Provider feedback information and customer choice decisions on crowdsourcing marketplaces: Evidence from two discrete choice experiments

Behrang Assemi [a,b,*], Daniel Schlagwein [a,1]

[a] UNSW Australia Business School, Sydney, NSW, Australia
[b] Faculty of Engineering, Architecture and Information Technology, University of Queensland, Brisbane, QLD, Australia

ARTICLE INFO

ABSTRACT

Crowdsourcing marketplaces are increasingly becoming popular for the online transactions of services. On these marketplaces, profile information of providers, especially feedback left by previous customers, is the main information source for choice decisions of prospective customers. In the study reported in this paper, we examined the impacts of various feedback information components on provider profiles on the decisions of customers. We conducted two fractional factorial discrete choice experiments, one in a controlled laboratory setting and one online on a crowdsourcing marketplace. We found that the feedback information components "number of reviews" and "average weighted rating" have the largest impacts on the decisions of customers. We also found that "positive ratings" and "positive comments" have significant impacts on customers' decision-making, especially when they appear on the first feedback page. We also found in the lack of highly visible feedback components on the subsequent feedback pages, "negative comments" become a significant determinant of customers' decisions. We also showed the significant impact of information consistency on customers' decision-making, through the synergistic interaction effects between different feedback components. Finally, we found evidence that the cost of evaluating a feedback information component has a negative impact on the likelihood of customers evaluating that information component. The article concludes with implications of the findings of the study for theory and practice.

© 2015 Elsevier B.V. All rights reserved.

1. Introduction

In the past few years, online crowdsourcing marketplaces (also referred to as freelancing marketplaces) have become of central importance for outsourcing of services [1–3]. Crowdsourcing marketplaces allow customers to outsource their service needs to providers, typically using reverse auctions or private negotiations to determine prices [2,4]. The crowdsourcing marketplaces industry in the USA is expected to grow at a rate of 35% per year in the decade 2010–19 [5].

Deciding on the most appropriate provider is a key challenge for customers on crowdsourcing marketplaces [3]. Customers have to base their decisions primarily on provider profile information [3,6–8]. They face two main problems with such decision-making. Firstly, the information on the profile may be incomplete. That is, not all information components relevant for customer decisions are available on provider profiles [6]. There is an "information asymmetry" between providers

and customers (i.e., providers know their service quality better than customers know) [6,9]. Secondly, the information on the profile may be irrelevant for customer decisions, which amplifies information overload [10]. Given the bounded rationality of customers (e.g., limited time available to make a decision), they cannot effectively evaluate all the information components available on provider profiles, both due to the large number of information components and the large number of competing providers [10–12].

These problems lead to crowdsourcing marketplaces being characterized by high levels of uncertainty and low levels of trust [2,3,13]. Providers are incentivized to overstate their qualities (i.e., "moral hazard"), and customers are often unable to make good decisions (i.e., "adverse selection") [14,15]. Crowdsourcing marketplace provider profiles do not sufficiently help customers to distinguish between low- and high-quality providers [16]. Hence, customers are usually more willing to transact with their previous providers, if they had an acceptable experience, instead of searching for new, better providers [3,8].

The usefulness of provider profiles on crowdsourcing marketplaces can be improved through design changes by the crowdsourcing marketplaces. To improve provider profiles' design, however, we need to better understand how different information components on these profiles affect customers' decision-making. At present, our knowledge about the relevance and importance of the information components that

customers consider when selecting a crowdsourcing marketplace provider is fragmented [6]. Prior research suggests that customer decisions are primarily driven by the information components that reflect previous customers' feedback, due to the higher credibility of these information components [17]. While studies found a positive impact of some feedback information components (e.g., "average rating") on customers' decision-making, the impact of other feedback components (e.g., "negative comments" hidden in not immediately visible feedback pages), their relative importance, and their potential interactions are not considered well [17]. Hence, our study is set to improve our knowledge of such impacts by answering the following research question: How do the different provider profiles' feedback information components impact on customer choice decisions on crowdsourcing marketplaces?

Taking advantage of recent methodological progress in discrete outcome modeling, we designed a discrete choice experiment (DCE) and ran it in two different settings: a controlled university laboratory and a crowdsourcing marketplace. We used nested logit analysis to evaluate a set of proposed hypotheses based on the data collected in the two experiments. The main benefit of DCEs is that they more closely resemble people's real-life decision-making when selecting the best alternative (in comparison with the other methods of evaluating customer preferences) [18]. Nested logit modeling also provides valuable, detailed insights about people's decision process, overcoming deficiencies of earlier analysis techniques (e.g., multinomial logistic regression) [19].

