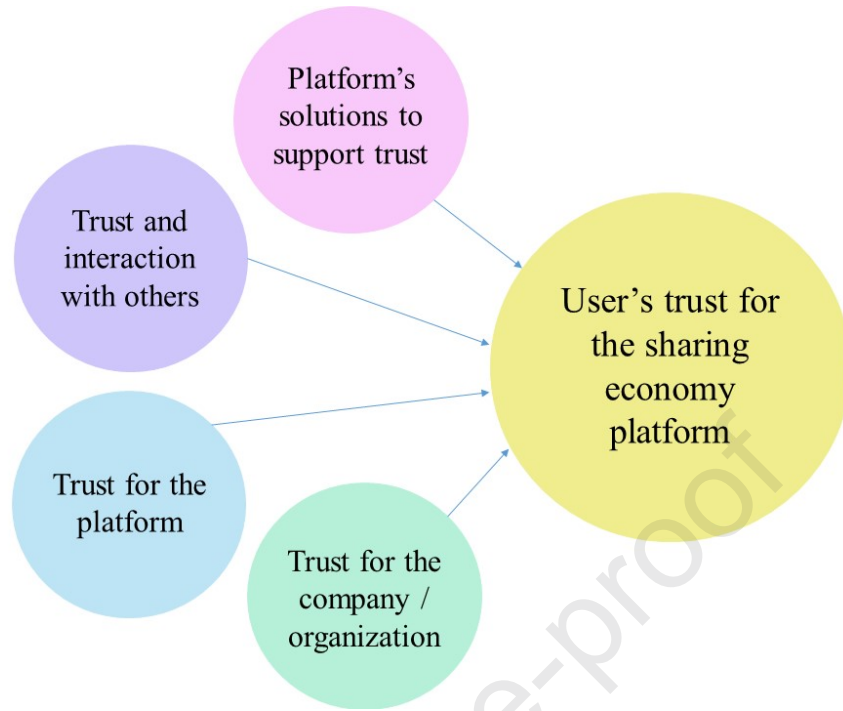
Building Trust in the Sharing Economy: Current Approaches and Future Considerations

wordcount: 10 401

1. Introduction

The world's population is increasing, and this mean an increase in the use of resources. Accordingly, there is a need for solutions to support a more sustainable way of living and doing business. The sharing economy can be one solution for promoting sustainability. The sharing economy enables the use of expensive physical assets without a need to purchase. For example, fashion has a significant environmental impact, and renting or loaning high-end fashion items can reduce the effects on the environment (Zamani et al., 2017). The sharing economy can also make products and assets more affordable (Leung et al., 2019; Schor, 2016) and offer new ways of earning money (Schor, 2016). Further, it can reduce information asymmetry (Thierer et al., 2016; Zloteanu et al., 2018) through digital platforms, be more democratically organized (Schor, 2016), and ecological than traditional businesses (Bocken et al., 2014; Martin et al., 2019). Related to sustainable business models, Bocken et al. (2014) identified different archetypes, such as under-utilized assets and capabilities, market places for second-hand goods, social enterprises, and collaborative models. These archetypes form an important part of the sharing economy. However, whilst the sharing economy certainly provides several benefits, the question remains why it is not more widely used, and why some sharing economy organizations or companies fail.

Cohen and Munoz (2016) examined a personalized bus service (named Kutsuplus) that was launched by the city of Helsinki in Finland, which was a hybrid traditional bus service and ride-sharing scheme. The idea seemed good, supported sustainability, and offered a more customized service. However, it failed within the same year, because economic profitability did not rise in line with popularity during the experiment (Kutsuplus-kokeilun loppuraportti, 2016). Another example of a failed scheme is Duara Travels, which was a new kind of travel agency where travelers could stay in villages in developing countries and live with and like local people. The company ensured that all the families and villages engaged in the scheme were safe for tourists and conducted all the marketing and booking. Prices were fair, and host families received 40 % of the payment. Despite seeming effective for supporting responsible tourism in developing countries, Duara Travels failed, as it did not establish a sufficient customer base (Duara Travels, 2020.) The reasons for these failed

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projects have led several authors to suggest that distrust of companies in the sharing economy (and their services/products) hinders its positive effect and may lead to failures (Chasin et al., 2018; Cherry and Pidgeon, 2018). In other words, by increasing trust toward sharing economy platforms, companies can increase the positive effects and strengthen individuals' decisions to use such platforms (Arteaga-Sánchez et al., 2018; Edbring et al., 2016; Hawlitschek et al., 2018b). Still, the significance and mechanisms of trust development within the sharing economy are largely unexplored (Cohen & Munoz, 2016).

To identify the factors that affect trust in sharing economy platforms, we conducted a systematic literature review. More specifically, we aimed to identify 1) how existing studies define the concept of trust, 2) which aspects of trust in the sharing economy have been studied, 3) which technology solutions have been used to build trust in sharing economy platforms, and 4) how to evaluate trust in the sharing economy. By investigating these issues, we aim to clarify the factors that facilitate the building of trust in sharing economy platforms and offer suggestions for future studies on the topic. Moreover, we answer the call by Bijlsma-Frankema and Rousseau (2015) to provide a better overview and synthesis of the existing research on trust. The novelty of this study lies in its collection, comparison, and synthesis of the relevant literature.

The paper is structured as follows. The introduction provides the rationale for the study and introduces key vocabulary. Section 2 outlines the research method and explains how the research was conducted. In Section 3, the research findings are presented. In the final chapter, we discuss the results and present conclusions on their significance, practical implications, and future research topics to help other researchers focus on the most relevant issues pertaining to the sharing economy.

1.1 Sharing economy

The sharing economy is here to stay. Its economic value has been predicted to grow from US$ 15 billion in 2014 to US$ 335 billion by 2025 (Statista, 2019). For example, the well-known accommodation platform Airbnb made a profit of US$ 93 million in 2017, from total revenues of US$ 2.6 million (Bort, 2018). The sharing economy has been studied to some extent, but defining it remains a subject of debate (Cherry & Pidgeon, 2018). One point of universal agreement is that the sharing economy involves interaction between people (Barnes & Mattson, 2016; Carbone et al., 2018; Future of Money Research Collaborative, 2018; Hou, 2018; Ma et al., 2019), for example, in the context of collaborative consumption it can be seen either as a subset of the sharing economy (Belk, 2014; Hamari et al., 2016) or

as a synonym for it (Martin et al., 2019). Terms related to the sharing economy include the gig economy, peer-to-peer economy, on-demand economy (Hou, 2018; Ertz & Leblanc-Proulx, 2018; Future of Money Research Collaborative, 2018; Martin, 2016; Tsui, 2016), access-based consumption, and crowd-based capitalism (Ertz & Leblanc-Proulx 2018). Thus, the taxonomy used to capture the sharing economy is unclear, and the relationships between subsets or terms involved remain vague.

The sharing economy can be thought of as a business or supply chain model that uses digital platforms to connect consumers (Hou, 2018). The purposes of these platforms include short-term rentals, ride-sharing, or the sharing of information (Hou, 2018). Schor (2016) suggests that both platforms and the press define who is considered part of the sharing economy. Roos and Hahn (2019, p. 681) propose the following definition: "collaborative consumption is based on the effective management of collaborative, shared use of used, common, or idle resources (i.e., products, assets, or services)."

The sharing economy can be divided into four categories: "recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets" (Schor, 2016, p. 2). Further, it can be categorized according to groups of innovations: 1) accommodation sharing platforms, 2) car and ride sharing platforms, 3) peer-to-peer employment markets, and 4) peer-to-peer platforms for sharing and circulating resources (Martin, 2016). Sharing economy platforms can also be assigned to one of four models: chaperones (prototypical example: Airbnb); franchisers (prototypical example: Uber); gardeners (prototypical example: Couchsurfing); and principals (prototypical example: Handy). Chaperone and franchiser platforms exhibit a high level of rivalry among participants, with loose control by chaperone platform owners compared with tight control exerted by franchiser platform owners. There is low rivalry among participants in gardener platforms, with only loose control used by platform owners. Finally, low rivalry exists among participants in principal platforms, where platform owners exert tight control (Constantiou et al., 2017.)

Within the context of this study, we define the sharing economy as a way of sharing a resource (know-how, assets, or information) safely, with or without payment, with other people through a digital platform. Important aspects of this definition are that access to resources is temporary and that sharing happens relatively safely. Usually, the safety of transactions is ensured using technological solutions.

1.2 Trust in the sharing economy

The sharing economy is increasing rapidly providing users with certain benefits; however, some crucial aspects remain understudied. In particular, the significance and mechanisms of trust development among the sharing economy are largely unexplored (Cohen & Munoz, 2016). While people have always shared resources, this mainly occurs in interaction with strangers within the sharing economy (Frenken & Schor, 2017). These interactions with unknown parties can be highly risky, potentially resulting in financial and other losses (Luhmann, 2000). Consequently, trust is an essential element within sharing economy platforms, as noted by the Future of Money Research Collaborative (2018).

