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Influencing Factors of the Continuous Use of a Knowledge Payment Platform—Fuzzy-Set Qualitative Comparative Analysis Based on Triadic Reciprocal Determinism

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Abstract: Based on triadic reciprocal determinism, in this study, we adopted the fuzzy-set qualitative comparative analysis (fsQCA) method to conduct configuration analysis on the factors that influence the continuous use of knowledge payment platforms and explain the mechanism of the configuration effect of different influencing factors. The research included six casual variables: perceived value, platform quality, satisfaction, trust, subjective norms, and habits. Continuous use intention and continuous use behavior were used as the outcome variables. By discussing the action paths of six casual variables on two outcome variables, it is suggested that the operators of knowledge payment platforms should select different influencing factor configuration paths to improve the service and promote the continuous use of the knowledge payment platform by users.

Keywords: knowledge payment platform; continuous use intention; continuous use behavior influencing factors; fsQCA analysis

1. Introduction

At present, there is a great deal of academic research on knowledge payments [1,2] but little research focuses on the continuous use of knowledge payment platforms. Knowledge payment platform products are seriously homogenized; therefore, it is more difficult to attract new customers and expand the number of people using knowledge payment platforms. In addition, the time and economic costs of developing a new customer are much higher than those of maintaining an old customer [3]. Therefore, while recruiting new users, it is necessary to avoid the loss of existing customers, increase continuous use among existing customers, and improve the repurchase rate, which are necessary strategies for the sustainable survival and development of knowledge payment platforms. The continued use of knowledge payment platforms is a complex and dynamic process. The present studies looked only at either continuous use intentions or continuous use behaviors. There are few studies that compared the influencing factors of continuous use intention and continuous use behavior. At present, research on the structural equation method of continuous use behavior only focuses on the linear relationship between a single factor and the intention or behavior of continuous use and measures the independent effect of each factor on the intention or behavior of continuous use. However, this cannot explain the complex causal relationship between multiple factors and behavior outcomes. Continuous use of behavior repetition is the result of the joint action of the human, environment, and behavior. In-depth research on the influencing factors of knowledge payment platform continuous use intention and behavior can reveal the user's path of continuous use and promote the user's continued use of the knowledge payment platform. This is of great significance for the sustainable development of knowledge payment platforms [2]. Therefore, the motivations of this research are as follows: First, we tried to use fuzzy-set qualitative comparative analysis (fsQCA), a method of exploration, to identify the configuration of the influencing factors on continuous use intention and continuous use behavior. Through the comparison

of two groups of solutions, we find the different influencing factors between the occurrence of continuous use intention and continuous use behavior, then we can further analyze the impact and sustainable behavior. The effective strategies identified can be used to promote the generation of continuous use intention and the transformation of continuous use intention into continuous use behavior.

Second, in order to have a broader research view, we researched the influencing factors of continuous use intention and continuous use behavior regarding knowledge payment platforms based on triadic reciprocal determinism which can include factors that come from people, environment, and behavior.

Last but not the least, the research tried to find and show different paths to help knowledge payment platform or similar platform operators promote the sustainable development of the platform economy and adopt accurate methods to solve associated problems at different stages.

This study makes several contributions. First, the current research on the continuous use of knowledge payment platforms still focuses on the influencing factors of continuous use intention or behavior, ignoring the differences and connections between the influencing factors of continuous use intention and behavior. Through empirical analysis, this study identified the differences between the paths of continuous use intention and continuous use behavior, which are conducive to distinguishing and selecting strategies that promote continuous use intention and continuous use behavior. Secondly, the study used the fuzzy-set qualitative comparative analysis method to explore the factors of continuous use intention and continuous use behavior from the perspective of configuration, which enriches the empirical research in the field of continuous use intention and continuous use behavior regarding knowledge payment platforms. Thirdly, based on triadic reciprocal determinism, this study also considered the main factors of environment, platform users, and behavior, making the research perspective even broader and systematic.

The rest of this paper is organized as follows: the next section presents the theoretical background, followed by the research model. Section 3 describes the research methodology, including the study design and the data collection procedure. Section 4 analyzes the outcomes through the fsQCA method. Section 5 presents and discusses the results of the study, as well as the implications and directions for future research. Section 6 presents the research conclusions.

2. Theoretical Background

2.1. Continued Use of Knowledge Payment Platforms

"Knowledge payment platform" refers to a platform where knowledge providers provide knowledge and information to people in need for a fee, which has typical characteristics of e-commerce (i.e., sales and purchases) [2]. Knowledge payment platforms can provide diverse, professional, accurate, and high-quality knowledge. In addition, the means of obtaining knowledge from a knowledge payment platform is also very convenient, which saves the knowledge demanders a lot of search time and energy and can improve the personal learning efficiency [1,4,5]; therefore, people are willing to obtain knowledge from a knowledge payment platform.

