

The Effect of Perceived Value on Mobile Reading Users' Willingness to Pay: Postprint

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Abstract

[Purpose/Significance] Mobile reading has emerged as a new trend in national reading; however, users' willingness to pay for reading content is generally low. To ensure the long-term healthy development of the mobile reading industry and enhance users' willingness to pay, investigating the factors that influence users' payment willingness is essential. [Method/Process] Grounded in the User Value Acceptance Model (VAM) theory and incorporating insights from flow theory, perceived trust theory, and perceived risk theory, this study integrates variables of social influence and user copyright awareness based on the characteristics of mobile reading. Through questionnaire surveys, we examine users' willingness to pay for mobile reading and analyze the collected data to identify the primary factors influencing mobile reading users' payment behavior. [Results/Conclusion] Perceived enjoyment and perceived usefulness positively influence perceived value, whereas perceived cost negatively affects perceived value, thereby impacting users' willingness to pay. Perceived value constitutes the primary factor influencing users' payment willingness; perceived usefulness, perceived risk, social influence, and copyright awareness all exert direct effects on users' willingness to pay for mobile reading.

Full Text

Preamble

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The Impact of Mobile Reading User's Perceived Value on Willingness to Pay

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Abstract

[Purpose/Significance] Mobile reading has become a new trend in national reading, yet users' willingness to pay for reading content remains generally low. To promote the long-term healthy development of the mobile reading industry and enhance users' payment willingness, it is essential to investigate the factors influencing users' willingness to pay. **[Method/Process]** Based on the Value-based Adoption Model (VAM) theory and drawing upon flow theory, perceived trust theory, and perceived risk theory, this study incorporates characteristics of mobile reading by adding social influence variables and user copyright awareness variables. Using questionnaire surveys to understand users' willingness to pay for mobile reading and analyzing the collected data, the study identifies the main factors influencing mobile reading users' payment behavior. **[Result/Conclusion]** Perceived interest and perceived usefulness have positive effects on perceived value, while perceived cost negatively affects perceived value, thereby influencing users' willingness to pay. Perceived value is the primary factor affecting users' payment willingness, while perceived usefulness, perceived risk, social influence, and copyright awareness all directly impact users' willingness to pay for mobile reading.

Keywords: mobile reading; willingness to pay; perceived value; copyright awareness

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1 Introduction

In the current era of mobile networks and omnimedia, rapid improvements in smart device performance have enabled mobile reading—defined as reading behavior conducted through digital devices and electronic software [2], including but not limited to text, audio, and images—to emerge as a new reading form. Its advantage of being unrestricted by time and location is gradually transforming the public's traditional reading concepts and practices [1]. According to the 17th National Reading Survey conducted by the China Press and Publication Research Institute, the contact rate of digital reading methods among nationals reached 79.3%, making mobile reading the preferred choice for users. User-paid reading constitutes the primary revenue source for the current mobile reading market, representing the key to user monetization and a strong pillar for the healthy development of the industry. Therefore, studying users' willingness to pay for mobile reading is highly necessary.

A review of relevant literature reveals that current research on mobile reading mostly focuses on development status, profit models, trends, and promotion of various derived APPs, with limited studies examining the reasons and in-

fluencing factors behind the generally low user payment willingness. Li Min and Cheng Qian investigated from a consumer perspective how college students are influenced by external factors, stimulus factors, psychological factors, and response factors during mobile reading payment processes, proposing counter-measures for developing the college student mobile reading payment market [3]. Cheng Xiaoyu and Liu Kunfeng explored influencing factors of users' mobile reading payment willingness based on the Elaboration Likelihood Model and personal payment awareness, using a partial least squares structural equation model for validation. Results indicated that users' personal payment awareness, entertainment value of paid content, usefulness, source credibility, and social influence significantly affect payment reading attitudes [4]. Chen Xiaotong et al., using the Technology Acceptance Model as a prototype and introducing consumer psychological and behavioral factors such as flow experience and perceived monetary value, examined factors influencing users' adoption intention of mobile reading fee-based services, concluding that perceived usefulness is the most important factor affecting adoption intention, while fee-based services in mobile reading have particularities that require meeting users' specific content needs [5].