Essentially, trust-based issues within the sharing economy are born out of distrust for old institutions (Lub et al., 2016). Before the industrial era, trust was developed primarily among family members. However, after the industrial revolution, this system was superseded by trust built between strangers through the use of licenses (Hou, 2018). Trust issues in society, such as fundamental distrust (Lub et al., 2016) and trust in the internet economy (Hou, 2018), enabled new kinds of businesses and supply chains to emerge. Recent generations also conceptualize values and attitudes differently: ownership is less important to them than access (Lub et al., 2016). In light of these factors, an accurate understanding of the different aspects affecting trust-building within the sharing economy is essential. This understanding will facilitate the development of better and safer platforms, help inform the public about risks to avoid a false sense of security, assist in the building of better business plans, and promote improved strategic decision-making within the sharing economy.

2. Research Method

To conduct a systematic literature review, we followed recommendations by Webster and Watson (2000). Prior systematic literature reviews can be divided into two different types: conventional studies (which may employ meta-analysis) and mapping studies (Kitchenham et al., 2010). This study applies a mapping approach to discover what is known about a certain phenomenon—trust in the sharing economy. By recognizing and categorizing elements that affect trust, we can find ways to better support trust among sharing economy platforms.

2.1 Search process

We followed an established protocol to minimize bias in the systematic literature review (Brereton et al., 2007). We first selected the most relevant keywords for the review,

which included "trust," "sharing economy," "peer-to-peer economy," and "gig economy." On initial review of the existing literature, we noted the fragmented nature of available literature. For this reason, we chose not to constrain our scope in the study to any specific journals, research method, or scientific fields. This literature review presents transdisciplinary research in which researchers try to find a "more general and common body of knowledge beyond the disciplines" (Sakao & Brambila-Macias, 2018). Those studies reviewed were from the fields of sustainability, information systems, economics/business, sociology, tourism, and law.

The second step was to select relevant databases for the queries. Because of the fragmented nature of the literature, we chose five widely recognized and reliable databases, which we consider to contain a good sample of the sources in terms of breadth and depth, as follows: Academic Search Elite (EBSCO), Science Direct, SAGE Journals Online – SAGE Premier (SAGE), Association for Information Systems Electronic Library (AIS eLibrary), and ProQuest – Science Database (ProQuest). The following research strings were used for the search to find the most relevant literature: trust AND ("sharing economy" OR "peer-to-peer economy" OR "gig economy" OR Uber OR Airbnb).

Trust was a term used in all the searches because it was a key element. The sharing economy has many subsets and synonyms, which is why "peer-to-peer economy" and "gig economy" were included as search strings. We were also aware that other synonyms such as peer-to-peer rental markets, crowd-based capitalism, on-demand economy, access-based consumption, and collaborative consumption also exist. However, these were discarded as they were rarely used and had little impact on search results. Because the search terms "sharing economy," "peer-to-peer economy," and "gig economy" produced insufficient results in matter of volume, we added the terms Airbnb and Uber. These two platforms have been catalysts for the growing interest in the sharing economy (Martin et al., 2017), and are thought to be dominant platforms (Geissinger et al., 2019).

2.2 Inclusion and exclusion criteria

The search was limited to peer-reviewed academic journal articles. We excluded conference publications as their reliability is more challenging to assess. We also set English as a criterion for the language to ensure valid interpretation. Our search was conducted without including any temporal criteria. The keywords were searched mainly from abstracts; however, in some cases, this resulted in very few or no search results. In these cases, the search criteria were expanded to include the body text. This provided more results but often led to results that were outside the research scope. For instance, this was evident in cases

where a study only mentioned the sharing economy as an example. In such situations, an article was excluded from the review (Table 1). This approach follows the work of Brereton et al. in which they suggest that abstracts are often of "too poor quality to determine whether papers are relevant to specific research questions" (2007, p. 581).

By using these criteria, we identified 238 articles that were considered suitable for inclusion in the study. After removing duplicates, we went through all the remaining studies manually and eliminated those that did not contain research on trust in the sharing economy. This left 60 articles (see Table 1). We also found one literature review about trust antecedents in the sharing economy by ter Huurne et al. (2017). This important work focuses on sociological and psychological issues of trust in the sharing economy. However, it did not consider the technological aspects of the phenomenon. Furthermore, most of the studies reviewed by ter Huurne et al. (2017) were published in 2016 or earlier, whereas a notable portion of the papers reviewed in our study are published from 2017 through 2019 (Table 2). Hence, it can be assumed our study amplifies the work of ter Huurne et al. (2017) and answers their call for more studies on trust in the sharing economy.

Table 1. Search results of the literature review. Table shows how many articles were found from the databases and how many were included in this study.

Database	Search string	All results	Selected articles
EBSCO	sharing economy AND trust	14	8
EBSCO	Airbnb AND trust	5	2
EBSCO	Uber AND trust	21	0
EBSCO	trust AND peer-to-peer economy	0	0
Science Direct	sharing economy AND trust	21	17
Science Direct	Airbnb AND trust	9	9
Science Direct	Uber AND trust	11	0
Science Direct	trust AND peer-to-peer economy	21	2
SAGE	sharing economy AND trust	6	6
SAGE	trust AND peer-to-peer economy	6	2
SAGE	trust AND Airbnb	2	2
SAGE	trust AND Uber	5	2
AIS eLibrary	sharing economy AND trust	21	9
AIS eLibrary	trust AND Airbnb	23	7
AIS eLibrary	Uber AND trust	31	4
AIS eLibrary	trust AND peer-to-peer economy	5	1
ProQuest	sharing economy AND trust	22	15
ProQuest	trust AND Airbnb	11	4
ProQuest	trust AND Uber	2	0
ProQuest	trust AND peer-to-peer economy	1	0
	Total number	**238**	**90**

After removing duplicates	60

Table 2. The number of articles arranged by the year of the publication. Most articles were from the years 2016 to 2019.

Year	Number of Articles
2019	11
2018	26
2017	11
2016	9
2015	1
2014	1
2013	1

3. Results

In this section, the findings of the systematic literature review are presented and categorized based on the research questions outlined in the introduction.

3.1 Defining the concept of trust

Trust is an abstract concept that is evidently difficult to understand or define. It is necessary for research papers to define trust because it can be interpreted differently according to the geographical area or culture, for example (Lyon et al., 2012). From our sample, only 24 of the 60 studies defined trust: 15 provided a more traditional definition, and 9 studies defined trust specifically with regard to digital environments. Trust defined in traditional contexts can be considered a leap into the unknown, where there is a possibility of betrayal, but we think there is enough evidence of trustworthiness to take the risk and trust (Gambetta, 2000; Lewis & Weigert, 1985; Luhmann, 2000). For example, Mittendorf (2018, p. 379) used following definition of trust which we include to traditional definition: "This paper follows the sociological view of trust coined by Luhmann (1979), understanding trust as a collective attribute that is created from interactions between different parties." These traditional definitions are considering more psychological and sociological aspects and do not include technological aspect.

Authors who took the digital environment into account when defining trust include Wang and Jeong (2018, p. 163), who define e-trust as follows: "e-trust means general beliefs in online service providers that result in behavioral intentions." Interestingly, more than half of the studies (n = 36) provided no definition of trust, perhaps due to its abstract nature and

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the consequent difficulty of defining it in detail. Nevertheless, it is surprising that so many authors provided no definition. This is somewhat concerning, as abstract terms that can mean different things to different people can easily lead to misinterpretation. For example, the word *creativity* can be understood in many different ways and using the term without defining it can lead to misunderstandings or confusion (Mahaux et al., 2012). Table 3 shows whether the reviewed articles categorized trust as either related to digital environments or using a traditional definition.

Table 3. Definitions of trust in the reviewed articles.

No	Article	No definition	Trust in digital environment	Traditional definition of trust
1.	Abrahao et al., 2017	X		
2.	Abrate & Viglia, 2019	X		
3.	Amirkiaee & Evangelopoulos, 2018		X	
4.	Arteaga-Sánchez et al., 2018			X
5.	Asaad et al., 2019		X	
6.	Barnes & Mattsson, 2016	X		
7.	Bente et al., 2014	X		
8.	Bhappu & Schultze, 2018	X		
9.	Bokyeong & Cho, 2016	X		
10.	Brescia, 2016	X		
11.	Chang & Wang, 2018	X		
12.	Chasin et al., 2018	X		
13.	Cheng et al., 2019		X	
14.	Constantiou et al., 2017	X		
15.	Costa et al., 2017			X
16.	De Rivera et al., 2017			X
17.	Ert et al., 2016		X	
18.	Etzioni et al., 2019			X
19.	Future of Money Research Collaborative; Nelms et al., 2018		X	
20.	Gleim et al., 2019			X
21.	Hartl et al., 2016	X		
22.	Hawlitschek et al., 2018a			X
23.	Hawlitschek et al., 2018b	X		
24.	Hira, 2017	X		
25.	Hou, 2018	X		
26.	Kakar et al., 2018	X		
27.	Kashyap & Bhatia, 2018	X		
28.	Lan et al., 2017	X		
29.	Lee et al., 2018		X	
30.	Leung et al.,2019	X		
31.	Liang et al., 2018			X
32.	Lub et al., 2016	X		
33.	Ma et al., 2019			X
34.	Mikołajewska-Zając, 2018	X		
35.	Mittendorf, 2018			X
36.	Molz, 2013	X		
37.	Moon et al., 2019	X		
38.	Pappas, 2017	X		
39.	Puschmann & Alt, 2016	X		
40.	Rekhviashvili & Sgibnev, 2018	X		
41.	Sabitzer et al., 2018	X		
42.	Ta et al., 2018	X		
43.	Tauscher & Kietzmann, 2017	X		
44.	ter Huurne et al., 2018			X
45.	Teubner & Flath, 2015	X		
46.	Teubner et al., 2019	X		
47.	Thierer et al., 2016			X
48.	Todolí-Signes, 2017	X		
49.	Tsui, 2016	X		
50.	Tussyadiah & Park, 2018			X
51.	Wang & Jeong, 2018		X	
52.	Wu et al., 2017		X	
53.	Wu et al., 2018	X		
54.	Xie et al., 2017		X	
55.	Xie et al., 2019	X		
56.	Yang et al., 2018	X		
57.	Ye et al., 2019			X
58.	Zhang et al., 2018			X