The types of knowledge products on the knowledge payment platform include graphic knowledge paid products, audio knowledge paid products, video knowledge paid products, and question and answer knowledge paid products. The main models of paying for knowledge are questions and answers/live, book listening, column/course, community, and consulting.

In recent years, the public has paid more attention to the width and depth of self-knowledge, and people's acceptance and recognition of knowledge payment have been increasing. With the continuous development of the Internet industry, the knowledge payment industry has gained a lot of benefits. With the gradual maturity of the operation mode of the knowledge payment platform and the continuous enrichment of content and forms, the overall market scale of the industry is expected to accelerate the expansion. iiMe-

dia Research data shows that since 2017, the market scale of China's knowledge payment industry has expanded rapidly, reaching 39.2 billion yuan in 2020, and is expected to reach 67.5 billion yuan by 2021. The scale of paid knowledge users in China has maintained a steady growth trend, growing to 418 million people in 2020. During the novel coronavirus outbreak in 2020, 63.1 percent of Chinese users bought paid knowledge products.

According to the review of research on the factors influencing users' continuous use of knowledge payment platforms, from the perspective of theory and model selection, most research refers to and expands existing theories and models. These theories and models are mainly derived from information systems and social psychology. Commonly used theories or models of information systems include the technology acceptance model (TAM) [6], the IS success model [7], the unified theory of acceptance and use of technology (UTAUT), the innovation diffusion theory (IDT), the expectation confirmation model (ECM) [8], the expectation confirmation model of IS continuance (ECM-ISC) [8], the expanded expectation confirmation model (EECM) [9], the task-technology fit (TTF), the technology continuity theory (TCT), and other information system-related theoretical models to study continuous use behavior. Theories or models of social psychology include the theory of planned behavior (TPB), the expectation of recognition theory, social identity theory, the sense of social presence theory, habit theory, trust theory, experience value theory, and attachment theory. In addition, some scholars have used the perceived risks theory, flow theory, and the stimulus-organism-response model (S-O-R) to study continuous use behavior.

Regarding research methods, the current research on the continuous use of knowledge payment platforms mainly adopts statistical analysis methods, mainly structural equation models and multiple linear analysis. In general, it follows the research logic of putting forward hypotheses based on existing theories and research and using a structural equation model (SEM) to empirically test the hypotheses. The analysis of the continuous use behavior of knowledge payment platforms considers the relationship between each factor among multiple influencing factors. However, the influence of the combined configuration of multiple factors on the outcome cannot be obtained.

Regarding research content, the existing research content on the continuous use of knowledge payment platforms involves continuous use intention, continuous use behavior, continuous sharing behavior, and continuous payment behavior. The factors influencing the continuous behavior of knowledge payment platforms mainly involve three aspects: users, platform, and environment. User factors include emotional factors (satisfaction [10], attitude [11], etc.), cognitive factors (perceived value [12], perceived usefulness [8], etc.), and other personal factors (Internet experience [13], motivation [14], etc.). Platform factors include system quality (safety, compatibility, etc.), information quality [15] (credibility, usefulness, etc.), and service quality (platform image, use efficiency, etc.). Environmental factors include social factors (convenience conditions, subjective norms, etc.) and economic factors (alternatives, conversion costs, etc.).

2.2. Triadic Reciprocal Determinism

Triadic reciprocal determinism comes from social cognitive theory (SCT). The American psychologist Bandura proposed triadic reciprocal determinism [16,17], which claims that individual behavior is formed by the interaction between the individual, the environment, and behavior, as shown in Figure 1, where P represents the person, E represents the environment, and B represents the behavior. The three are mutually determined by causality and interaction, thus constituting a complete system. Triadic reciprocal determinism surpasses the traditional "unidirectional determinism" in cognitive psychology, takes the individual, environment, and behavior into consideration comprehensively, and constructs a bridge of interaction between individual inner cognition and the external environment around behavior. According to the triadic reciprocal determinism theory model, knowledge payment platform continuous use behavior is essentially the result of the interaction between users' individual factors, the external environment, and the use behavior. Every satisfying usage can promote continuous use behavior or cessation of use,