In summary, existing research focuses on exploring how customer perception affects consumers' willingness to purchase paid content. However, customers' decisions to purchase a product reflect their comprehensive evaluation after weighing costs against perceived benefits. H. W. Kim [6] proposed the Value-based Adoption Model (VAM) based on perceived value theory and Technology Acceptance Model theory, which places greater emphasis on comprehensive evaluation of perceived value. Therefore, this study adopts VAM as the theoretical framework, using perceived value as a mediating variable to evaluate users' willingness to pay for mobile reading products from their comprehensive perceived value. Theoretically, this enriches VAM theory and provides data and cases in the mobile reading domain, offering references for studying mobile reading payment willingness. Practically, it provides guidance for the development of mobile reading platform payment services, helping platforms understand the main factors influencing users' payment willingness.

2 Theoretical Model and Research Hypotheses

2.1 Theoretical Foundation and Hypothesis Development

2.1.1 Customer Perceived Value Theory Customer perceived value originates from Adams' Equity Theory, which links consumers' outcome-input ratio with service providers' outcome-input ratio [7]. V. A. Zeithaml defined customer perceived value as customers' overall evaluation of product and service utility after weighing perceived benefits against costs incurred in obtaining the product or service [8]. Perceived benefits are termed perceived gains, including material and spiritual benefits, while costs incurred are termed perceived sacrifices, such as monetary costs, time costs, and various risks. Numerous studies both domestically and internationally have indicated that the concept of per-

ceived value is crucial to many companies' success [9]. J. L. M. Tam also found through research that consumers' perceived value is an important factor triggering purchasing behavior [10]. Before deciding to pay for mobile reading content, users make a subjective value judgment based on their comprehensive evaluation of perceived gains and perceived sacrifices, generating payment willingness. Accordingly, hypothesis H1 is proposed:

H1: Users' perceived value of mobile paid reading positively influences their willingness to pay.

2.1.2 Perceived Gains Perceived gains refer to the expected benefits users perceive before purchasing a product. F. D. Davis et al. proposed the Technology Acceptance Model (TAM) in 1989 when studying user acceptance of information systems using the Theory of Reasoned Action [11]. The model posits that system use is determined by behavioral intention, which is jointly determined by two important variables—perceived usefulness and perceived ease of use. Existing research has shown that perceived usefulness and perceived ease of use positively influence consumers' online shopping attitudes [12]. Flow theory, widely applied in psychology and defined as “the holistic sensation people feel when fully participating in an activity,” is also commonly used to address optimal experiences for mobile network users [13], typically measured through perceived interest, perceived control, and concentration [14]. Users are mostly in a state of flow during reading. Based on mobile reading characteristics, this study selects perceived interest as a measurement variable. Additionally, a series of studies on consumers' purchase intentions have found that trust is an important factor affecting online consumption [15]. Therefore, this study includes perceived usefulness, perceived ease of use, perceived interest, and perceived trust as perceived gain variables.

(1) Perceived Usefulness. As one of the core variables of TAM, perceived usefulness refers to the degree to which users believe using a system enhances their work performance [16]. Existing research indicates that perceived usefulness increases consumers' purchase intention [17]. In this study, perceived usefulness refers to users' cognition regarding mobile reading's ability to acquire knowledge, improve efficiency, and save time. Research shows that mastering more skills and enhancing personal competitiveness through reading has become a primary purpose [18], with users more willing to read content that contributes to self-improvement. For mobile reading users, the perceived value to themselves is precisely the enhancement in knowledge and efficiency that mobile reading content provides. Accordingly, the following hypotheses are proposed:

H2a: Perceived usefulness positively influences users' perceived value of mobile paid reading.

H2b: Perceived usefulness positively influences mobile reading users' willingness to pay.

