Research on the Breach of Relationship Norms by Opportunistic behavior in the Context of Big Data

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Abstract. In this paper, psychological contract violation is introduced as a mediate variable to study the breach of relationship norms by opportunistic behavior of e-commerce platform. Based on the data analysis of 400 B2C e-commerce platform consumers, the results show that the opportunistic behavior of the platform has a negative impact on relationship norms, and psychological contract violation will reduce consumers' willingness to follow the relationship. It plays a mediate role between platform opportunistic behavior and relationship norms, and user stickiness can reduce the negative impact of psychological contract violation on relationship norms. However, opportunistic behavior and psychological contract violation have no negative influence on conflict resolution norms. The findings provide theoretical guidance for e-commerce platform managers to make up for the destruction of relationship norms caused by opportunistic behavior through the realization of consumer psychological contract.

1. Introduction

The opportunistic behavior of “Big Data Killing Familiar” of e-commerce platforms is more concealed and preventive than traditional transaction forms, and a survey of 2,008 respondents by China Youth Daily showed that 51.3% of the respondents have encountered the situation that Internet enterprises use big data to "kill off" their familiarity. With the maturity of big data technology, the growth of e-commerce platform and enhancement of consumers’ dependence on the platform, various opportunism behaviors, including "killing familiar", come along (ZHENG Xin 2017)[1].

In the early stage of the establishment of the trading relationship, in order to obtain the possibility of continuous trading, the platform will establish good relationship norms and obtain the support and trust of consumers by sacrificing self-interest and providing better services. Over time, Continuous business exchanges can produce characteristics that undermine the stability of internal relationships (Dyer and Singh 1998), and the platform may exploit consumer trust and information to seek improper interests. As consumers invest more economic and emotional resources into their relationships, their motivation to find the best solution will decrease (Jeffries and Reed 2000) and they are more likely to suffer from opportunism. Based on this, this paper discusses the destructive effect of opportunistic behavior of e-commerce platform on relationship norms, and introduces psychological contract violation as a mediate variable. In order to test whether there is any difference in the impact of psychological contract violation caused by the opportunism behaviors of "killing familiar" and "cheating stranger" on relationship norms, this paper also introduces "user stickiness" as a moderator variable, it is believed that user stickiness can moderate the relationship between consumer perceived psychological contract violation and relationship norms.
2. Theoretical Framework and Research Hypothesis

2.1. Concept Definition

2.1.1. Opportunism Behavior. Opportunistic behavior refers to the use of subterfuge for private interests, which includes misrepresentation of information, distortion of results, false promises, etc (Anderson 1988). In the course of network transaction, e-commerce platform and merchants also have the opportunistic behavior of violating promise, contract, error description of product, delayed delivery (Pavlou and Gefen 2005)[2] and taking all kinds of concealed technology to obtain consumers’ information for personal gain. Both the collection of information and improvements in platform technology will reduce the cost of implementing opportunism and increase the success rate of implementation. This paper studies the opportunistic behavior of the channel end seller, which lacks attention, and extends the theory of opportunism behavior. The emergence of big data has enabled the platform to grasp more consumer information, increase the concealment of opportunism behavior, the study of opportunistic behavior in e-commerce platform can better stop and stifle it and maintain the order of transaction.

2.1.2. Psychological Contract Violation. Rousseau (1990) studied psychological contracts at the individual level and believed that psychological contracts are individuals’ beliefs about reciprocal obligation. Luo Hai-cheng (2005)[3] introduced the concept of psychological contract into marketing field and defined the specific concept connotation, WAN Ying-hong (2011)[4] explored the customer psychological contract based on the service provider responsibility under the service relationship, and proposed that the customer psychological contract in the service relationship contains four dimensions of merchant responsibility: service standard, service fairness, interpersonal communication and symbiosis development. Psychological contract Violation refers to indignation and betrays when an organization fails to fulfill its obligations (Morrison and Robinson 1997). The root cause is betrayal and breach of contract, the former refers to the intentional non-performance of the obligations, the latter refers to breach of word caused by inconsistent understanding of obligations between the two sides (Robinson and Morrison 2000). However, the research on the consequences of psychological contract violation focuses on the negative behavior and attitude of the perceived party, lack of research on the destructive impact on the relationship norms established by both parties to the contract, based on the dimension of psychological contract proposed by Wan Ying-hong, this paper studies the influence of psychological contract violation on relationship norms.