which can also prompt users to continue to recommend the platform. This study is based on existing research and adopts the theory of triadic reciprocal determinism. The research selected individual factors and environmental factors that influence the continuous use of knowledge payment platforms and analyzed the combination of different relationships between these factors of the knowledge payment platform that affect the desire and behavior of users regarding continued use, thus promoting sustainable continued behavior and reducing the occurrence of disuse.
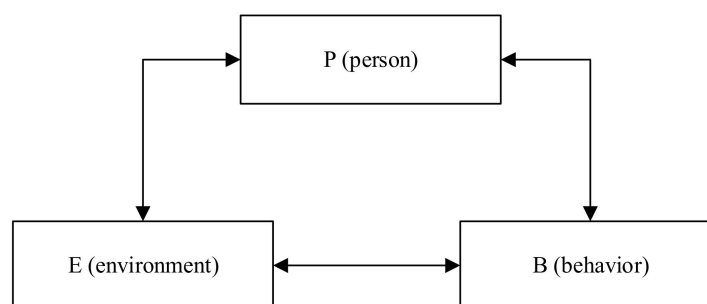
Figure 1. Triadic reciprocal determinism theory model.

3. Methods

3.1. Fuzzy-Set Qualitative Comparative Analysis (fsQCA)

QCA is a way of looking at processes holistically via systems. Each case is regarded as a configuration of casual conditions and outcome, and there is an asymmetric relationship between the configuration for outcome and its non-set in the research. The presence of a certain outcome is not caused by a condition acting alone but is the outcome of related conditions each playing a comprehensive role [18,19]. This method helps identify the complex causal relationships caused by the interdependence between variables. The most commonly used analysis techniques of QCA include csQCA (crisp-set qualitative comparative analysis), mvQCA (multi-value set qualitative comparative analysis), and fsQCA (fuzzy-set qualitative comparative analysis). This study adopted the fsQCA method for the analysis to handle fine-grained data [18].

As a new method developed from set theory, fuzzy-set qualitative comparative analysis (fsQCA) has been used more frequently in business and management research and has become a hot topic in methodology in recent years [20–23]. fsQCA is a diversity-oriented approach that proposes different paths to understand the generation of outcomes [24]. Different from traditional quantitative technology based on correlation method, fsQCA attempts to analyze the interdependence of causal conditions and the conjectural causality represented by a configuration [19,25]. fsQCA assumes equifinality between configurations [26]. This means that more than one configuration can produce the same outcome. fsQCA advocates for causal asymmetry and conditioned asymmetry. Based on the advantages and characteristics of fsQCA described above, this method can better explain the heterogeneity between cases and the complex configuration effect between conditions [27].

Following the recommendations of more recent studies regarding the best practice for fsQCA [21,28], the operation steps of fsQCA are as follows. First, casual conditions are extracted from theoretical analysis. When using fsQCA to study a certain problem, the conditions that are suitable for configuration analysis should be extracted by analyzing the theory and evidence in existing studies. The second step is to collect data. Data suitable for the QCA approach can be derived from textual cases, secondary data, and questionnaire design. The third step is the calibration for variables. Before the analysis of the fsQCA method, data should be calibrated and converted into a set. The fourth step involves the truth table. The fifth step is the standardized analysis. The sixth step is the evaluation of the results.

3.2. Outcome and Casual Conditions

The selection strategies of casual conditions commonly used in QCA include the Popper falsification method, theoretical perspective method, supplementary strategy, and comprehensive strategy [29]. In combination with triadic reciprocal determinism, the "theoretical perspective" method and "comprehensive" strategy were adopted in the selection of casual variables. The "theoretical perspective" method finds the core conditions that influence the analysis outcomes through regression literature and existing mature classical theories and provides solid theoretical support for the research. At the same time, combined with the characteristics of the knowledge payment platform, a comprehensive strategy is adopted to include more comprehensive casual variables as far as possible.

Based on the above analysis and combined with existing studies and mature theoretical models, the following research variables were extracted to construct the sustainable-use model of the knowledge payment platform, as shown in Figure 2. fsQCA was used to analyze the combination relationships between variables in the model.
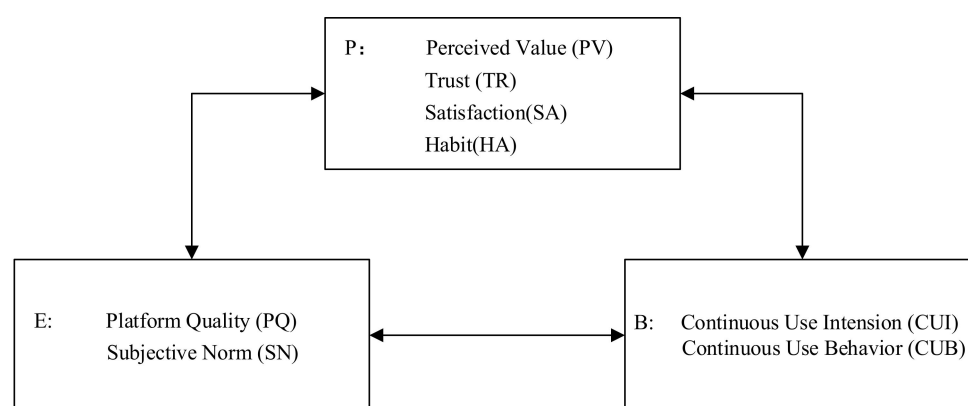
Figure 2. Research framework. Note: P represents the person, E represents the environment, and B represents the behavior.

