**Study of Reputation, Quality and Pricing in an Online Freelance**

**Marketplace**

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The online freelance marketplace is special websites and online platforms which match self-employed sellers of services that can be delivered electronically with buyers (clients). Online freelancing is promptly growing because of digitalization. The demand for freelancers increased by 17.2% in 2019, and there was a 12.1% increase in wages (Inc., 2019). These trends can be explained by two factors apart from technological advances. First, freelance markets may offer people services with affordable and lower prices on average (Ba, Pavlou, 2000). Second, it is a low-cost way to trade for geographically distant economic agents (Yoganarasimhan, 2013).

However, despite the growth of online freelancing, it may face challenges, and the main one is information asymmetry. In this case clients cannot distinguish sellers by their type, whether they provide low-quality or high-quality service and sellers may act opportunistically (Akerlof, 1970). Thus, online platforms established reputation mechanisms in order to prevent violations. However, despite the benefits of reputation, it may fail in some cases, and there can be the problem of reputation inflation (Filippas et al., 2019).

The main goal of this paper is to understand what happens in a situation of reputation purchase by low-skilled workers. To elaborate this question a theoretical dynamic signalling model was built. The use of reputation as a social control system is covered in literature for a long time. It is argued that clients are not only take into account the observed reputation but also place significant weight on seller reputation (Yoganarasimhan, 2013). Moreover, the mechanisms of reputation purchase and its manipulation is covered in several papers (Dini, Spagnolo, 2009; Dellarocas, 2006). The research by Tadelis (1999) gives the basic idea how to structure the model of the following research. The concept of model design for the following research is drawn from Fudenberg and Tirole’s chapter (1991) about reputation effects.

The model that is built in the following research covers the mechanism of reputation manipulation. High-skilled workers can place only high prices as low prices is worse strategy for them. Low-skilled freelancers try to mimic and apart from low prices may set high ones. The model is of n periods. Reputation system is implemented in the first period. The rating system may be considered as a signal for a buyer about a freelancer’s type. In the zero period there is only one signal, which is the prices. After the zero period, high-skilled freelancers get their first feedback with the probability of buying from the high-skilled freelancer $p\_{1}.$ The first proposition after the zero period states that under the condition of reputation absence more clients decide to order services at the low price when $p\_{1}$ → 0. Also, more clients decide to order services at the high price when $p\_{1}$ → 1. When $p\_{1}$ → 0 and the prices are equal they choose randomly.

Starting from the first period the reputation mechanism is implemented. It was derived that when the costs of buying reputation are low there exist freelancers who do not buy reputation at all. This can be explained by the fact that if the cost of buying reputation is too low then agents understand that consumers know this fact. Reputation can be easily purchased in this case. Hence, reputation is a weak signal and there is no need to buy it as clients do not pay attention to it.

This paper discussed the problem of reputation of high and low-skilled freelancers in an online freelance marketplace. Reputation is not a stable technique that work perfectly. Thus, there exist ways how to manipulate it. The main result is when costs of purchasing are high then only maximum rating is bought. This can be explained by the fact that low-skilled freelancers want to be chosen by clients in order to recoup their losses. As clients pay attention to the rating, they usually choose the highest, thus, freelancers buy the possible maximum. Also, the observation of different thresholds of costs helps us to specify the minimum number of periods for which reputation was bought by low-skilled freelancers. This may give us the diversity in reputation levels excluding the ’no reputation’ case. If the reputation across freelancers does not vary much, then the costs may be assumed as above average. Otherwise, the more rating level changes the lower the costs of reputation purchase for low-skilled freelancers.

Another result is that when costs are low then the reputation mechanism can be assumed as a weak signal and clients try to make a choice basing only on prices. In this case there are low-skilled freelancers with different ratings in the market and all of them can buy reputation, but they probably would not as if they set low prices, it will not influence on clients’ choice. If low-skilled freelancers set high prices, then they need to buy maximum rating.

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