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59.	Zhu et al., 2018	X	
60.	Zloteanu et al., 2018		X

3.2 Different aspects of trust in the sharing economy

In this section, we consider the second research question. Four different aspects relating to trust emerged from the data during the literature review. These aspects are divided into four different categories based on how the articles dealt with trust among digital platforms. Studies that dealt with more than one aspect of trust were included in more than one category. These categories were 1) how sharing economy platforms support trust-building, 2) the impact of trust on platform usage among users, 3) users' trust in the sharing economy platform or company, and 4) trust as the core of the sharing economy.

3.2.1 How sharing economy platforms support trust-building

This category indicates the factors that affect users' trust, which can be affected by the sharing economy company or platform developer. Of 60 articles, 25 belonged to this category. Among these 25, two clear types of paper were identified: studies that support the use of specific technology solutions for trust-building (Research Question 3) and studies that describe how different solutions affect trust (Table 4).

Table 4. Articles categorized into two different groups based on their focus on trust-building

How do sharing economy platforms support trust-building?	
Research findings	References
The research results support the use of a technological solution.	Asaad et al., 2019; Cheng et al. 2019; Constantiou et al., 2017; Hou, 2018; Future of Money Research Collaborative, 2018; Kashyap & Bhatia, 2018; Lee et al., 2018; Leung et al., 2019; Molz, 2013; ter Huurne et al., 2018; Zloteanu et al., 2018
The research investigates how different solutions affect trust.	Abrahao et al., 2017; Barnes & Mattsson, 2016; Bente et al., 2014; Chang & Wang, 2018; Ert et al., 2016; Etzioni, 2019; Liang et al., 2018; Mikołajewska-Zając, 2018; Puschmann & Alt, 2016; Rekhviashvili & Sgibnev, 2018; Todolí-Signes, 2017; Xie et al, 2019

3.2.2 Impact of trust among users in the sharing economy

This category includes studies (n = 18) that considered trust among users in the sharing economy. This includes aspects that platform developers cannot affect; for example,

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how user characteristics influence trust. These studies can be divided into three subcategories: those that considered 1) how individuals' usage of the platform affects the extent of people's trust, 2) how individual characteristics influence trust, and 3) how important it is to trust other users within the sharing economy.

Individual usage of the platform can affect the extent of other people's trust. For example, people can improve their social presence in a sharing economy platform, which in turn can enhance others' trust (Ye et al., 2019). Zhang et al. (2018) found that reputation is not as crucial in the sharing economy as it is within traditional e-commerce and that trust can be increased by improving response rates and by decreasing response times. A study by Tussyadiah and Park (2018) notes that the way users portray themselves affects the building of trust. For instance, Airbnb customers considered users who described themselves as well-traveled more trustworthy than those that portrayed themselves in terms of their profession. These studies report that individual behavior can influence how much users trust other users among sharing economy platforms.

Sometimes, individual characteristics such as appearance or culture of origin can have an influence on trust. Even though it may be assumed that trust-building depends on technological solutions and people's use of sharing economy platforms, some factors are beyond users' or developers' control. For example, culture (Chasin et al., 2018) or the interpretation of an individual's trustworthiness based on a photo (Ert et al., 2016) may affect users' decision to trust that person. An interviewee from Brazil in the study by Chasin et al. explained that "trust is the last thing you do" (2018, p. 195).

The last subcategory highlights how vital mutual trust is for users among sharing economy platforms. For example, Hawlitschek et al. (2018b) assert that trust in other users is a crucial prerequisite of platform usage. Trust is a significant factor in individual decision-making regarding repeated use of a sharing economy platform (Arteaga-Sánchez et al., 2018). People's trust is also affected by the trust of others in the platform. If potential users have the impression that others trust a platform, their own trust is enhanced (Teubner et al., 2019). Amirkiaee and Evangelopoulos (2018) found that trust is both a matter of grave concern and the most significant factor influencing the decision to use ride-sharing. This finding is supported by Wu et al. who propose that trust is the "strongest factor in Chinese travelers' room-sharing intention" (2017, p. 2702).

3.2.3 Users' trust in a sharing economy platform or company

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The articles in this category (n = 11) considered users' trust in sharing economy platforms or companies. Institutional trust can lead to trust in the sharing economy (Wu & Shen, 2018). For example, with regard to Airbnb, studies suggest that system quality (Wang et al., 2019) and security and privacy (Yang et al., 2018) strongly influence the formation of trust. Personal qualities such as innovativeness (Wang & Jeong, 2018) seem to affect how trustworthy Airbnb is thought to be. However, there are some contradictory research findings: Liang et al. (2018) suggest that trust in Airbnb did not directly affect trust in an individual host; however, Teubner et al. (2019) propose that trust among users may be enhanced because users trust the platform.

3.2.4 Trust as the core of the sharing economy

Articles in this category were not as consistent as in other categories, as they considered different aspects or perspectives regarding trust as the core of the sharing economy. Nine articles focused on this area. The sharing economy has its origins in distrust of older more traditional institutions (Lub et al. 2016); thus, trust is essential in this new economic context (Hira, 2017; Leung et al., 2019). For example, Brescia (2016) proposes that the sharing economy would suffer if it were overly regulated. However, the present study found that whilst considering trust as the core of the sharing economy, the articles do not deal with factors that affect trust as such. Instead, they consider why trust is essential to the sharing economy.

There is no single solution to enable trust-building. Thierer et al. (2016) indicate that free competition in the market leads to good solutions. Still, these solutions build trust for the platform, not among users (Thierer et al., 2016). The sharing economy is above all an intermediary: it mitigates risks and builds trust (Constantiou et al., 2017). Part of the business model of the sharing economy is to keep prices low, and to do this platforms usually do not offer formal training for service providers, which can lead to a low level of quality control for services (Tauscher & Kietzmann, 2017). Chasin et al. (2018) propose that because sharing economy platforms have weak control over their quality of service, trust and safety are consequently the reasons for their failure. On the contrary, Tsui (2016) asserts that trust is not the cause of business failure. It seems that the research is unanimous about the importance of trust in the sharing economy, but the degree to which it affects the success of a platform remains unclear.

3.3 Different technology solutions to build trust in the sharing economy

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Based on our review, we found 28 technological solutions thought to build users' trust in sharing economy platforms (or other users), as presented in Table 5. Reputation systems were one of the most studied trust-building solutions. Abrahao et al. (2017) suggest that they can reduce the impact of social bias, for example, through trust in others who are similar (homophily). A study by Rekhiviasvili and Sgibnev (2018) seems to support this: they did not study reputation systems as such but found that technological solutions can compensate for interpersonal trust. Hou (2018) noticed that reputation systems help to build trust between strangers, and the Future of Money Research Collaborative (2018) asserts that reputation has the most powerful impact on users' trust. Reputation not only builds trust but also seems to have a positive effect on sales and prices (ter Huurne et al., 2018). Based on these studies, we can conclude that the use of reputation systems for trust-building among sharing economy platforms is both justified and a good choice; however, these systems are sensitive to small variations. For example, Bente et al. (2014) propose that the difference between three and four stars (rating) is enough to increase sales.

As for the question of how technological solutions should be used to best support trust-building, the answer is not so coherent. For example, a study by Zloteanu et al. (2018) suggests that user judgment can be affected by seeing at least three pieces of information relating to trust and reputation; however, it is unaffected by seeing any additional pieces. In turn, Ert et al. (2016) propose that users will use any information they can to make a decision; however, they are unclear about how much trust and reputation information users need to make their decision to trust.

Platforms may integrate with social media (Barness & Mattson, 2016). However, they should still maintain their trust and reputation systems because it may be best that trust and reputation information is produced "locally" within the platform (Zloteanu et al., 2018). Thus, it may be that integration with social media should be carefully considered, as it remains unclear whether social media integration supports trust-building among sharing economy platforms. Furthermore, it seems reasonable that information should be generated locally within platforms; otherwise, the purpose of the platforms and their trust systems could result differently making them difficult to compare.

Table 5. Technological solutions for building trust. 28 solutions were found from the literature review how trust can be supported in the sharing economy.