(2) Perceived Ease of Use. In TAM theory, “perceived ease of use” indicates

that the easier users subjectively perceive an information system or technology product to operate, the more positive their acceptance attitude. Zhao Feifei also confirmed in studying influencing factors of users' knowledge payment willingness in online Q&A communities that perceived ease of use significantly positively influences users' Q&A payment willingness [19]. For mobile reading, if users find platform operations simple during initial use, it can enhance their perceived experience of the product, constituting part of users' perceived gains. Therefore, the hypothesis is proposed:

H3: Perceived ease of use positively influences users' perceived value of mobile paid reading.

(3) Perceived Interest. The interest of mobile paid reading refers to the pleasure and enjoyment that paid reading content brings to users, representing one of mobile reading's greatest characteristics [20]. This is not only due to its diverse forms and convenience for anytime-anywhere use but also its rich and varied content, including novels and leisure reading materials for users' entertainment. If mobile reading platforms can provide better emotional experiences, users' comprehensive evaluation of perceived value will be higher. Therefore, the hypothesis is proposed:

H4: Perceived interest positively influences users' perceived value of mobile paid reading.

(4) Perceived Trust. Perceived trust and TAM are commonly used as theoretical bases for studying user behavioral intentions. Many consumers' reluctance to choose mobile reading platform payment services partly stems from considerations of platform trust. This study's perceived trust includes trust in platforms and trust in authors. Well-known platforms and authors are more trusted by reading users, who believe their reading content is more reliable. Perceived trust affects users' overall perceived value of paid reading, making it a reference dimension for consumers' pre-payment perceived value. Therefore, the following hypothesis is proposed:

H5: Perceived trust positively influences perceived value of mobile paid reading.

2.1.3 Perceived Sacrifices While obtaining benefits from mobile reading, users must also bear corresponding costs, including economic costs, time costs, etc., such as fees paid for mobile reading products and time spent, as well as potential risks. This study includes perceived cost and perceived risk as perceived sacrifice variables.

(1) Perceived Cost. V. A. Zeithaml [8] proposed perceived cost theory when studying the relationship between price, value, and quality. Existing research has confirmed that perceived cost negatively influences mobile internet users' content payment willingness [21]. When users evaluate the perceived value of mobile paid reading, cost is an essential consideration, including time, money, and effort spent on mobile reading. Since the popularization of mobile internet

in China, various information has become mixed, and users are accustomed to searching for free content online. Before paying for mobile reading content, they carefully consider the price of paid reading. Simultaneously, users compare potentially higher-quality paid content with freely available content, thereby affecting their pre-purchase perceived value. Therefore, the following hypothesis is proposed:

H6: Perceived cost negatively influences users' perceived value of mobile paid reading.

(2) Perceived Risk. Mobile reading platforms are mobile internet platforms with virtual characteristics, which increases uncertainty about product quality and the possibility of security and privacy breaches. Chen Huaping et al. found through empirical research on users' mobile payment behavior that perceived risk significantly influences users' mobile payment willingness [22]. When users believe platforms pose security and privacy risks, they reduce financial transactions, thereby also affecting their perceived value of reading content and reducing their payment willingness. Therefore, the following hypotheses are proposed:

H7a: Perceived risk negatively influences users' perceived value of mobile paid reading.

H7b: Perceived risk negatively influences mobile reading users' willingness to pay.

2.1.4 Social Influence Social influence refers to the phenomenon where individual attitudes and behaviors are affected by others to varying degrees under others' influence, such as from peers, superiors, family members, or the social environment. When users consider purchasing mobile products or services with uncertain factors, they tend to listen to others' opinions and are likely to be influenced by their surroundings. Previous research has considered the direct impact of social influence on behavioral intentions [23], as H. P. Lu et al. found that social network influence and image sense play important roles in user behavioral intentions [24]. A. J. Setterstrom et al. explored the impact of social influence on online content payment willingness from micro, meso, and macro levels, finding that peer groups and reputation are the most important factors affecting users' payment [25]. Therefore, the following relationship hypothesis is proposed:

H8: Social influence positively influences mobile reading users' willingness to pay.