3.2.1. Causal Conditions

Perceived value (PV): There are many definitions of perceived value, but this study adopted Zeithaml's definition. Zeithaml [30] defined customer perceived value as consumers' overall evaluation of the utility of a particular service based on the comparison of benefits and costs. From the perspective of balancing perceived benefits and perceived costs, referring to the dimensional classification standards proposed by Sheth, et al. [31], Sweeney and Soutar [32], Petrick [33], etc., combined with the characteristics of the continuous use behavior of a knowledge payment platform, this study measured the perceived value from the following dimensions: perceived usefulness in terms of perceived revenue, perceived expense level in terms of perceived payment (monetary payment), perceived ease of use (time and energy investment), and perceived risk (mental investment).

Platform quality (PQ): As a carrier to provide users with knowledge products and knowledge services, platform quality is a key factor for users' continuous use. Combined with the characteristics of information systems and knowledge payment platforms, the quality of a knowledge payment platform is measured from three dimensions: knowledge quality, system quality, and service quality. The quality of knowledge is defined as the timely, relevant, complete, professional, and understandable nature of the information provided by the knowledge provider [34]. System quality refers to the ability of the platform provider to establish and operate the platform well, ensure the basic functions of the platform, and maintain a stable and reliable platform system [34]. Quality of service refers to the indirect contact between the platform provider and users and the subjective experience generated by the internal activities of users to meet their needs [34].

Trust (TR): Some scholars have shown that users' trust in the platform technology, privacy security, knowledge provider, and system has a significant impact on users' acquisition behavior [35–37].

Subjective norm (SN): Subjective norms refer to the social pressure that individuals feel when they take or do not take specific actions [38]. In other words, individual behavior decisions will be subject to the binding force of superiors, colleagues, family members, and friends, reflecting the influence of society and people around them on individual behavior decisions. Rational behavior theory and planned behavior theory claim that subjective norms are positively correlated with behavioral intention.

Satisfaction (SA): After users use the knowledge payment platform or are in the process of continuous use, feelings of satisfaction and pleasure arise; such feelings are more psychological. Expectation–Confirmation Theory identifies IS continuation intentions determined by their satisfaction with IS use [9]. An increase in user satisfaction will lead to the intention to use and thus used [39]. User satisfaction is highly correlated with usage and is also related to IS continuance intention [9,40,41].

Habit (HA): Habits reflect an unconscious, automatic tendency of behavior developed in the course of one's personal history. Limayem et al. [10] stated that habit comes from repeated use behavior and is an autonomous response to a stimulus. The academic circle also generally acknowledges the important influence of habits on users' continuous use behavior. When users use the knowledge payment platform, the probability of the behavior determined by their habits is higher, and they can directly determine the user's behavior without following the user's intention.

3.2.2. Outcome

Continuous use intention (CUI): Continuous use intention is a subjective tendency to choose something repeatedly and can be used to predict the generation of continuous use behavior. Continued use intention is more important than initial acceptance; it is of vital importance for the knowledge payment platform to achieve sustainable development [8,42].

Continuous use behavior (CUB): When the user has the intention of continuous use, only the continuous use behavior of the user can truly reflect whether the knowledge payment platform has sufficient attraction and user retention, which can create value for the knowledge payment platform [34].

To sum up, this study included a total of eight variables related to users' continuous use of knowledge payment platforms. The perceived value, trust, habits, and satisfaction of the ante-dependent variables belong to the personal factors of triadic interactive determinism. Platform quality and subjective norms are environmental factors. Continuous use intention and continuous use behavior as outcome variables are behavioral factors. The above factors refer to variables in the relevant literature and classical theories and reflect the characteristics of continuous use by users of knowledge payment platforms.

3.3. Data

The sample data of this study were obtained by questionnaire. Measurements were made using a seven-point Likert scale ("1" for strongly disagree, "4" for the middle point, and "7" for strongly agree). Based on the existing research results of scholars, the authors drew lessons from the verified scale and took full account of the characteristics of the research object in this study to pertinently select and adapt the variable measurement items of the scale. Data were obtained online, and questionnaires were mainly distributed through a WeChat group on a mobile social network. The questionnaire mainly included three parts. The first part contained the basic statistical characteristics of the subjects, including gender, age, education, occupation, and income. The second part covered the use of knowledge payment platforms. This included the type of platform used, the type of program used, and the length and frequency of use. The third part included questions designed based on existing studies (see Table 1) centering on the casual variables and outcome variables. A

total of 395 questionnaires were collected in this study, and 386 valid questionnaires were obtained after eliminating 9 invalid ones.