Technological solution	References
Background check	Amirkiaee & Evangelopoulos, 2018; Etzioni, 2019; Thierer et al., 2015; Xie et al., 2019
Back-up insurance	Hawlitschek et al., 2018b; Puschmann & Alt, 2016; Zhu et al., 2018
Big data analytics	Thierer et al., 2015
Communication through the platform	Bhappu & Schultze, 2018; Thierer et al., 2015
Credit-scoring system for users' self-regulation	Lan et al., 2017
Driver's and passengers' dynamic information (location & time)	Zhu et al., 2018
Filter for unqualified drivers	Zhu et al., 2018
Friend link	Molz, 2013
Identity verification	De Rivera et al., 2017; Etzioni, 2019; Zhu et al., 2018; Zloteanu et al., 2018; Xie et al., 2019
Informing your friends/family of the car number	Kashyap & Bhatia, 2018
Integration with social media	Barnes & Mattsson, 2016; Lee et al., 2018
Laws and regulations	Bokyeong & Cho, 2016
Number of followers	Hou, 2018
Number of reviews	Abrahao et al., 2017; Hou, 2018; Zloteanu et al., 2018
Photos	De Rivera et al., 2017; Hawlitschek et al., 2018b; Molz, 2013; Xie et al., 2019; Zhang et al., 2018
Profiles/personal information	Bhappu & Schultze, 2018; De Rivera et al., 2017; Hawlitschek et al., 2018b; Molz, 2013; Ta et al., 2018; Thierer et al., 2015; Tussyadiah & Park, 2018; Zhang et al., 2018; Zhu et al., 2018
Rating systems	Abrahao et al., 2017; Amirkiaee & Evangelopoulos, 2018; Barnes & Mattsson, 2016; De Rivera et al., 2017; Etzioni, 2019; Future of Money Research Collaborative, 2018; Hawlitschek et al., 2018b; Hira, 2017; Hou, 2018; Lee et al., 2018; Thierer et al., 2015; Tsui, 2016; Xie et al., 2019; Zhu et al., 2018; Zloteanu et al., 2018;
Reporting of other users' violations of the rules	Lan et al., 2017
Reputation systems	Abrahao et al., 2017; Bente et al., 2014; Cheng et al., 2019; Costa et al., 2017; Ert et al., 2016; Hou, 2018; Mikołajewska-Zając, 2018; Molz, 2013; ter Huurne et al., 2018; Thierer et al., 2015; Zloteanu et al., 2018
Reviews	Amirkiaee & Evangelopoulos, 2018; Chang & Wang, 2018; De Rivera et al., 2017; Hawlitschek et al., 2018b; Kakar et al., 2018; Thierer et al., 2015; Xie et al., 2019; Yang et al., 2018; Zloteanu et al., 2018
Rules and standards	Constantiou et al., 2017; Wu et al., 2017
Search function	Gleim et al., 2019
Secure payment systems	Barnes & Mattsson, 2016; Hawlitschek et al., 2018b; Thierer et al., 2015
Seller information	Kakar et al., 2018
Superhost badge	Xie & Mao, 2017

Time of departure (Uber & Ola)	Kashyap & Bhatia, 2018
Tracking feature (Uber & Ola)	Kashyap & Bhatia, 2018
Vouching	Molz, 2013

3.4 Evaluating trust in the sharing economy

The sharing economy cannot reach its potential without trust. Trust in other users can predict platform usage (Hawlitschek et al., 2018b), is essential for repeated use of the platform (Arteaga-Sánchez et al., 2018), and is a crucial factor affecting the decision to use, for example, ride-sharing (Amirkiaee & Evangelopoulos, 2018). This is why platform developers and companies could use the easy-to-use tool for evaluating user trust. The sharing economy includes for-profit and non-profit organizations, of which non-profit organizations have less money for developing the platform. A lightweight solution could serve such organizations in particular.

Based on this comprehensive literature review and its findings, we created a preliminary model (Figure 1) for evaluating users' trust in the sharing economy platform. We aimed to create a tool for sharing economy platform developers/management to use for evaluating user trust. In this paper, we describe our preliminary model from that tool. It has not yet been tested, and its development continues with design science research. We encourage the rest of the academic community to evaluate, test, and further develop this model. We plan to conduct design science research from this subsequently.

The tool consists of four sections: 1) platforms' solutions to support the trust of users, 2) trust and interaction between users, 3) users trust for the platform, and 4) users trust for the company/organization. Evaluation occurs with a sliding scale from the center towards the corners. The closer to the center, the less the aspect has been considered within the platform. Measurement can be conducted in practice, for example, with a radar chart (Figure 2) using a scale of 0–5 (where 0 is the aspect that has not been considered at all and five means the element has been considered well). The tool is intended for evaluating user trust in the sharing economy platform and to identify problem areas in relation to trust. If platform developers or managers recognize areas where user trust is not well supported, they can make improvements accordingly.
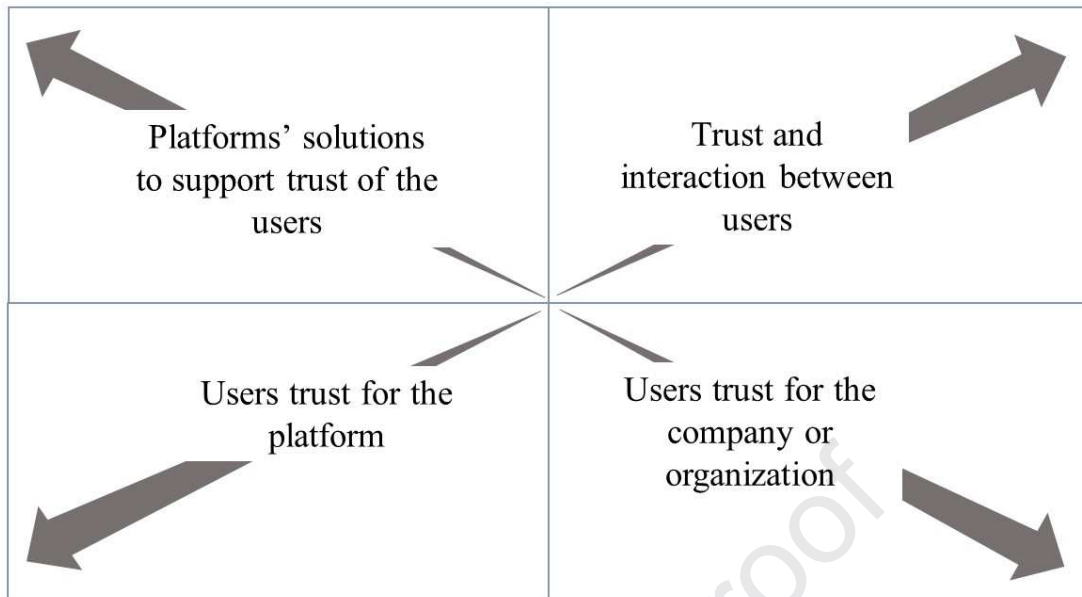
Figure 1. Preliminary model for evaluating users' trust in the sharing economy platform.
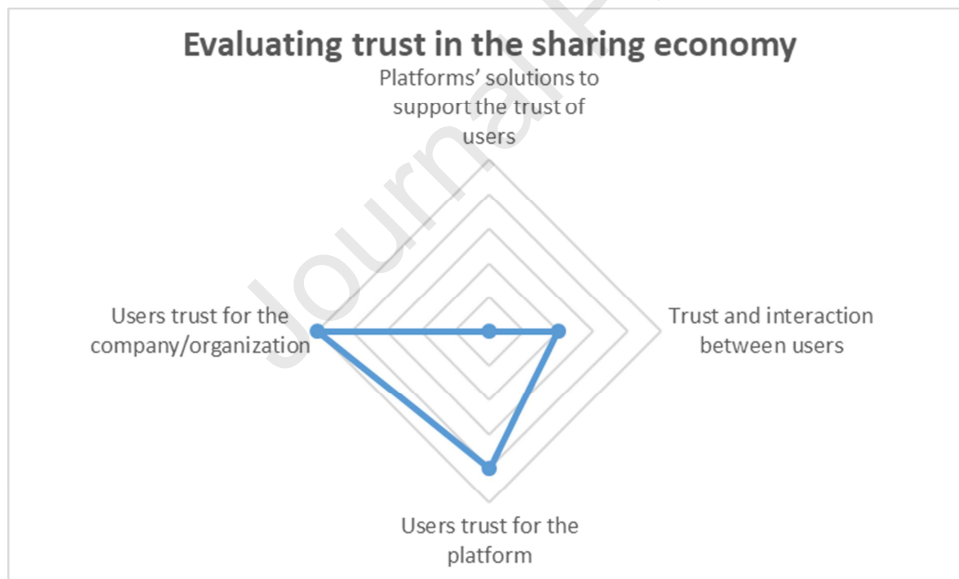

Figure 2. Example of radar chart based on the preliminary model.