2.1.5 Copyright Awareness During the early development stage of the internet, relevant laws and regulations for digital publishing were not yet sound, and copyright issues faced significant challenges [26], with rampant plagiarism and frequent infringement and piracy incidents. In recent years, as national policies have attached importance to the online literature industry, the copyright environment for online literature has become increasingly standardized. Simul-

taneously, users' awareness of legitimate content has gradually strengthened, and their willingness to pay for copyright has gradually increased. We have reason to believe that copyright awareness will affect users' payment willingness. Therefore, the following hypothesis is proposed:

H9: Copyright awareness positively influences mobile reading users' willingness to pay.

2.2 Research Model Construction

Based on the above theories and hypotheses, this study proposes a theoretical model of the impact of mobile reading users' perceived value on payment willingness, as shown in Figure 1 [Figure 1: see original paper].

3 Research Methodology

3.1 Questionnaire Design

Combining previous literature research with mobile reading characteristics, this study designed a survey questionnaire. All questionnaire items were measured using a five-point scale, with respondents answering according to their own situations and indicating their degree of agreement. The survey was conducted through two channels: (1) online questionnaires via the Wenjuanxing platform, with questionnaire links distributed through social platforms; (2) offline distribution of paper questionnaires. A total of 383 questionnaires were distributed. After eliminating invalid questionnaires with careless responses based on reverse-coded items, 335 valid questionnaires were ultimately collected.

Regarding sample statistics: males accounted for 36.11%, females for 63.88%; the age group 18-25 had the highest proportion at 97.61%; education level was predominantly undergraduate, accounting for 93.13%; average monthly consumption was mainly between 1,000-3,000 yuan, accounting for 80.59%. Based on this basic information, the study also surveyed respondents' mobile reading information: mobile reading experience of over four years was most common, accounting for 53.73%; average daily reading duration was mostly 1-2 hours, accounting for 43.58%; the three most frequently used reading platforms were instant messaging tools, browsers, and Web 2.0 application APPs; mobile reading payment methods mainly included tipping and direct article purchase.

3.2 Variable Measurement

The measurement model included ten latent variables, each containing 3-6 measurement items, measured using a Likert 5-point scale. Specific content is shown in Table 1 .

4 Data Analysis

4.1 Correlation Analysis

This study used SPSS 23.0 to conduct correlation analysis among variables to examine their relationships. Results showed that perceived value positively correlated with users' mobile reading payment willingness ($r=0.350$, $p<0.01$). Perceived interest ($r=0.219$, $p<0.01$), perceived usefulness ($r=0.244$, $p<0.01$), perceived ease of use ($r=0.198$, $p<0.01$), and perceived trust ($r=0.115$, $p<0.01$) all positively correlated with perceived value, while perceived cost ($r=-0.229$, $p<0.01$) negatively correlated with perceived value (see Table 2).

4.2 Structural Model Testing

This study used AMOS 24.0 software to conduct model fitting on the 335 collected questionnaires. Fit indices are shown in Table 3 , indicating that the overall model fit reached an acceptable level. After testing model fitting, AMOS 24.0 was used to conduct significance testing on path coefficients in the research model shown in Figure 1, yielding Table 4 and the final theoretical model (see Figure 2 [Figure 2: see original paper]).

4.3 Mediation Effect Testing

This study includes one mediating variable—perceived value. Therefore, the Bootstrap confidence interval estimation method was selected for mediation testing. Using a 95% confidence level and 2,000 samples, the mediation effect test results are shown in Table 5 and Table 6 . Comparing direct and indirect mediation effect test results shows that after the intervention of perceived value, path coefficients for perceived usefulness, perceived interest, and perceived cost increased, with strengthened influence effects, thus confirming perceived value as a mediating variable.

