Consumers’ Redemption Behavior of Mobile Coupons: The Role of Cognitive Trust

Qing TANG\textsuperscript{1,a}, Hong-yi MAO\textsuperscript{2,b,*} and Hong-wei WEN\textsuperscript{1,c}

\textsuperscript{1}Center for Post-Doctoral Studies of Shenzhen Airline, Shenzhen, China
\textsuperscript{2}Economics and Management School, Jiujiang University, Jiujiang, China
\textsuperscript{a}tangqing@hust.edu.cn, \textsuperscript{b}maojoey@gmail.com, \textsuperscript{c}wenhongwei@shenzhenair.com
*Corresponding author

Keywords: Swift Trust, Knowledge-Based Trust, Recommendation Trust, Trust Formation.

Abstract. The formation of trust and the impact on information sharing behavior have been widely studied. However, how cognitive trust affects users’ trust in SNS mobile coupon recommendation is still unknown. This study investigates the effects of swift trust, knowledge-based trust, and their interactions in the mechanism of enhancing trust in social recommendation. Except perceived similarity, swift and knowledge-based trust is positively related with recommendation trust. Moreover, the familiarity with the retailer is complementary with expertise of the recommender, and substitute with trust propensity in enhancing recommendation trust. Theoretical and practical implications are discussed.

1. Introduction

Mobile coupons are digital coupons that sent to mobile phones, smartphones or personal digital assistant (PDA) [1]. Consumer can obtain discounts or rebates using m-coupon by showing the coupon to cashier. Flexible distribution, easy carrying and accurate targeting make m-coupon an efficient marketing tool which has been widely used in mobile commerce [2]. In social networks, mobile coupons can be quickly shared among SNS members and forwarded to huge populations, issuing mobile coupons on the base of SNS platform began to prevail among many retailers. Users are more likely to accept SNS peers’ recommendations rather than retailers’ advertises based on the mutual trust. Integrating mobile coupons with SNS is expected to an effective way to speed up mobile coupon usage. The huge traffic brings enormous opportunities for social media marketing. However, the effectiveness of social media marketing of m-coupon needs further investigation. This study will examine the factors that affecting the redemption behavior of mobile coupons in SNS recommendation.

Cognitive trust is the one of the foundations of recommendation trust formation in organizations [3], and defined as a “trustor’s rational expectations that a trustee will have the necessary attributes to be relied upon”. It is built by trustee’s professional, experience and role performance and can be categorized as swift trust and knowledge-based trust. Kim [4] found that the cognitive trust focused on system safety and credibility of online shopping, and had significant positive impacts on online retailer trust, which affected the purchase intention. Cognitive trust is a basic of affect-based trust with different attributes [5]. However, how cognitive trust affects users’ trust in SNS mobile coupon recommendation is still unknown. We focus on the effects and interactions of swift and knowledge-based trust on recommendation trust in this study. Therefore, this study attempts to fill this gap by examining the following two research questions:

1. What is the impact of cognitive-based trust on recommendation trust?
2. What is the inner mechanism in the effects of cognitive-based trust (swift and knowledge-based trust) on recommendation trust?
2. Research Model and Hypotheses

The research model is described in Fig. 1. The research model examines the linear and nonlinear effects of swift and knowledge-based trust on recommendation trust.

Figure 1. The research model.

2.1 Linear effects of cognitive trust

Swift trust includes the rule-based trust, the category-based trust, user’s characteristic-based trust, and the third party-based trust. We measure each trust as structure assurance, perceived similarity, trust propensity and perceived expertise of the recommender respectively.

Structure guarantee based on rule trust means that organizational structure, rules and regulations, organizational norms can ensure the security of transaction. In m-coupon social media marketing, social network and merchant should ensure the structure conductive to m-coupon sharing and receiving. Good structure assurance can make the social marketing process safe and effective. And the violation behavior will be punished by the social media platform and merchants. Gefen et al. [6] regarded that the rule guarantees on the site such as privacy statement, certification and participation could promote the formation of trust. We infer that:

\[ H1: \text{Structure assurance positively influences the social recommendation trust.} \]