4. Discussion, Future Research Directions, and Limitations

4.1 Discussion and suggestions for further research

The sharing economy is forecast to grow significantly (Statista, 2019), and might offer a significant answer to sustainability challenges (Cherry & Pidgeon, 2018). Moreover, trust plays an essential role in the sharing economy (Future of Money Research

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Collaborative, 2018); therefore, it is crucial to understand it better. We used a systematic literature review to examine the following research questions: 1) How trust is defined in the research? 2) Which aspects of trust within the sharing economy have been studied? 3) Which technology solutions have been employed within the sharing economy? and 4) How can trust in the sharing economy be evaluated? By answering these questions, we learned which essential aspects should be further studied in the future, what should be considered by individuals when trusting others in sharing economy platforms, and what should be taken into account when developing new platforms for the sharing economy.

We identified deficiencies in the definition of the term *trust* in the reviewed articles. Only half (n = 36) of the studies reviewed provided a definition of the concept of trust. This was a somewhat worrisome finding, as it is challenging to investigate the matter with only vague definitions (or no definition at all) for the central term. We recommend that researchers consider which terms require definition, or if the terms are so well-known and universally understood that they can be left without a definition. It would also be wise to review the definition of key terms occasionally, as if an author does not define terms that are ambiguous or difficult to understand, this could lead to difficulties in their comprehension and usage. For example, if we do not know how a researcher has understood a term, it may then be difficult to review the study and compare with similar studies. It should also be noted that research on trust in the sharing economy is multidisciplinary, and, in some fields its application is not particularly intuitive, or the nomenclature of their field is used. We conclude that defining the meaning of *trust* explicitly is essential to avoid misunderstandings. We hope that these findings will inspire researchers to consider how to define trust in future studies.

We also identified that the term *sharing economy* is understood in slightly different ways. It has synonyms and subsets—for example, gig economy, peer-to-peer economy, and on-demand economy (Hou, 2018; Ertz & Leblanc-Proulx, 2018; Future of Money Research Collaborative, 2018; Martin, 2016; Tsui, 2016)—whose relationships and usage are unclear. The use of these and related terms should be researched and clarified in future. Different fields of study use different terms, which can influence the research framed (Sakao & Brambila-Macias, 2018). If there are no common terms between research fields, it may be hard to create shared knowledge beyond specific research fields. For example, Sakao and Brambila-Macias (2018) argue that the quality of environmental sustainability will benefit from transdisciplinary research.

Personal characteristics (for example, personal innovativeness; see Wang & Jeong, 2018) and behaviors (for example, how users portray themselves in a platform; see

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Tussyadiah & Park, 2018) influence how trustworthy individuals are seen to be within sharing economy platforms. Neither of these has been researched in sufficient depth. For instance, there is a lack of studies focusing on individual social skills and their effect on perceived trustworthiness. For example, digital platforms may discriminate people based on their social skills. Thus, platforms should be developed so that such social bias can be reduced. We already know that individual behavior can either enhance or diminish trust in sharing economy platforms. However, it remains unclear how easily people are able to manipulate other people's beliefs and create trust under false pretenses. It might be possible to prevent this via specific technological solutions. This would increase equality and support the social dimension of sustainability. Social bias in sharing economy platforms may lead to inequality: personal characteristics and behavior may affect the extent to which individuals can benefit from the sharing economy. Thus, it seems that the sharing economy may impact the social dimension of sustainability in particular. Transparency is often greater in the sharing economy when information is provided not only by the service provider but also by users.

Based on this review, there seems to be a shared understanding that trust is the core of the sharing economy, as without trust, there is no sharing. However, the degree to which sharing economy companies take trust into account in their business strategy and their values remains unclear. For instance, whether sharing economy companies understand the importance of trust and how much users' trust affects their success are essential aspects to explore in future studies. Furthermore, we found evidence that user trust in a company can lead users to trust other users (Teubner et al., 2019). Trust among users may have a positive impact on platform usage, and in turn, a positive impact on the success of the platform. This exciting aspect seems to require more attention and studies to refine the contradictory findings related to its importance to companies' performance. For example, Chasin et al. (2018) suggest that "trust and safety are . . . reasons for failures of sharing economy [companies]," while conversely, Tsui (2016) suggests a lack of trust does not seem to be the reason why some sharing economy companies end up failing.

Sharing economy businesses do not always exist in a conducive political environment (see, e.g., Zhu, Li, & Zhou, 2018, regarding the Didi ride-hailing platform). For instance, laws and regulations vary from country to country, and regulations can sometimes change at a fast pace—particularly the case for international or global companies, as this may hinder the expansion of a business. Research is therefore required that accounts for and describes the environment in which the sharing economy company operates. For example, geographical

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area, laws, regulations, and culture should be considered as they can significantly influence the success (or otherwise) of a business.

Large, global companies like Airbnb and Uber have been studied extensively, and these studies have provided a great deal of information on trust-building in the sharing economy. However, their large size may lead to a distorted picture of the sharing economy when considering smaller firms and start-ups. In addition, most of these studies have focused on commercial platforms, whereas there seems to be a lack of studies on trust-building within non-commercial operations. Non-commercial and smaller sharing economy platforms could be studied in the future, as their business models and impact of trust on such businesses might differ considerably. We also perceive a need for comparative studies between the sharing economy and traditional business to examine the extent to which technological solutions, personal characteristics, and personal behavior affect trust-building within these two different business models. We further noticed that some researchers (see Martin et al., 2019) say that the sharing economy seems more sustainable than traditional businesses. Still, we did not encounter sufficient evidence to support this.

Furthermore, we found that information sharing is an integral part of the sharing economy; however, it is barely addressed in existing studies. A variety of platforms could be taken as a research sample to obtain the broadest possible picture. Other solutions could be to study different kinds of sharing economy platforms separately, and then combine and compare information from these studies with the help of a systematic literature review to gain a broader perspective on the platforms.

In this study, we identified 28 different technological solutions for supporting trust-building among sharing economy platforms. Many studies supported the use of reputation systems, rating systems, and reviews, but it would be essential to assess which technology solutions are optimal for building trust. The fact that some technological solutions have been used or researched less does not necessarily mean that they are less effective. In addition, there is conflicting information on the optimal number of technological solutions to use. This would be worth researching further, as it is not always economically viable to use multiple solutions. This would help sharing economy companies to be more sustainable by not using funds for something they do not need.

A major research topic for the future is to evaluate the impact of the sharing economy on different dimensions of sustainable development, for example see Martin et al. (2019), Schor (2016), and Zervas et al. (2017). There might be a negative environmental impact when sharing economy services are added to traditional products. One example of this is how

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IKEA in London uses the TaskRabbit sharing economy platform to help customers with product assembly; in this way, they aim to sell more products. However, evaluating the sustainability of the sharing economy is not a simple task. It also has many positive effects; for example, it can increase social connections and employment options (Ciulli & Kolk, 2019). Because the sharing economy is a diverse group of platforms, one way to understand its impact on sustainability could be to view one platform from several different perspectives, such as environmental, economic, social, and cultural points of view. Subsequently, it might be easier to understand how to research the sustainability of the sharing economy on a larger scale.

In our literature review, we noted the relatively recent publication of most of the articles. The boundaries of the sharing economy are difficult to draw, and it is still uncertain what economic, ecological, and social impacts the sharing economy will have (Netter et al., 2019). We do not know enough about the sharing economy yet, and questions concerning its content, its effect on sustainability (economic, ecologic, social, and cultural aspects), and how can we support its sustainable aspects are still mostly unanswered or need clarification.

4.2 Implications for theory and practice

As Bocken et al. (2014, p. 42) write: "A holistic approach is required to tackle the challenges of a sustainable future: responses to environmental changes will necessarily need to be in parallel with economic and social change." The sharing economy can include environmental, economic, and social aspects of sustainability. In addition, Cherry and Pidgeon (2018) suggest that tackling trust issues should be noted when designing sharing economy concepts and delivery. The sharing economy struggles to find the optimal balance between security, trust, and ease of use. Safety- and trust-related solutions may complicate the use of the assets; whilst at the same time, ease of use is essential, so we should try to understand more about trust-building. This paper presents what we have identified relating to trust in the context of sharing economy.

Trust is a remarkable reason why sharing economy platforms fail (Chasin et al. 2018). Based on this literature review, we developed a preliminary model to evaluate the trust of users. This model could especially help small and non-profit sharing economy platforms. For example, Martin et al. (2019) propose that local sharing economy platforms can be more sustainable than traditional businesses. By supporting the development of local, small, and non-profit sharing economy, we can promote sustainability.

4.2 Limitations

As Kitchenham et al. (2010, p. 804) note regarding systematic literature reviews, "one of the major problems… is finding all the relevant studies." This literature review is no exception, and it should be noted that there might be relevant studies that we did not find in our search. In addition, how we chose our keywords affected the results. Our exclusion criteria might be too limiting, since we excluded conference papers. However, even though this is a limitation, we feel the validity of the study was increased as it can be challenging to evaluate the quality of conferences. Furthermore, in this paper we created a theoretical model of how trust can be assessed in the sharing economy; unfortunately, the model has not yet been tested in practice and requires further empirical validation. In principle, the model is suitable for both research and the development of platforms.

The trust research domain is not familiar with the authors. Authors have studied trust before from the perspective of information systems. In this systematic literature review, the field of study was not fixed to only one research field. This can either be a positive feature (for breadth of focus) or conversely it can lead to a fragmented view. This possible limitation should be noted, but the authors still believe that there is a need for this type of research.

