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What Factors Will Determine Users' Knowledge Payment Decision?

An Theoretical and Empirical Research

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Abstract: With the increase of peoples' eagerness for higher quality knowledge, paid Q&A is becoming a new tendency. However, what factors are helpful to drive potential users' payment decisions remains unknown. In this paper, we investigated the effects of expert attributes and reputation on users' payment decisions made on an online Q&A platform in China. We developed auto-parsing crawlers to collect online observational data and used the negative binomial panel regression method to estimate the effects of expert attributes and reputation on users' payment decision. The results show that expert attributes such as the number of paid questions, the number of times that answers are approved, whether the expert has a personal home page, whether the expert mentions his/her area of expertise, the number of followers, score of expert answers have significant effects, whereas the times that the expert shared knowledge free and whether the expert has a real name certification do not influence users' willingness to pay for an answer. The results help experts on paid Q&A platforms to improve their performance, perfect their personal information, and enhance users' trust, so as to promote the development of knowledge sharing economy.

Keywords: Paid Q&A, Sharing Economy, Users' Payment Decision, Reputation

1. RESEARCH QUESTION

The spring up of paid Q&A has facilitated the development of knowledge-sharing economy, which makes it possible for experts in different industries to do online transactions with their knowledge. However, unlike other C2C transactions, except for price, ordinary users (buyer) barely have no information about the knowledge commodity (answer) before the expert (seller) answers to the question. Trust problem is one of the greatest barriers between sellers and buyers who are not familiar with each other, and trust has been found as the fundamental determinant of consumer decisions when it comes to the establishment of transaction relationship. Therefore, we believe that studying users' payment decision in paid Q&A from the trust perspective is meaningful, and the research results may help lower users' perceived risk and improve the service quality provided by experts. Therefore, the two research questions addressed in this study are:

- What are the key factors that affect users' payment decision in online Q&A?
- How do these factors influence users' payment decision?

The establishment of the trust relationship between questioners and the respondents (answerers) is the prerequisite for users to pay for the professionally generated content (PGC). Therefore, this study builds a theoretical model based on trust theory, and explores the factors that affect users' decision on paying for PGC, from the dimensions of trusting beliefs and reputation respectively. Adapting viewpoints of Mayer and Schoorman, we measure the trustworthiness of experts from three perspectives: ability, benevolence and integrity. Based on the above theory, we proposed the theoretical framework of this study with eight hypotheses.

H1a: The number of paid questions the expert answered has a positive influence on users' payment decision.

H1b: Number of times that answers are approved has a positive influence on users' payment decision.

H2: Number of times that experts freely shared knowledge has a positive influence on users' payment

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decision.

H3a: Whether the expert has a real name certification has a positive influence on users' payment decision.

H3b: Whether the expert has opened a personal home page has a positive influence on users' payment decision.

H4: Whether users are accessible to the information about the detailed area of expertise has a positive influence on users' payment decision.

H5a: Number of followers has a positive influence on users' payment decision.

H5b: Number of followers has a positive influence on users' payment decision.

2. MAJOR RESEARCH FINDINGS

In this paper, we did a data-driven study using real-world data from Zhihu.com to estimate the effects of expert attributes and reputation on users. Through the Homan test, we decided to use negative binomial panel regression method under the fixed effect model to estimate. The estimation results are reported in Table 1.

Table 1. Estimation result

Dependent Variable: the number of users that pay to question (in 10 days)				
	Coefficient	Standard Error	P-value	VIF
Ln(Price)	-0.292	0.011	0.000	1.14
Ln(Reply_Num+1)	0.497	0.032	0.000	2.80
Ln(Worth_Num+1)	0.207	0.015	0.003	3.74
Ln(Share_Num+1)	0.056	0.006	0.668	1.24
Has_Authenticated	0.005	0.003	0.213	2.67
Is_Infinity	0.310	0.002	0.000	1.74
Is_Proficient	0.192	0.052	0.000	2.19
(Follower ^{0.17} -1)/(-0.17)	0.212	0.049	0.009	1.12
(Score ^{6.88} -1)/(-6.88)	0.126	0.051	0.000	1.45
_Cons	-1.172	0.135	0.000	-

According to the result showed in Table 2, except H2 ($\beta_4=0.056$; $P=0.668$) and H3a ($\beta_5=0.005$; $P=0.213$), other hypotheses all passed the significance test. Through analysis, we think that the insignificance of

“Share_Num” is closely related to the information overload that isolates users from high-quality knowledge.

Under the circumstances that anyone can easily express his opinion as well as nonsense, although “Share_Num” expresses the expert benevolence in sharing knowledge free, it cannot impress users who are eager to get high-quality knowledge. And the insignificance of “Has_Authenticated” indicates that, compared to other expert attributes, users are less concerned about whether the expert is real name authenticated, for most of the personal information has been displayed on the expert profile page.

3. CONCLUSIONS

In this paper, we did a data-driven study based on trust belief and reputation to estimate the effects of expert attributes on users purchase decision in paid Q&A. As a result, we find that, most of expert attributes pass the significance test, while the times that the expert shared knowledge free and whether the expert has a real name certification have no significant effect.

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