Table 1. Questionnaire design.

Variable	Questions	Literature Sources
CUI	5	Lin and Wang [43], Zheng, et al. [44], Bhattacherjee [34]
CUB	5	Bhattacherjee [34]
PQ	10	DeLone and McLean [39], Hassanzadeh, et al. [45]; Kim, et al. [14], Roca, et al. [46]
PV	10	Davis [6], Murphy and Enis [47]
TR	3	Yao-Hua Tan [48], Carter and Belanger [49], Pavlou [3]
SN	4	Fishbein and Ajzen [38]
SA	4	Xu, et al. [50]
HA	3	Brown, et al. [51], Landis, et al. [52], Limayem, et al. [10]

PQ—platform quality; PV—perceived value; TR—trust; HA—habit; SN—subjective norm; SA—satisfaction; CUI—continuous use intention; CUB—continuous use behavior.

Table 2 shows the demographic characteristics of the valid sample. In terms of gender, female users accounted for 45.6% and male users accounted for 54.4%. In terms of user age, respondents who were 30–39 years old accounted for 35% and were the main age group of the sample distribution. From the perspective of occupation, public and private groups dominated, accounting for 30%. In terms of educational background, 73.85% of users had a bachelor's degree or above. The average monthly income was CNY 6001–8000 for 37.9% of the respondents. In terms of the time of use, most users had used the knowledge payment platform for half a year, accounting for 31.54%. In terms of knowledge payment platforms, Dragonfly FM had the largest number of users, accounting for 33.7%, followed by Litchi Micro course (31.28%), Youshu (29.74%), and Zhihu (28.97%). In terms of product types, most people (59.49%) chose column/course, followed by a paid community (55.38%) and a live broadcast (48.72%).

Table 2. Sample's demographic characteristics.

Attribute	Classification	Ratio (%)
Gender	Male	54.4
	Female	45.6
Age	Under 20 years	5.2
	20–29 years	28.5
	30–39 years	35.0
	40–49 years	28.0
Education	College education or below	26.2
	Undergraduate	53.9
	Master's	10.8
	Ph.D. students	9.2
Disposable income (CNY)	Lower than 2000	13.1
	2001–4000	10.5
	4001–6000	10.3
	6001–8000	37.9
	Above 8000	28.2
Occupation	Students	19.7
	Employees of state-owned enterprises	10.1
	Foreign/joint venture employees	18.9
	Private enterprise	30.3
	Individual/boss	1.3
	Freelance work	7.3

3.4. Reliability and Validity Tests

The reliability of the scale was tested with the sample data obtained from the formal survey. SPSS 22.0 was used for the reliability analysis, and the results showed that Cron-

bach's alpha value was 0.975 > 0.7, and Cronbach's alpha values of the deleted items in eight variables were all less than or equal to 0.975, indicating the good reliability of the scale. It had high internal consistency. The validity analysis using SPSS 22.0 showed that the KMO value was 0.98 > 0.7, and Bartlett's sphericity test significance p = 0.000 < 0.05, indicating good scale validity.

3.5. Data Calibration

The fsQCA is an analysis technique based on set theory that first requires data calibration [19,29] to transform the original variables into a set range from 0 to 1 that can be used for necessity and sufficiency analysis. This study used the direct calibration method [53] by setting three anchors, namely, full membership, full non-membership, and the crossover point, among which, the crossover point was the largest fuzzy point in the set. In this study, the maximum, mean, and minimum values of variables were used as anchors [54,55]. We input values of 0.5 as 0.501 to those scores in the fs/QCA software program, which guarantees that no cases are dropped during the analysis [56].

4. Results

4.1. Analysis of Necessary Conditions

In fsQCA, a condition always exists when the outcome occurs, and the condition is necessary to obtain the outcome. Consistency is an important measure of the necessary conditions, and consistency represents the extent to which the outcome act as a subset of a perfector condition. It is widely believed that when consistency >0.9, the corresponding precursor condition is the necessary condition [29,57]. Coverage is an important indicator to judge the empirical relevance of these necessary conditions based on the consistency satisfaction (i.e., when identified as necessary conditions). As can be seen from Table 3, an explanatory variable of consistency >0.9 for the outcome variable of continuous use intention (CUI) or continuous use behavior (CUB) did not exist; therefore, there were no necessary conditions for the user to produce continuous use intention or produce continuous use behavior.