2.1.3. Relationship Norms. Heide and John (1992) [5] identify three dimensions of relevance to relational norms: Flexibility, solidarity, and conflict resolution. Flexibility defines the expectations of both parties to adjust their relationship or transaction as the environment changes, meaning that the agreement can be modified in good faith if exceptional circumstances occur. Solidarity defines the expectation that a relationship is highly valued, as the degree of joint involvement in problem solving. Conflict resolution refers to the informal and internal resolution of conflicts in the context of relational exchange (as opposed to discrete transactions, which are resolved through formal and external processes such as litigation). This paper studies the destructive effect of opportunistic behavior on relationship norms in relationship marketing, and introduces psychological contract violation as a mediate variable.

2.2. Research Hypotheses

2.2.1. Opportunistic behavior and relationship norms. Academic community has done a great deal of research on the causes and consequences of opportunism, and found that opportunism will not only damage the interests of others (ZHENG Xin 2017), but also seriously damage the business relationship. Speculation by one side can lead to distrust among consumers and may end up in a vicious cycle of suspicion and retaliation (Nooteboom, Bart, Hans Berger, and Niels 1997). Opportunism is one of the
main factors that destroy the relationship between enterprises (Wathne and Heide 2000), which hinders the development of relationship norms, especially the flexibility. Only when the majority of social members in the trading network approve, defend or comply with the trading relationship norms, can the trading relationship norms form (Mochm and Seashore 1981). The opportunistic behavior in the transaction network will affect the effectiveness of the transaction relationship norms. This leads to the following assumptions:

- **H1a:** Platform opportunistic behavior has negative influence on flexibility.
- **H1b:** Platform opportunistic behavior has negative influence on solidarity.
- **H1c:** Platform opportunistic behavior has negative influence on conflict resolution.

### 2.2.2. Mediate effect of psychological contract violation

There is also a corresponding psychological contract between consumers and e-commerce platform in the context of online transactions. When the customers perceive platform fails to fulfill its obligations, the psychological contract violation occurs. Research by JAP and Anderson (2003) suggests that, if a trader has an opportunistic motive, it will resort to deceptive or distorted information to achieve its results. Once the consumer discovers that the information or promise provided by the platform is false and the result does not reach the minimum acceptable level, it will form the consumer's psychological contract violation. When an individual feels a psychological contract violation, there is a feeling of being cheated, which lowers his or her support behavior, and even leads to destructive emotions and behaviors, there will also be problems in the relations between the two sides (LI Yi and WEI Feng 2007), and less flexibility in dealing with adverse outcomes (ZHAI Sen-jing, HUANG Pei, and GAO Wei-he 2012). When the consumer's psychological contract is broken, the corresponding relationship norms will inevitably change. The fulfillment of psychological contract will promote customers to give positive feedback about products and services to enterprises, and be willing to recommend them to others (LI Dan-dan and XUE Yun-yan 2014), but psychological contract violation will generate negative word-of-mouth, cause the consumer to take a negative attitude towards the provider of the service or product (CHEN Xiao-gui 2009). The behavior of platform opportunism can enhance consumers' perceived of psychological contract violation, and further reduce their willingness to comply with relationship norms.

There are two aspects to understand stickiness, one is based on the characteristics of the website, the ability of the website to attract and retain users (Zott, Amit, and Donlevy 2000), the other is based on the users, refers to the user's willingness to visit and use the site repeatedly, and the state of mind that it will continue to be use (Lin 2007). Liu Yan-bin (2010) confirmed the positive relationship between website stickiness and purchase volume, Li (2006) established the website stickiness model mediated by trust, thought that when users have confidence in the site, they will continue to make transactions on the site. Therefore, this paper has reason to think that the stronger the user stickiness is, the stronger the user's trust in the e-commerce platform is, and the higher the consumer's willingness to follow the relationship norms is.

- **H2a:** Consumer perceived psychological contract violation plays a mediate role in the relationship between platform opportunistic behavior and flexibility.
- **H2b:** Consumer perceived psychological contract violation plays a mediate role in the relationship between platform opportunistic behavior and solidarity.
- **H2c:** Consumer perceived psychological contract violation plays a mediate role in the relationship between platform opportunistic behavior and conflict resolution.
- **H3a:** User stickiness positively moderates the relationship between psychological contract violation and flexibility.
- **H3b:** User stickiness positively moderates the relationship between psychological contract violation and solidarity.
- **H3c:** User stickiness positively moderates the relationship between psychological contract violation and conflict resolution.