5. Summary and Conclusions

Trust in the sharing economy has been studied from different perspectives. In this paper, the reviewed studies were divided into four categories: 1) how sharing economy platforms support trust-building, 2) the impact of trust between users on platform usage, 3) users' trust for the sharing economy, and 4) trust as the core of the sharing economy. From the review, 28 technology solutions to build trust were gleaned. Reputation systems, ratings, and reviews were the most used technological solutions for this purpose. Of the 60 papers studied, 24 defined trust, 15 defined it traditionally, and 9 studies defined trust in the digital environment in particular. Of the total of 60 papers, 36 did not define trust at all.

Trust in the sharing economy is a current research topic, and most of the studies were written in recent years. It is a critical research topic, because in the future, the sharing economy could be one way to support sustainability. Trust in the sharing economy should be studied further; for example, non-commercial platforms in the sharing economy have not been studied enough to obtain a clear picture. Many technological solutions have been recognized, but their roles are not yet clear. For example, it is not known how many of these

platform developers should be used and which ones are optimal for trust-building in the sharing economy platform without endangering users.

The result of this systematic literature review is a theoretical model of how trust can be evaluated in the sharing economy. Additionally, we assembled useful tables for researchers and practitioners. For example, both practitioners and researchers can use Table 5, which presents a list of technological solutions for trust-building in the sharing economy. We have systematically summarized the last five years of relevant literature and condensed the main notes and conclusions in tabular form. We assume that this review will help other researchers in studying trust issues related to the sharing economy.

References

Abrahao, B., Parigi, P., Gupta, A., & Cook, K. S. (2017). Reputation offsets trust judgments based on social biases among Airbnb users. Proceedings of the National Academy of Sciences, 114(37), 9848-9853. https://doi.org/10.1073/pnas.1604234114

Amirkiaee, S. Y., & Evangelopoulos, N. (2018). Why do people rideshare? An experimental study. Transportation research part F: traffic psychology and behaviour, 55, 9-24. https://doi.org/10.1016/j.trf.2018.02.025

Arteaga-Sánchez, R., Belda-Ruiz, M., Ros-Galvez, A., & Rosa-Garcia, A. (2018). Why continue sharing: Determinants of behavior in ride-sharing services. International Journal of Market Research. https://doi.org/10.1177/1470785318805300

Barnes, S. J., & Mattsson, J. (2016). Building tribal communities in the collaborative economy: an innovation framework. Prometheus, 34(2), 95-113. https://doi.org/10.1080/08109028.2017.1279875

Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. Journal of business research, 67(8), 1595-1600. https://doi.org/10.1016/j.jbusres.2013.10.001

Bente, G., Dratsch, T., Kaspar, K., Häßler, T., Bungard, O., & Al-Issa, A. (2014). Cultures of trust: effects of avatar faces and reputation scores on german and arab players in an online trust-game. PloS one, 9(6), e98297. https://doi.org/10.1371/journal.pone.0098297

Bhappu, A. D., & Schultze, U. (2018). Implementing an organization-sponsored sharing platform to build employee engagement. MIS Quarterly Executive, 17(2), 109-120. Available at: https://aisel.aisnet.org/misqe/vol17/iss2/6

Bijlsma-Frankema, K. M., & Rousseau, D. M. (2015). It takes a community to make a difference: evaluating quality procedures and practices in trust research. In Handbook of research methods on trust. Edward Elgar Publishing. https://doi.org/10.4337/9781782547419

Bocken, N. M., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. Journal of cleaner production, 65, 42-56. https://doi.org/10.1016/j.jclepro.2013.11.039

Bokyeong, K., & Cho, Y. C. (2016). Investigating the impact of justice dimension and perceived value on customer satisfaction for sharing economy of accommodation. Journal of Business & Economics Research (JBER), 14(4), 153-170. https://doi.org/10.19030/jber.v14i4.9804

Bort, J. (2018). Airbnb made $117.8 million in profit on $3.3 billion in revenue, but an internal clash sent the CFO out the door. Business Insider, 7.

Brereton, P., Kitchenham, B. A., Budgen, D., Turner, M., & Khalil, M. (2007). Lessons from applying the systematic literature review process within the software engineering

domain. Journal of systems and software, 80(4), 571-583. https://doi.org/10.1016/j.jss.2006.07.009

Brescia, R. H. (2016). Regulating the Sharing Economy: New and old insights into an oversight regime for the peer-to-peer economy. Nebraska Law Review, 95(1), 87. Available at: http://digitalcommons.unl.edu/nlr/vol95/iss1/4

Carbone, V., Rouquet, A., & Roussat, C. (2017). The rise of crowd logistics: a new way to co☐create logistics value. Journal of Business Logistics, 38(4), 238-252. https://doi.org/10.1111/jbl.12164

Chang, W. L., & Wang, J. Y. (2018). Mine is yours? Using sentiment analysis to explore the degree of risk in the sharing economy. Electronic Commerce Research and Applications, 28, 141-158. https://doi.org/10.1016/j.elerap.2018.01.014

Chasin, F., von Hoffen, M., Hoffmeister, B., & Becker, J. (2018). Reasons for failures of sharing economy businesses. MIS Quarterly Executive, 17(3), 185-199. Available at: https://aisel.aisnet.org/misqe/vol17/iss3/4

Cheng, X., Fu, S., Sun, J., Bilgihan, A., & Okumus, F. (2019). An investigation on online reviews in sharing economy driven hospitality platforms: A viewpoint of trust. Tourism Management, 71, 366-377. https://doi.org/10.1016/j.tourman.2018.10.020

Cherry, C. E., & Pidgeon, N. F. (2018). Is sharing the solution? Exploring public acceptability of the sharing economy. Journal of cleaner production, 195, 939-948. https://doi.org/10.1016/j.jclepro.2018.05.278

Ciulli, F., & Kolk, A. (2019). Incumbents and business model innovation for the sharing economy: Implications for sustainability. Journal of cleaner production, 214, 995-1010. https://doi.org/10.1016/j.jclepro.2018.12.295

Cohen, B., & Munoz, P. (2016). Sharing cities and sustainable consumption and production: towards an integrated framework. Journal of cleaner production, 134, 87-97. https://doi.org/10.1016/j.jclepro.2015.07.133

Constantiou, I., Marton, A., & Tuunainen, V. K. (2017). Four models of sharing economy platforms. MIS Quarterly Executive, 16(4). Available at: https://aisel.aisnet.org/misqe/vol16/iss4/3

Costa, R. B., Fernandes, V. M., & do Nascimento Gonçalves, F. (2017). The trust building in hospitality experiences mediated by the internet: The cases of Couchsurfing and Airbnb. Comunicacao, Midia e Consumo, 14(39), 67. https://doi.org/10.18568/cmc.v14i39.1180

De Rivera, J., Gordo, Á., Cassidy, P., & Apesteguía, A. (2017). A netnographic study of P2P collaborative consumption platforms' user interface and design. Environmental Innovation and Societal Transitions, 23, 11-27. https://doi.org/10.1016/j.eist.2016.09.003

Duara Travels. (2020). Accessed 26th of May 2020, retrieved from: https://www.duaratravels.com/#book-a-stay

Edbring, E. G., Lehner, M., & Mont, O. (2016). Exploring consumer attitudes to alternative models of consumption: motivations and barriers. Journal of Cleaner Production, 123, 5-15. https://doi.org/10.1016/j.jclepro.2015.10.107

Ert, E., Fleischer, A., & Magen, N. (2016). Trust and reputation in the sharing economy: The role of personal photos in Airbnb. Tourism management, 55, 62-73. https://doi.org/10.1016/j.tourman.2016.01.013

Ertz, M., & Leblanc-Proulx, S. (2018). Sustainability in the collaborative economy: A bibliometric analysis reveals emerging interest. Journal of Cleaner Production, 196, 1073-1085. https://doi.org/10.1016/j.jclepro.2018.06.095

Etzioni, A. (2019). Cyber trust. Journal of Business Ethics, 156(1), 1-13. https://doi.org/10.1007/s10551-017-3627-y

Frenken, K., & Schor, J. (2017). Putting the sharing economy into perspective. Environmental Innovation and Societal Transitions, 23, 3-10. https://doi.org/10.1016/j.eist.2017.01.003

Future of Money Research Collaborative:, Nelms, T. C., Maurer, B., Swartz, L., & Mainwaring, S. (2018). Social payments: Innovation, trust, Bitcoin, and the sharing economy. Theory, Culture & Society, 35(3), 13-33. https://doi.org/10.1177/0263276417746466

Gambetta, D. (2000). Can We Trust Trust?. Trust: making and breaking cooperative relations, electronic edition, Department of Sociology, University of Oxford, 213-237.