Table 3. Necessity analysis.

Conditions	Outcome: CUI		Outcome: CUB	
	Consistency	Coverage	Consistency	Coverage
PQ	0.844079	0.870409	0.704076	0.757658
PV	0.813500	0.886981	0.682416	0.776461
TR	0.829845	0.807985	0.741017	0.752919
HA	0.818723	0.829229	0.707161	0.747428
SN	0.868390	0.843412	0.740560	0.750583
SA	0.839616	0.839656	0.727080	0.758781
~PQ	0.633261	0.576668	0.610206	0.579873
~PV	0.672540	0.584444	0.625294	0.567051
~TR	0.599580	0.576056	0.568490	0.569973
~HA	0.628493	0.581636	0.602706	0.582063
~SN	0.609630	0.587157	0.586606	0.589588
~SA	0.641500	0.600691	0.603835	0.590047

4.2. Configurational Analysis

In a qualitative comparative analysis, the number of cause configurations of fuzzy-sets is equal to 2nd of the number of casual conditions (n stands for the number of casual conditions) [29]. However, the actual observed cases may not satisfy all the configurations, and there may be no corresponding cases (or so-called logical remainders) for some configurations. Therefore, a researcher needs to simplify the truth table composed of all conditional configurations [29,53]. The configuration results leading to the presence or absence of the outcomes are obtained mainly according to Boolean algebra. In this study, six conditions were selected, and 64 configurations existed. Referring to the analysis criteria

recommended by previous studies, this study set the consistency threshold at 0.8 [18,26] and the case frequency threshold at 5 [28]. The PRI consistency threshold was 0.7 [55] such that less than 0.7 in the outcome column was coded as 0.

Complex, intermediate, and parsimonious solutions can be obtained using standardized analysis. The study focused on the intermediate solution and analyzed the core conditions in the configuration with the parsimonious solution. Seven configurations were obtained using standardized analysis of continuous use intention and six configurations were obtained by continuous use behavior, suggesting that causes leading to the continuous use of a knowledge payment platform were varied.

4.2.1. Configuration Analysis of Continuous Use Intention

The continuous use intention configuration yielded seven sets of solutions. These seven sets of solutions could be divided into three types according to different core conditions: platform quality-driven, satisfaction-driven, and platform quality- and satisfaction-driven together. The final configuration of continuous use intention is shown in Table 4.

Table 4. Configuration results of continuous use intention.

Configurations	T1	T2	T3	T4	T5	T6	T7
PQ	●	●	●	●	●	⊗	
PV		•	•	•	•	•	⊗
TR		•	⊗		●		•
HA	⊗			⊗		•	•
SA			⊗	●	●	●	●
SN	•	•				⊗	•
CV	0.577	0.750	0.457	0.557	0.713	0.482	0.594
NCV	0.006	0.023	0.005	0.001	0.006	0.007	0.004
CS	0.966	0.946	0.978	0.976	0.967	0.985	0.982
OCV				0.802			
OCS				0.925			

Note:(1) A black circle (●) represents the presence of a condition and a circle with "⊗" indicates its absence. Large circles represent core conditions, small circles represent peripheral conditions, and blank spaces indicate that the condition may or may not exist in the configuration. (2) CV stands for coverage, NCV stands for net coverage, CS stands for consistency, OCV stands for overall coverage, and OCS stands for overall consistency.

Specifically, configuration T1 indicated that the combination of higher platform quality, subjective norms, and lack of habits could generate continuous use intention among users. Configuration T2 indicated that higher platform quality, subjective norms, and trust could generate users' continuous use intention. Configuration T3 indicated that higher platform quality, perceived value, lack of satisfaction, lack of trust could generate continuous use intention among users. Configuration T4 indicated that higher platform quality, satisfaction, perceived value, and lack of habit could generate continuous use intention. Configuration T5 indicated that higher satisfaction, platform quality, perceived value, and trust could generate continuous use intention. Configuration T6 indicated that higher satisfaction, habit, perceived value, and lack of platform quality as well as lack of subjective norms could generate continuous use intention among users. Configuration T7 indicated that the combination of higher satisfaction, subjective norms, trust, habits, and lack of perceived value could also generate continuous use intention.