### 3. Research Design
Using five items from Heide (2007) to measure consumers’ perceived platform opportunism behavior. The service provider responsibility scale based on psychological contract developed by Wan Yin-hong et al. (WAN Ying-hong, YUE Ying, and JJANG Li-quan 2011; WANG Xiao-juan, WAN Ying-hong, and CHENG Jia 2017) is used to measure the degree of psychological contract violation, it reverses score from the degree of fulfillment far below commitment to the degree of fulfillment far higher than the commitment. Using the Heide and John’s (1992) scale to measure consumer’s willingness to comply with relationship norms, which involves three dimensions: flexibility, solidarity, and conflict resolution. Measuring user stickiness using 3 items of Hsu, etc. (2014). All of the above scales were evaluated by the scale of 1-7 Likert scale.

4. Data Analysis and results

4.1. Reliability and validity tests

Based on confirmatory factor analysis, this paper analyzes the reliability, convergent validity, discriminative validity among user stickiness, platform opportunism behavior, psychological contract violation and relationship norms, the goodness of fit of the model was also tested. Data result display, each item scored higher in its own dimension, with the minimum factor score of 0.73, the minimum reliability of CR of 0.86 exceeding 0.7, and the minimum AVE of each dimension is 0.78, exceeding the suggested value of 0.5, most of the illustrative dimensions have been explained. The dimension discrimination validity is determined by comparing the square root of the Ave value of each dimension and the correlation coefficient between constructs. Each dimension is more relevant to itself than to the other dimensions, It shows that the discriminative validity of dimension is better. To sum up, the data show that the scale has good reliability, Convergent Validity and discriminant validity.

The goodness of fit indices and critical values for measurement model and structural model display that \( \chi^2 / df \) values of 1.956 and 2.270 are between 1 and 3 respectively, conforming to the standard. And CFI values are 0.955 and 0.944, respectively. The TLI values are 0.950, 0.938, all greater than 0.9, up to standard. SRMR value is less than the recommended value of 0.08, shows that the model is acceptable. RMSEA value is less than 0.08, shows that the model fits well. Generally speaking, the goodness of fit of the model is acceptable.

4.2. Construction and Verification of structural equation Model

In this paper, we use Mplus7.4 software to model the structural equation and test the hypothesis (Figure 1.).
5. Conclusions and Discussion
In the study of the direct influence of platform opportunistic behavior on relationship norms, opportunistic behavior is negatively correlated with flexibility norms and solidarity norms. It indicates that the opportunistic behavior of platform will reduce the consumers' expectation to adjust the relationship or transaction activities with the change of environment, and the consumers' willingness to participate in the problem-solving. The interesting finding is that platform opportunism does not decrease the willingness of consumers to comply with conflict resolution norms, but rather is a positive correlation that is certainly worth further study, after all, conflicts between consumers and e-commerce platforms are very common. One powerful explanation is the "cost" problem, for consumers, the time, communication and financial costs of negotiating solutions to conflicts of goods and services are lower than those of the formal process.

In the mediating role of consumers' perceived psychological contract violation, the influence of psychological contract violation on relationship norms is because it influences or shapes customers' relevant psychological states or reactions, and then has a negative impact on relationship norms. This paper uses the psychological contract based on platform service responsibility as the measurement.
dimension of psychological contract violation, and examines the impact of different dimensions of consumer perception of psychological contract violation on relationship norms. It is found that psychological contract violation plays a partial mediating role in platform opportunistic behavior and norms of flexibility and solidarity, which indicates that the relationship between opportunistic behavior and relationship norms is not only affected by consumers’ individual cognitive emotion, but also influenced by other external relationships such as switching costs, service recovery, and so on.

In the moderating effect, the influence of user stickiness on the relationship between service standard, service fairness, interpersonal communication and flexibility norms is supported, and the influence on the relationship between service fairness, symbiotic development and solidarity norms is supported. It indicates that when consumers interact more frequently with e-commerce platform, they will show a more positive relationship with the platform, will be more willing to cooperate with some of the platform change request, and in the face of problems consumers will be more inclined to participate in the solution, rather than to blame the platform unilateral responsibility. The effect of user stickiness on the relationship between symbiotic development and flexibility is not significant, which indicates the limitation of user stickiness. On the one hand, the responsibility of symbiotic development reflects the platform’s emphasis on the long-term relationship, on the other hand, it also reflects the platform’s recognition of the creative value of consumers, and the impact of the symbiotic development on flexibility is based on future development expectations, and is not affected by the stickiness of current users. User stickiness has no significant moderating effect on the relationship between service standard, interpersonal communication and solidarity, it shows that when consumers are faced with the psychological contract violation caused by destructive behaviors such as product quality and service attitude which can be evaded but not evaded, user stickiness cannot play a better role.

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