Geissinger, A., Laurell, C., Öberg, C., & Sandström, C. (2019). How sustainable is the sharing economy? On the sustainability connotations of sharing economy platforms. Journal of Cleaner Production, 206, 419-429. https://doi.org/10.1016/j.jclepro.2018.09.196

Gleim, M. R., Johnson, C. M., & Lawson, S. J. (2019). Sharers and sellers: A multi-group examination of gig economy workers' perceptions. Journal of Business Research, 98, 142-152. https://doi.org/10.1016/j.jbusres.2019.01.041

Hamari, J., Sjöklint, M., & Ukkonen, A. (2016). The sharing economy: Why people participate in collaborative consumption. Journal of the association for information science and technology, 67(9), 2047-2059. https://doi.org/10.1002/asi.23552

Hartl, B., Hofmann, E., & Kirchler, E. (2016). Do we need rules for "what's mine is yours"? Governance in collaborative consumption communities. Journal of business research, 69(8), 2756-2763. https://doi.org/10.1016/j.jbusres.2015.11.011

Hawlitschek, F., Notheisen, B., & Teubner, T. (2018a). The limits of trust-free systems: A literature review on blockchain technology and trust in the sharing economy.
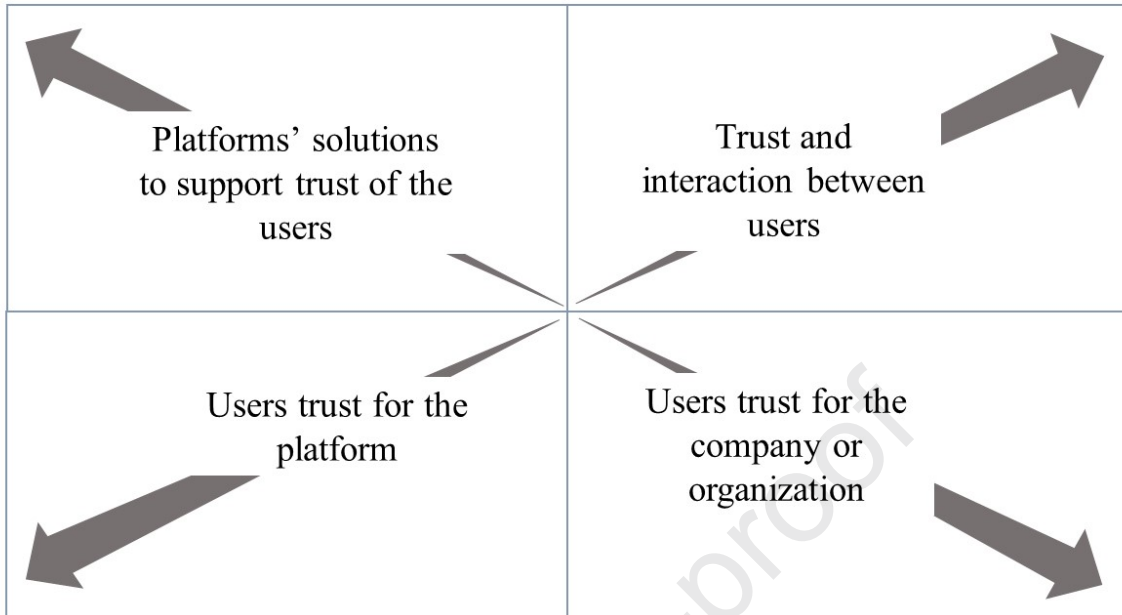
Electronic commerce research and applications, 29, 50-63. https://doi.org/10.1016/j.elerap.2018.03.005

Hawlitschek, F., Teubner, T., & Gimpel, H. (2018b). Consumer motives for peer-to-peer sharing. Journal of Cleaner Production, 204, 144-157. https://doi.org/10.1016/j.jclepro.2018.08.326

Hira, A. (2017). Profile of the sharing economy in the developing world: Examples of companies trying to change the world. Journal of Developing Societies, 33(2), 244-271. https://doi.org/10.1177/0169796X17710074

Hou, L. (2018). Destructive sharing economy: A passage from status to contract. Computer Law & Security Review, 34(4), 965-976. https://doi.org/10.1016/j.clsr.2018.05.009

Kakar, V., Voelz, J., Wu, J., & Franco, J. (2018). The visible host: Does race guide Airbnb rental rates in San Francisco? Journal of Housing Economics, 40, 25-40. https://doi.org/10.1016/j.jhe.2017.08.001

Kashyap, R., & Bhatia, A. (2018). Taxi drivers and taxidars: a case study of Uber and Ola in Delhi. Journal of Developing Societies, 34(2), 169-194. https://doi.org/10.1177/0169796X18757144

Kitchenham, B., Pretorius, R., Budgen, D., Brereton, O. P., Turner, M., Niazi, M., & Linkman, S. (2010). Systematic literature reviews in software engineering–a tertiary study. Information and software technology, 52(8), 792-805. https://doi.org/10.1016/j.infsof.2010.03.006

Kutsuplus-kokeilun loppuraportti. (2016). HSL Helsingin seudun liikenne –kuntayhtymä. Accessed 26th of May 2020, retrieved from https://www.hsl.fi/uutiset/2016/kutsuplus-kokeilun-loppuraportti-kehitystyota-matkojen-yhdistelyn-saralla-kannattaa-0

Lan, J., Ma, Y., Zhu, D., Mangalagiu, D., & Thornton, T. F. (2017). Enabling value co-creation in the sharing economy: The case of mobike. Sustainability, 9(9), 1504. https://doi.org/10.3390/su9091504

Lee, Z. W., Chan, T. K., Balaji, M. S., & Chong, A. Y. L. (2018). Why people participate in the sharing economy: An empirical investigation of Uber. Internet research, 28(3), 829–850. https://doi.org/10.1108/IntR-01-2017-0037

Leung, X. Y., Xue, L., & Wen, H. (2019). Framing the sharing economy: Toward a sustainable ecosystem. Tourism Management, 71, 44-53. https://doi.org/10.1016/j.tourman.2018.09.021

Lewis, J. D., & Weigert, A. (1985). Trust as a social reality. Social forces, 63(4), 967-985. https://doi.org/10.1093/sf/63.4.967

Liang, L. J., Choi, H. C., & Joppe, M. (2018). Exploring the relationship between satisfaction, trust and switching intention, repurchase intention in the context of Airbnb. International Journal of Hospitality Management, 69, 41-48. https://doi.org/10.1016/j.ijhm.2017.10.015

Lub, X. D., Rijnders, R., Caceres, L. N., & Bosman, J. (2016). The future of hotels: The Lifestyle Hub. A design-thinking approach for developing future hospitality concepts. Journal of Vacation Marketing, 22(3), 249-264. https://doi.org/10.1177/1356766715623829

Luhmann, N. (2000). Familiarity, confidence, trust: Problems and alternatives. In D. Gambetta (Ed.), Trust: Making and breaking cooperative relations (electronic edition) (pp. 94–107). Department of Sociology, University of Oxford.

Lyon, F., Möllering, G., & Saunders, M. N. (2012). Introduction: The variety of methods for the multi-faceted phenomenon of trust. In Handbook of Research Methods on Trust (pp. 1-15). Elgar.

Ma, S., Gu, H., Hampson, D. P., & Wang, Y. (2019). Enhancing Customer Civility in the Peer-to-Peer Economy: Empirical Evidence from the Hospitality Sector. Journal of Business Ethics, 1-19. https://doi.org/10.1007/s10551-019-04128-5

Mahaux, M., Mavin, A., & Heymans, P. (2012, March). Choose your creativity: Why and how creativity in requirements engineering means different things to different people. In International working conference on requirements engineering: Foundation for software quality (pp. 101–116). Berlin, Heidelberg: Springer. https://doi.org/10.1007/978-3-642-28714-5_9

Martin, C. J., Upham, P., & Klapper, R. (2017). Democratising platform governance in the sharing economy: An analytical framework and initial empirical insights. Journal of Cleaner Production, 166, 1395-1406. https://doi.org/10.1016/j.jclepro.2017.08.123

Mikołajewska-Zając, K. (2018). Terms of reference: The moral economy of reputation in a sharing economy platform. European Journal of Social Theory, 21(2), 148-168. https://doi.org/10.1177/1368431017716287

Mittendorf, C. (2018). Collaborative consumption: the role of familiarity and trust among millennials. Journal of Consumer Marketing, 35(4), 377-391. https://doi.org/10.1108/JCM-12-2016-2040

Molz, J. G. (2013). Social networking technologies and the moral economy of alternative tourism: The case of couchsurfing. org. Annals of tourism research, 43, 210-230. https://doi.org/10.1016/j.annals.2013.08.001

Moon, H., Miao, L., Hanks, L., & Line, N. D. (2019). Peer-to-peer interactions: Perspectives of Airbnb guests and hosts. International Journal of Hospitality Management, 77, 405-414. https://doi.org/10.1016/j.ijhm.2018.08.004

Netter, S., Pedersen, E. R. G., & Lüdeke-Freund, F. (2019). Sharing economy revisited: Towards a new framework for understanding sharing models. Journal of cleaner production, 221, 224-233. https://doi.org/10.1016/j.jclepro.2019.02.225

27

Pappas, N. (2017). The complexity of purchasing intentions in peer-to-peer accommodation. International Journal of Contemporary Hospitality Management, 29(9), 2302-2321. https://doi.org/10.1108/IJCHM-08-2016-0429

Puschmann, T., & Alt, R. (2016). Sharing economy. Business & Information Systems Engineering, 58(1), 93-99. https://doi.org/10.1007/s12599-015-0420-2