The remainder of this article is structured as follows. In section 2, we review the existing literature on online profile information. In section 3, we develop a theoretical model informed by this review. In section 4, we present our research method. In section 5, we present the empirical findings of our study. In section 6, we discuss the theoretical meaning of these findings. In section 7, we conclude the article with implications for scholars and practitioners.

2. Literature review

This research builds on, and contributes to, the literature interested in the impacts of profile information in the context of crowdsourcing marketplaces and similar IT-enabled online exchanges for services (we also consider, with caution, the related literature on electronic marketplaces for products [e.g., Amazon], which have more standardized items and hence less quality uncertainty). The literature has established that online feedback mechanisms are effective means to build and represent the reputation and trustworthiness of providers [17,20–23]. Feedback information on provider profiles is more important than other information components, such as self-descriptions of providers. This is so because feedback information components reflect the genuine and *de facto* experiences of past customers [12]. Hence, all electronic marketplaces, including crowdsourcing marketplaces, encourage customers to leave feedback after each transaction with a provider [24,25].

According to the literature, feedback information components reduce the information asymmetry between providers and customers in electronic marketplaces [16,17,25]. Hence, feedback information components help to develop trust on electronic marketplaces, including crowdsourcing marketplaces [16,26]. The existence of feedback mechanisms prevents opportunistic behavior by an online provider because such behavior would become permanently visible on the provider's profile [15] and damage the provider's gradually established reputation [17,27].

Which feedback information components are the most important? Thus far, the literature appears to agree that across contexts, the "average rating" (average rating based on all past customer ratings) is a key information component. A high average rating positively affects the decisions of customers to transact with the corresponding provider [28,29]. A high average rating also positively correlates with the likelihood of this provider actually being paid by their customers [21].

The literature further suggests that the "number of reviews" is relevant on online marketplaces [21,23,29]. While these findings are related to the transaction behavior of customers in the context of marketplaces for products, it appears reasonable to assume that the same underlying logic (that customers are more likely to select providers that have been selected more frequently by previous customers) also may apply to crowdsourcing marketplaces.

Other provider feedback components may be also important for customer decision-making. While not investigated in the context of crowdsourcing marketplaces, the literature on marketplaces for products found that the number of "positive ratings" and the number of "positive comments" can affect costumers' transacting behavior [17,27].

Where we are lacking knowledge in both the literature on crowdsourcing marketplaces in specific and the literature on online marketplaces in general are as follows: a) we do not clearly know the impact of feedback information components on customers' choice decisions, as previous studies have evaluated the impact of these components on customers' trust, price premiums, and bid prices rather than choices [27,30]; b) we do not know the role of implicit characteristics of feedback information components in customer decision-making, for example, we do not know to what extent the visibility of information components matters; and c) we do not know how the information components matter in their relative relation to one another, for example, are there dominant effects? Are there interaction effects? We cannot answer these questions based on the existing literature. Table 1 summarizes the findings and gaps of the existing literature on the impacts of online feedback information on marketplaces.

3. Theoretical model

Building on the empirical findings of the literature, we have developed a theoretical model of the impact of provider feedback information on customers' choice decisions on crowdsourcing marketplaces. We have focused on eight feedback information components on provider profiles that we found to be common on provider profiles across the leading crowdsourcing marketplaces (i.e., Freelancer.com, UpWork [previously eLance and oDesk], and Guru; as of 2015).

In addition to the empirical findings, we also found signaling theory [33,34] to help us theorize the "how" and "why" of effects of crowdsourcing marketplace provider profile information component. The core idea of signaling theory is that "signals" transmitted from a "source" to "receivers" convey information regarding unobserved qualities of the signaling source [34]. Other research in the area of online platforms has found this theory helpful as well [15,16]. According to the theory, the information components of a provider profile signal the reputation and abilities of the respective provider (unobserved qualities of the source) to prospective customers (i.e., receivers) [17,25]. Such signals help customers to distinguish between low- and high-quality providers [15,24,35].

Seen as a signal, there is consensus in the literature that visibility (how visible a signal is) and cost (how difficult to generate the signal is) of a feedback information component are most important for its credibility [14,16,34,36]. That is, on crowdsourcing marketplace provider profiles, a high "number of feedback reviews" as well as a high "average weighted rating" are the most visible feedback information components. They are placed (on the above platforms, as of 2015) centrally, next to the name of the provider. They are also costly to generate signals: they can only be obtained by successfully completing projects for many clients over time [17,25]. The number of feedback reviews and the average weighted rating signal the "lifelong" reputation of the provider [17,27]. Hence, we expect that:

H1. A high number of feedback reviews on a provider's profile have a positive impact on the customers' decisions to choose the provider.