5 Discussion and Implications

5.1 Research Results Analysis

- (1) Research results show that hypotheses regarding perceived usefulness, perceived interest, and perceived cost on perceived value received significant support. From path coefficients, perceived cost is the primary factor affecting customer value. When considering the comprehensive value of paid reading, users carefully evaluate required costs, including time and monetary costs. Perceived interest and perceived usefulness are also important factors affecting customer perceived value, indicating that users highly concern themselves with spiritual and practical help obtained during mobile reading, expecting improvement through paid reading.
- (2) Hypotheses regarding perceived risk, perceived ease of use, and perceived trust on perceived value were not supported. Perceived risk's effect on

perceived value was not significant, suggesting that when comprehensively evaluating mobile reading value, users rarely weigh perceived risk, possibly because internet technology is maturing and users believe mobile paid reading does not pose significant risk or that risks are within acceptable ranges. Perceived ease of use's effect on perceived value was not significant, possibly because most respondents are frequent mobile reading and mobile payment users familiar with platform operations, with minimal differences between platforms, so perceived ease of use was not considered. Perceived trust's effect on perceived value was not significant, possibly because users prioritize paid reading product quality and benefits over platform or author reputation.

- (3) Hypotheses regarding perceived usefulness, perceived risk, perceived value, social influence, and copyright awareness on payment willingness received significant support. This indicates that perceived value is the decisive factor in users' payment willingness, while perceived usefulness, perceived risk, social influence, and copyright awareness also significantly affect mobile reading payment willingness. From the data, first, perceived risk has no significant effect on perceived value but significantly affects payment willingness, possibly because when comprehensively evaluating value, users focus more on the product itself without considering risk as a value reference. However, when considering payment involving property, users incorporate potential risks such as privacy and financial security risks. Second, mobile reading is a relatively young product service, so for young people, influenced by the sharing economy, users are willing to recommend to others or share on social networks. Finally, as the Party and state attach great importance to intellectual property protection and public cultural quality generally improves, more creators protect their legitimate rights through legal channels, forming a good atmosphere of respecting copyright throughout society, making copyright awareness another variable affecting user payment.

5.2 Recommendations

5.2.1 Improve Content Quality and Reduce Users' Cost Perception

To meet users' spiritual needs, mobile reading platforms can further increase the interest and practicality of mobile reading content, providing diverse products and services to meet different user needs. Since perceived usefulness is the primary factor in customer perceived value, mobile reading platforms should encourage high-quality content creation, widening the gap between free and paid reading content to enable users to truly obtain spiritual satisfaction and improved efficiency in practical affairs from paid content. As perceived cost is a negative influencing factor on customer perceived value, mobile reading platforms should attach importance to this, using big data analytics to grasp users' acceptable cost levels and adopting marketing strategies to reduce users' cost perception. Additionally, for different book types, platforms can adopt

different pricing models, such as buying e-books with free premium paperbacks for classic masterpieces, or ending-payment and advance-reading models for suspense novels, to more targeted attract readers.

5.2.2 Leverage Platform Social Features and Strengthen Copyright Protection for Original Works Mobile reading platforms should fully leverage their unique social media characteristics. Under the internet sharing economy, users are more susceptible to social influence. Mobile reading platforms can provide sharing functions or adopt marketing measures encouraging users to share high-quality paid content on social platforms, even using share-for-discount marketing strategies to expand platform visibility and stimulate mobile reading users' interest. Although public copyright awareness has gradually strengthened in recent years, due to abundant free content on mobile internet, pirated resources still dominate the market, causing users to search for free resources before paying for reading. Therefore, mobile reading platforms should strengthen copyright protection, enhance content creators' copyright protection awareness, and cultivate public awareness of paying for copyright and quality content.

5.3 Research Limitations and Future Outlook

This study's limitations include: using customer perceived value as a mediating variable with perceived interest, perceived usefulness, perceived ease of use, perceived trust, and perceived cost as antecedent independent variables to investigate factors influencing users' mobile reading payment willingness. In reality, factors influencing customer perceived value can be not only divided into gains and sacrifices but also reclassified into other types such as functional value, hedonic value, and utilitarian value. Additionally, due to objective constraints, most questionnaire respondents were undergraduate students, resulting in a relatively homogeneous user sample, which may affect research result accuracy. Future research should address these issues with corresponding improvements.

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Li Tingting: Responsible for questionnaire design and distribution, data analysis, and drafting the manuscript.

He Jianjia: Responsible for providing research ideas, checking paper logic structure, and revising the manuscript.

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