In general, the first five configuration paths all contained platform quality, and configurations T4–T7 all contained satisfaction, showing that the two played key roles in the generation of continuous use intention. Moreover, if one of the variables of satisfaction or platform quality was missing, the other variable needed to be present as a core condition. This meant that, in the path toward continuous use intention, at least the satisfaction or quality of the knowledge payment platform must be higher than that of other platforms that the users have used before or higher than users' expectations for this platform. Configurations T3–T6 all contained perceived value, indicating that perceived value was also an important condition for users to generate continuous use intention. However, perceived

value did not appear in every configuration as a necessary condition, indicating that users could have continuous use intention even if they did not feel that the knowledge payment platform was valuable to them. The total number of variables in configuration T7 was higher than that in the other six groups, indicating that the absence of perceived value required a combination of habits, subjective norms, trust, and higher satisfaction to produce continuous use intention. This result fully showed the complexity and diversity of the path toward a customer's intention to use the platform continuously, and it was necessary to fully explore the influential factors of different customer groups' continuous use intention, which provided a new idea for the development and operation of knowledge payment platforms.

4.2.2. Configuration Analysis of Continuous Use Behavior

The continuous use behavior configuration yielded six sets of solutions. These six sets of solutions could be divided into two types according to different core conditions: one was the existence of platform quality and a lack of habits as the core condition (B1–B4); the other was the existence of habits and a lack of platform quality as the core condition (B5 and B6). The final configuration of continuous use behavior is shown in Table 5.

Table 5. Configuration results of continuous use behavior.

Configurations	B1	B2	B3	B4	B5	B6
PQ	●	●	●	●	⊗	⊗
PV		•	⊗	•	⊗	•
TR		⊗		●	•	
HA	⊗	⊗	⊗	⊗	●	●
SA	⊗	⊗		•	•	•
SN	•		•	⊗	•	⊗
CV	0.419	0.344	0.436	0.382	0.432	0.417
NCV	0.005	0.000	0.012	0.006	0.017	0.015
CS	0.876	0.906	0.876	0.892	0.885	0.890
OCV			0.546			
OCS			0.827			

Note:(1) A black circle (●) represents the presence of a condition and a circle with "⊗" indicates its absence. Large circles represent core conditions, small circles represent peripheral conditions, and blank spaces indicate that the condition may or may not exist in the configuration. (2) CV stands for coverage, NCV stands for net coverage, CS stands for consistency, OCV stands for overall coverage, and OCS stands for overall consistency.

Configuration B1 indicated that the higher platform quality, subjective norms, lack of satisfaction, and lack of habit combination could produce continuous use behavior. Configuration B2 indicated that the platform quality, perceived value, lack of habit, lack of satisfaction, and lack of trust combination could produce continuous use behavior. Configuration B3 indicated that the higher platform quality, lack of perceived value, lack of habit, and subjective norms combination could produce continuous use behavior. Configuration B4 indicated that the combination of higher platform quality, higher trust, perceived value, satisfaction, lack of habit and lack of subjective norms produced continuous use behavior. Configuration B5 indicated that the combination of stronger habits, satisfaction, trust, subjective norms, lack of platform quality, and lack of perceived value could produce continuous use behavior. Configuration B6 indicated that the combination of stronger habits, perceived value, satisfaction, lack of platform quality, and lack of subjective norms could produce continuous use behavior.

In the path to habit loss, higher platform quality was required to generate continuous use behavior. In the path to platform quality loss, it took stronger habits to generate continuous use behavior. This means that either the platform quality or habit at least needed to exist as a core condition to generate continuous use behavior. Platform quality appeared as a core condition in four paths, habit in two, and trust in one. There was a condition missing in each of the six paths, indicating that any single variable in these variables was not a necessary condition for the occurrence of continuous use behavior.

However, there were missing variables in each path, and at least one variable appeared as a core variable, which indicated that, if there were missing factors, there needed to be some other factors in a stronger form to promote the occurrence of continuous use behavior. The existence of two environmental factors, namely, platform quality and subjective norms, in configurations B1 and B3 could promote the occurrence of continuous use behavior, indicating that the environment had a great influence on people. The combined effect of the internal environment (platform quality) and external environment (subjective norms) could motivate users to continue to use the knowledge payment platform.

4.3. Robustness Test

Checking the robustness of the analysis results is a key step in QCA research [18,58]. The robustness test of QCA includes various methods. The most commonly used method is to reasonably adjust the settings of relevant parameters, such as the calibration basis, minimum case frequency, and consistency threshold value, and then analyze the adjusted data again to compare the configuration changes to evaluate the reliability of the results [58–62]. If the adjustment of parameters does not result in substantial changes in the number, composition, consistency, and coverage of configurations, the analysis results can be considered reliable [21]. In this study, the robustness test was conducted by adjusting the consistency level (the consistency level was increased from 0.8 to 0.82) and changing the minimum case frequency method (4 instead of 5). The two criteria of QCA result robustness proposed by Schneider and Wagemann [29] (set relation state of different configurations and fitting parameter difference of different configurations) were used for evaluation. It was found that the research conclusion of this study was still robust.