Perceived similarity measures the common values, similar beliefs and common interests shared in recommender and receiver [7,8], has been widely used as category-based trust. Individuals may adopt recommended products from similar ones. The category-based trust can weaken uncertainty and risk in social media marketing and generate trust to the social media marketing. When people feel that others have more similarities with themselves, they have more sense of identity, and then produce a higher trust. We infer that in m-coupon social media marketing context, if a user perceives a high sense of similarity with the recommenders he/she would have more confidence in recommenders’ coupons. Therefore, we assume that:

\[ H2: \text{Perceived similarity positively influences the social recommendation trust.} \]

Trust propensity is individual’s characteristic-base trust. It is a common belief in human nature, and consumers with the trust propensity often tend to trust others [5]. If consumer has a high degree of trust propensity, he/she would be more likely to trust other people’s recommendations. Trust propensity is a stable psychological characteristic and related to growing experience and cultural
background. In the recommendation of mobile coupons, the impact of trust propensity also showed similar characteristics. Therefore, we assume that:

**H3: Trust propensity positively influences the social recommendation trust.**

Expertise of the recommender is another source of swift trust. Individuals may rely on the recommenders’ expertise to make decision when they lack sufficient knowledge about the products. Voyer [9] found that the expertise of the word of mouth marketers had a positive impact on the recipient’s shopping behavior. In mobile coupon recommendations, if the recipient regards the recommenders with high professional, well understanding of the whole redemption process he/she is more likely to redeem the coupon. Therefore, we assume that:

**H4: Expertise of the recommenders positively influences the social recommendation trust.**

Knowledge-based trust is based on the previous interaction with merchants, including the purchase experience of the merchants, mass media advertising and so on. This study operated it as the familiarity with the retailers. Familiarity with the retailers can measure knowledge-based trust and is formed through the past trading experience, the accumulation of reputation. Gefen [6] regarded that the familiarity with the retailers affected users’ perceived ease of use. Johnson and Grayson [10] found that the evaluation of company’s reputation influenced the purchase intention, and the more consumers satisfied with the previous trading, the higher the degree of trust in the retailers. Therefore, this paper assumes that:

**H5: Familiarity with the retailers positively influences the social recommendation trust.**

### 2.2 Nonlinear effects of cognitive trust

Knowledge-based trust is a time-consuming process involving sequential iterations of observable past behavior. The formation of familiarity with the retailer (knowledge-based trust) needs interaction with retailer directly and indirectly through friends or mass media. We infer that familiarity with the retailer may play dissimilar roles in the relationship between swift trust and recommendation trust.

Structure assurance is institutional oriented, reflecting rule-based trust. When familiar with the retailer's high, customers intend to familiarize with institutional settings of the retailers, which lead to a better explicit and tacit understanding of how transaction norms or platform rules could contribute to customer’s interest. Therefore, a prominent level of familiarity with the retailer will strengthen the relationship between structure assurance and recommendation trust. Therefore, regarding perceived similarity, its effects on subsequent trust in recommendation will be strengthened in a high level of knowledge-based trust. Trust propensity is rooted in human personality with personal experience and knowledge, which certainly can be influenced and replaced by additional knowledge growing in the future. In the future, when the knowledge of retailers increases, customers will not rely on their past experience. We could conclude that familiarity with the retailers is substitute with trust propensity when generating recommendation trust. In terms of third party-based trust, the expertise of the recommender and familiarity with the retailer will be complimentary in forming future recommendations. The joint effect of two variables on recommendation trust is greater than the sum of the effect single variable. When customers are more familiar with the retailer, they could leverage their expertise to form some better recommendations. We assume that:

**H6: Familiarity with the retailer positively moderates the relationship between structure assurance trust and recommendation trust.**

**H7: Familiarity with the retailer positively moderates the relationship between perceived similarity and recommendation trust.**

**H8: Familiarity with the retailer negatively moderates the relationship between trust propensity and recommendation trust.**

**H9: Familiarity with the retailer positively moderates the relationship between perceived expertise and recommendation trust.**
2.3 Scale design and data collection

The questionnaire was released on the Epweike website, which is a professional trading platform for products and services like LOGO design, website construction, programming, advertising, program planning and so on. Epweike is an emerging website in China and has achieved more than 4.4 million successful transactions, with over 13 million members. The questionnaire was published from December 1 to 15th, 2014. Each valid questionnaire was paid 2 yuan. We finally received 210 valid questionnaires. The measurement items of all constructs are adopted in previous studies to ensure the validation of the instrument (the original table has been deleted due to space restriction).