Rekhviashvili, L., & Sgibnev, W. (2018). Uber, Marshrutkas and socially (dis-) embedded mobilities. The Journal of Transport History, 39(1), 72–91. https://doi.org/10.1177/0022526618757203

Roos, D., & Hahn, R. (2019). Understanding collaborative consumption: An extension of the theory of planned behavior with value-based personal norms. Journal of Business Ethics, 158(3), 679-697. https://doi.org/10.1007/s10551-017-3675-3

Sabitzer, T., Hartl, B., Marth, S., Hofmann, E., & Penz, E. (2018). Preventing conflicts in sharing communities as a means of promoting sustainability. Sustainability, 10(8), 2828. https://doi.org/10.3390/su10082828

Sakao, T., & Brambila-Macias, S. A. (2018). Do we share an understanding of transdisciplinarity in environmental sustainability research? Journal of Cleaner Production, 170, 1399-1403. https://doi.org/10.1016/j.jclepro.2017.09.226

Schor, J. (2016). Debating the sharing economy. Journal of Self-Governance and Management Economics, 4(3), 7–22. https://doi.org/10.22381/jsme4320161

Statista. (2019). Value of the sharing economy worldwide in 2014 and 2025 (in billion U.S. dollars). Accessed: 29 November 2019. Link: https://www.statista.com/statistics/830986/value-of-the-global-sharing-economy/

Ta, H., Esper, T. L., & Hofer, A. R. (2018). Designing crowdsourced delivery systems: The effect of driver disclosure and ethnic similarity. Journal of Operations Management, 60, 19-33. https://doi.org/10.1016/j.jom.2018.06.001

Tauscher, K., & Kietzmann, J. (2017). Learning from Failures in the Sharing Economy. MIS Quarterly Executive, 16(4), 2. Available at: https://aisel.aisnet.org/misqe/vol16/iss4/2

Ter Huurne, M., Ronteltap, A., Corten, R., & Buskens, V. (2017). Antecedents of trust in the sharing economy: A systematic review. Journal of Consumer Behaviour, 16(6), 485-498. https://doi.org/10.1002/cb.1667

Ter Huurne, M., Ronteltap, A., Guo, C., Corten, R., & Buskens, V. (2018). Reputation effects in socially driven sharing economy transactions. Sustainability, 10(8), 2674. https://doi.org/10.3390/su10082674

Teubner, T., & Flath, C. M. (2015). The economics of multi-hop ride sharing. Business & Information Systems Engineering, 57(5), 311-324. https://doi.org/10.1007/s12599-015-0396-y

Teubner, T., Hawlitschek, F., & Adam, M. T. (2019). Reputation transfer. Business & Information Systems Engineering, 61(2), 229-235. https://doi.org/10.1007/s12599-018-00574-z

Thierer, A. D., Koopman, C., Hobson, A., & Kuiper, C. (2016). How the Internet, the sharing economy, and reputational feedback mechanisms solve the 'Lemons Problem'. Univ. Miami Law Rev., 70(3). Available at: http://repository.law.miami.edu/umlr/vol70/iss3/6

Todolí-Signes, A. (2017). The 'gig economy': employee, self-employed or the need for a special employment regulation? Transfer: European Review of Labour and Research, 23(2), 193-205. https://doi.org/10.1177/1024258917701381

Tsui, K. K. (2016). Economic explanation: From sharecropping to the sharing economy. Man and the Economy, 3(1), 77–96. http://dx.doi.org/10.1515/me-2016-0005

Tussyadiah, I. P., & Park, S. (2018). When guests trust hosts for their words: Host description and trust in sharing economy. Tourism Management, 67, 261-272. https://doi.org/10.1016/j.tourman.2018.02.002

Wang, C. R., & Jeong, M. (2018). What makes you choose Airbnb again? An examination of users' perceptions toward the website and their stay. International Journal of Hospitality Management, 74, 162-170. https://doi.org/10.1016/j.ijhm.2018.04.006

Wang, Y., Asaad, Y., & Filieri, R. (2019). What makes hosts trust Airbnb? Antecedents of hosts' trust toward Airbnb and its impact on continuance intention. Journal of Travel Research, 59(4), 686-703. https://doi.org/10.1177/0047287519855135

Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. MIS quarterly, 26(2), xiii–xxiii. Stable URL: http://www.jstor.org/stable/4132319

Wu, J., Zeng, M., & Xie, K. L. (2017). Chinese travelers' behavioral intentions toward room-sharing platforms: The influence of motivations, perceived trust, and past experience. International Journal of Contemporary Hospitality Management, 29(10), 2688–2707. https://doi.org/10.1108/IJCHM-08-2016-0481

Wu, X., & Shen, J. (2018). A study on Airbnb's trust mechanism and the effects of cultural values—Based on a survey of Chinese consumers. Sustainability, 10(9), 3041. https://doi.org/10.3390/su10093041

Xie, K., & Mao, Z. (2017). The impacts of quality and quantity attributes of Airbnb hosts on listing performance. International Journal of Contemporary Hospitality Management, 29(9), 2240-2260. https://doi.org/10.1108/IJCHM-07-2016-0345

Xie, K., Mao, Z. E., & Wu, J. (2019). Learning from peers: the effect of sales history disclosure on peer-to-peer short-term rental purchases. International Journal of Hospitality Management, 76, 173-183. https://doi.org/10.1016/j.ijhm.2018.05.007
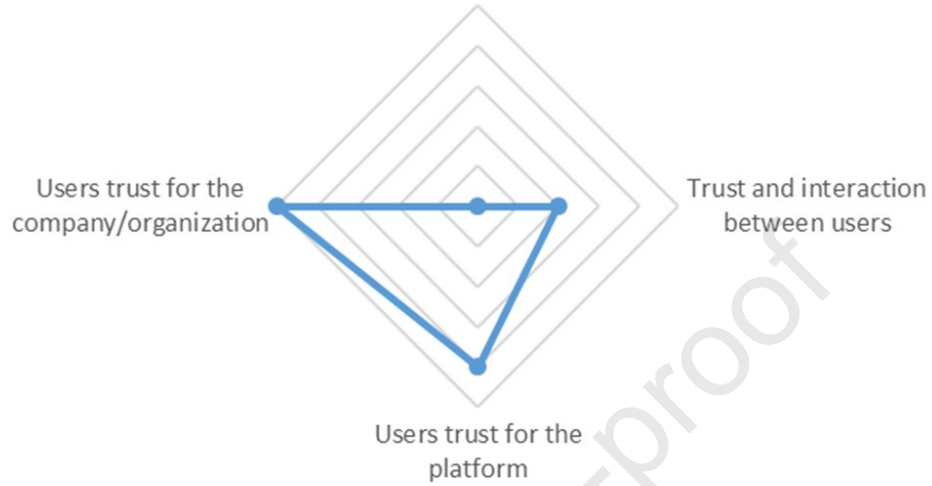
Yang, S. B., Lee, K., Lee, H., & Koo, C. (2019). In Airbnb we trust: Understanding consumers' trust-attachment building mechanisms in the sharing economy. International Journal of Hospitality Management, 83, 198-209. https://doi.org/10.1016/j.ijhm.2018.10.016

Ye, S., Ying, T., Zhou, L., & Wang, T. (2019). Enhancing customer trust in peer-to-peer accommodation: A "soft" strategy via social presence. International Journal of Hospitality Management, 79, 1-10. https://doi.org/10.1016/j.ijhm.2018.11.017

Zamani, B., Sandin, G., & Peters, G. M. (2017). Life cycle assessment of clothing libraries: can collaborative consumption reduce the environmental impact of fast fashion? Journal of cleaner production, 162, 1368-1375. https://doi.org/10.1016/j.jclepro.2017.06.128

Zervas, G., Proserpio, D., & Byers, J. W. (2017). The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry. Journal of marketing research, 54(5), 687-705. https://doi.org/10.1509/jmr.15.0204

Zhang, L., Yan, Q., & Zhang, L. (2018). A computational framework for understanding antecedents of guests' perceived trust towards hosts on Airbnb. Decision Support Systems, 115, 105-116. https://doi.org/10.1016/j.dss.2018.10.002

Zhu, G., Li, H., & Zhou, L. (2018). Enhancing the development of sharing economy to mitigate the carbon emission: a case study of online ride-hailing development in China. Natural Hazards, 91(2), 611-633. https://doi.org/10.1007/s11069-017-3146-2

Zloteanu, M., Harvey, N., Tuckett, D., & Livan, G. (2018). Digital Identity: The effect of trust and reputation information on user judgement in the Sharing Economy. PLoS ONE 13(12): e0209071. https://doi.org/10.1371/journal.pone.0209071

Platforms' solutions
to support trust of the
users

Trust and
interaction between
users

Users trust for the
platform

Users trust for the
company or
organization

Evaluating trust in the sharing economy

Highlights

- The sharing economy can support sustainability.

- Trust affects the use of the sharing economy

- The systematic literature review synthesizes current knowledge of trust in the sharing economy

- 28 trust building solutions were recognized

- The preliminary model was developed for identifying trust issues in the platform

Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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