5. Discussion

The results of this study showed the different paths of continuous use intention and behavior and compensated for the deficiencies of previous studies. This study enables the operators of knowledge payment platforms to reconsider the method of user retention from the perspective of a macrosystem. At the same time, it can subdivide user groups at the microlevel and adopt precise service methods according to the needs of users in each path to improve the continuous utilization rate of knowledge payment platforms.

5.1. Practical Implications

Focus on platform quality and satisfaction. Platform operators should improve the quality of knowledge payment platforms and attach importance to improving user satisfaction. The improvement of platform quality can be carried out from the aspects of improving the quality of knowledge products, improving system functions, and optimizing platform services. User satisfaction can be improved by irregularly conducting user satisfaction surveys to receive timely user demand feedback and other aspects.

Further develop functions to cultivate user habits. Open community discussion, check-in and punch cards, and other functions can also organize members' online or offline activities. Operators should establish a rich incentive mechanism to encourage users to extend their use time or increase the opening frequency of the knowledge payment platform to help users to form the habit of continuous use of the knowledge payment platform and develop an attachment to the knowledge payment platform.

Platform operators can carry out multi-angle and systematic thinking based on the intention of continuous use and different paths of continuous use behavior. Considering the combination of different factors in many paths can jointly promote users' continuous use intention and then promote the occurrence of continuous use behavior. In addition, according to the results of the study, since the configuration path generated by the user's continuous use intention is not the same as the path generated by the continuous use behavior, the continuous use intention is not equal to the continuous use behavior. The six factors play different roles in promoting the formation of continuous use intention and the occurrence of continuous use behavior. It is necessary to adopt different solutions

according to different configuration paths to promote the formation of continuous use intention and then promote the occurrence of continuous use behavior. Furthermore, we should pay attention to the interaction of person, environment, and behavior. Only when the influencing factors of the three aspects are fully considered and improved can a sustainable knowledge payment platform ecosystem be created.

5.2. Research Limitations and Prospects

There are some deficiencies in this study that need further discussion. First, this study adopted the questionnaire survey method, mainly using the WeChat platform for questionnaire distribution. The respondents were users who had experience with using knowledge payment platforms. These users had a high overall education level, and their age distribution was mainly middle-aged and young people. These people had a strong ability to use and accept information technology. Due to the lack of data on the continuous use of knowledge payment platforms among the elderly and teenagers in the sample, the research results may not fully reflect the use of all users. In the future, more diverse sample information can be obtained through data mining, interviews, and other channels for research. Second, both the impact factors of knowledge payment platform users' continuous use intention and continuous use behavior are complex and changeable. In addition to the six variables in this study, many other factors affect the continuous use of a knowledge payment platform, such as convenience, attachment, paying consciousness, individual differences, self-efficacy, and other factors. These factors could be studied in the future. Third, this study did not involve research on the influencing factors of users' discontinuous use intention and discontinuous use behavior, nor did it deeply explore the reasons for the failure of users' continuous use intention to be transformed into use behavior. These issues can be studied in the future.

6. Conclusions

Based on fsQCA, this study investigated the multiple configuration effects of continuous use intention and continuous use behavior of users of a knowledge payment platform and revealed multiple equivalent causal paths of continuous use intention and continuous use behavior of users. It was found that seven combination paths could generate the intention of continuous use of knowledge payment platform users and six combination paths could promote the occurrence of continuous use behavior. Platform quality (environmental factor) and satisfaction (human factor) were the key factors for forming the continuous use intention (behavior) of users of knowledge payment platforms. Platform quality (environmental factors) and habits (human factors) were key factors in the occurrence of continuous use behavior (behavior). Other factors also played a role in the occurrence of continuous use intention and continuous use behavior, but none of the variables were necessary or sufficient conditions for the occurrence of continuous use intention and continuous use behavior. The formation of continuous use intention and the occurrence of continuous use behavior of users on knowledge payment platforms were not the same configuration path. From the perspective of triadic reciprocal determinism, the occurrence of continuous use behavior is the result of the interaction between people, the environment, and behavior. Environmental factors and human factors work together to promote the occurrence of behavior and the repeated occurrence of behavior will also create a habit of using the platform, affect user satisfaction, promote the continuous improvement of the platform, deepen the influence of subjective norms, and so on, thus again promoting the occurrence of continuous use intention or behavior. By coordinating the relationships between person, environment, and behavior, users' continuous use of knowledge payment platforms can achieve sustainable and circular development and lead to a good sustainable use ecology of knowledge payment platforms.

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