3. Results

Partial least square (PLS) method is suitable for relatively small sample size and widely used in IS research. We checked the reliability, convergent and discriminate validity for the measurement model. The minimal item-to-construct loading is 0.73, which is higher than 0.707. All items loaded on the expected factors are larger than 0.1 than on any other factors. The results indicate our model exhibits good convergent and discriminate validity. The values of Cronbach’s alpha value, CR and the value of AVE also indicate that the scale has good discriminant validity, convergent validity. Moreover, our test indicates no serious common method bias threat this study.

Smart PLS3.0 was conducted to analyze the model. Hypothesis test results are shown in Table 1. From the formation mechanism of recommendation trust point of view, swift trust, knowledge-based trust is an important source of trust in recommendation, which interpret 55.4% of the variance of recommendation trust. Assurance, trust propensity, perceived expertise and knowledge-based trust have a significant positive impact on trust in social recommendation. Thus, H1, H3, H4 and H5 are supported. The moderating effects of knowledge-based trust are significant in the relationship between trust propensity and social recommendation trust, expertise of the recommender and social recommendation trust. Thus, H8 and H9 are supported.

<table>
<thead>
<tr>
<th>Table 1. Results of regression analysis.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables</strong></td>
</tr>
<tr>
<td>Structure assurance</td>
</tr>
<tr>
<td>Perceived similarity</td>
</tr>
<tr>
<td>Trust propensity</td>
</tr>
<tr>
<td>Expertise of the recommender</td>
</tr>
<tr>
<td>Familiarity with the retailers</td>
</tr>
<tr>
<td><strong>Moderation effects</strong></td>
</tr>
<tr>
<td>Structure assurance×Familiarity with the retailers</td>
</tr>
<tr>
<td>Perceived similarity×Familiarity with the retailers</td>
</tr>
<tr>
<td>Trust propensity×Familiarity with the retailers</td>
</tr>
<tr>
<td>Expertise of the recommender×Familiarity with the retailers</td>
</tr>
<tr>
<td>ΔR²</td>
</tr>
<tr>
<td>f² (Effect size)</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>F hierarchical</td>
</tr>
</tbody>
</table>

4. Discussions

This paper constructs a model of trust formation in the mobile coupon social recommendation. The impact of cognitive trust on recommendation trust is analyzed. Considering the complexity of cognitive trust, the paper also explores the generation and transfer mechanism of recommendation
trust of m-coupons. This paper may be among the first to study how swift and knowledge-based trust interact with each other to enhance recommendation trust in social media recommendation. Our research provides several implications in social commerce trust research.

First, we studied the effect of recommendation trust from swift trust, knowledge-based trust and their interactions. Swift trust and knowledge-based trust are the main factors in social recommendation of WeChat coupons. Swift trust comes from structure assurances, perceived similarity, trust propensity, and perceived expertise of recommender, while knowledge-based trust comes from familiarity with the retailer. Integrating both type of cognitive trust will provide a better understanding of how recommendation trust formed in social commerce.

Second, swift trusts have significant impact on recommendation trust except for perceived similarity. Structure assurances, perceived similarity, and perceived expertise of recommender positively influence recommendation trust, indicating that the presumptive form of trust could explain the paradoxical and complex trusting behaviors. The result that the path coefficient of perceived similarity is not significant may due to the complexity of individuals in the social network.

Third, knowledge-based trust not only significantly influences recommendation trust but also significantly moderates the effects of trust propensity and expertise of the recommender on recommendation trust. The negative moderating effect in the relationship between trust propensity indicate that familiarity with retailer weaken the impact of trust propensity. In this situation, users can rely on evaluation of retailer’s reputation, goods and services to establish recommendation trust. Besides, familiarity with the retailer positively moderates the relationship between perceived expertise and recommendation trust. Knowledge and previous experience with the retailer can strength the impact of perceived expertise.

Acknowledgement

This research was financially supported by the National Natural Science Foundation (NSFC) Programs of China [71661017] and Jiangxi Provincial Soft Science Research Program of China [20161BBA10033].

References
