Research Paper

Critical Factors for Personal Cloud Storage Adoption in China

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Citation: Jianya Wang (2016). Critical Factors for Personal Cloud Storage Adoption in China.

Received Feb. 1, 2016
Revised Apr. 20, 2016
Accepted May 16, 2016

Abstract

Purpose: In order to explain and predict the adoption of personal cloud storage, this study explores the critical factors involved in the adoption of personal cloud storage and empirically validates their relationships to a user's intentions.

Design/methodology/approach: Based on technology acceptance model (TAM), network externality, trust, and an interview survey, this study proposes a personal cloud storage adoption model. We conducted an empirical analysis by structural equation modeling based on survey data obtained with a questionnaire.

Findings: Among the adoption factors we identified, network externality has the salient influence on a user's adoption intention, followed by perceived usefulness, individual innovation, perceived trust, perceived ease of use, and subjective norms. Cloud storage characteristics are the most important indirect factors, followed by awareness to personal cloud storage and perceived risk. However, although perceived risk is regarded as an important factor by other cloud computing researchers, we found that it has no significant influence. Also, subjective norms have no significant influence on perceived usefulness. This indicates that users are rational when they choose whether to adopt personal cloud storage.

Research limitations: This study ignores time and cost factors that might affect a user's intention to adopt personal cloud storage.

Practical implications: Our findings might be helpful in designing and developing personal cloud storage products, and helpful to regulators crafting policies.

Originality/value: This study is one of the first research efforts that discuss Chinese users' personal cloud storage adoption, which should help to further the understanding of personal cloud adoption behavior among Chinese users.

Keywords Adoption behavior; Behavior intention; Personal cloud storage; Personal information management; Cloud computing; Network externality; Technology acceptance model (TAM); Personal innovativeness

JDIS
Journal of Data and Information Science
Vol. 1 No. 2, 2016
pp 60–74
DOI: 10.20309/jdis.201614

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1 Introduction

Personal cloud storage can support users conducting personal information management in a ubiquitous network environment, due to the following notable characteristics, such as mass storage, mobile storage, synchronization, and its allowing of sharing information at any time. Bush (1945) proposed "Memex" as a personal library, and we consider personal cloud storage as a contemporary "Memex" (Bush, 1945). According to a report released by the China Internet Network Information Center (CNNIC) in 2015, the number of Internet users in China has reached 668 million, with mobile phone users more numerous than PC users, accounting for 88.9%. With the increase in Internet users and the widespread use of multi-screen devices, a broad demand for cloud storage has emerged. But in fact, the penetration rate of personal cloud storage among Chinese users is very low. Only 38.3% of Internet users are familiar with personal cloud storage, and only 15.8% of Internet users have used personal cloud storage. The low adoption rate has restricted the development of China's personal cloud storage, and hindered exploitation of the advantages of cloud storage technology. In response to this phenomenon, domestic Internet research institutions, such as CNNIC, iResearch, Deloitte, etc., have begun to focus on the personal cloud storage market and user behavior. Based on our previous research (Wang & Luo, 2016), this paper mainly explores the critical factors for personal cloud storage adoption.

2 Literature Review

Since cloud computing technology has become very popular in the last few years, academics have begun to examine user adoption. So far, researchers have paid more attention to adoption in organizations, and less to individual adoption. Sun (2013) constructed an adoption model for cloud storage based on technology acceptance model (TAM) and task-technology fit (TTF), and found that perceived usefulness, perceived ease of use, and TTF influenced adoption intentions significantly (Sun, 2013). Cao and Bi (2014) added perceived fee, perceived risk, and personal innovativeness factors to the Unified Theory of Acceptance and Use of Technology (UTAUT) model (Cao & Bi, 2014; Venkatesh et al., 2003), and then verified it through an empirical study. The results showed that all factors had significant effects on adoption intention. Lian (2015) built an adoption model for electronic invoicing service users based on UTAUT2, and through empirical research he found that effort expectancy, social influence, trust, and risk had a significant impact on adoption intention (Lian, 2015). Tarmidi et al. (2014) conducted research on accounting personnel's behavior when they used Google Apps and Dropbox in SMEs, and found that two-thirds of respondents were not familiar with cloud computing

(Tarmidi et al., 2014). Adopters thought it could improve their time efficiency, while non-adopters were unaware of potential benefits and concerned about security. Park and Kim (2014) identified a number of cognitive factors that contribute to shaping user attitudes toward mobile cloud computing services by integrating these factors with TAM, and then surveyed 1,099 respondents, and found that user acceptance of mobile cloud services is largely determined by perceived mobility, connectedness, security, quality of service, and satisfaction (Park & Kim, 2014). Behrend et al. (2011) examined the factors that lead to acceptance of cloud computing platforms in colleges, and proposed an adoption model that adds personal innovativeness and teacher support to TAM3, and divided adoption behavior into practice use, future use intention, and future use (Behrend et al., 2011). Their findings demonstrated that background characteristics influenced perceived usefulness, while ease of use perceptions were largely determined by first-hand experiences with the platform and instructor support. Park and Ryoo (2013) used a longitudinal design to get survey data from undergraduate students at two universities in Korea (Park & Ryoo, 2013). Their results showed that user cloud service adoption intention is positively influenced by expected switching benefits, omnipresence, collaboration support, social influences, and personal innovativeness, but also negatively influenced by expected switching costs, satisfaction with incumbent IT, and breath use of incumbent IT.

In summary, research has shown that personal cloud service adoption is affected by a user's perception and experience, and technical characteristics of cloud computing that have positive or negative influences on it. Existing studies have confined themselves to modify the existing theory model, while giving little consideration to application scenarios and user needs. This paper argues that personal cloud storage is a kind of personal information management tool, which shifts the user's practice from local to online personal information management. We therefore explain user adoption behavior from the personal information management perspective.

3 Research Model and Hypothesis

3.1 Research Model

In our study, the adoption model is composed of critical influencing factors and their relationships. We must therefore first identify the factors, and then determine their relationships. We explore key factors in both theory and practice.

First, we found some possible influencing factors based on some IT adoption theories through theoretical deduction. Then, we conducted a survey, and obtained some factors based on user experiences in using personal cloud storage. Second, we compared the two types of factors, and summed up the critical factors. In order to

improve the model's prediction ability, and make it easy to understand, we identified concepts that were widely accepted in existing studies. Finally, at the technology level, three factors were identified: perceived usefulness, perceived ease of use, and cloud storage characteristics. In terms of environment, two factors were identified: network externality and the subjective norm. At the individual level, four factors were identified: perceived risk, perceived trust, personal innovativeness, and awareness. Liaw and Huang (2003) found that there was a strong correlation between adoption intention and actual behavior (Liaw & Huang, 2003). So we made intention a dependent variable. Also, a questionnaire survey (Appendix A) is more suitable for investigating user intention than user behavior. Following TAM and other current research, we derived a personal cloud storage adoption model (Figure 1).

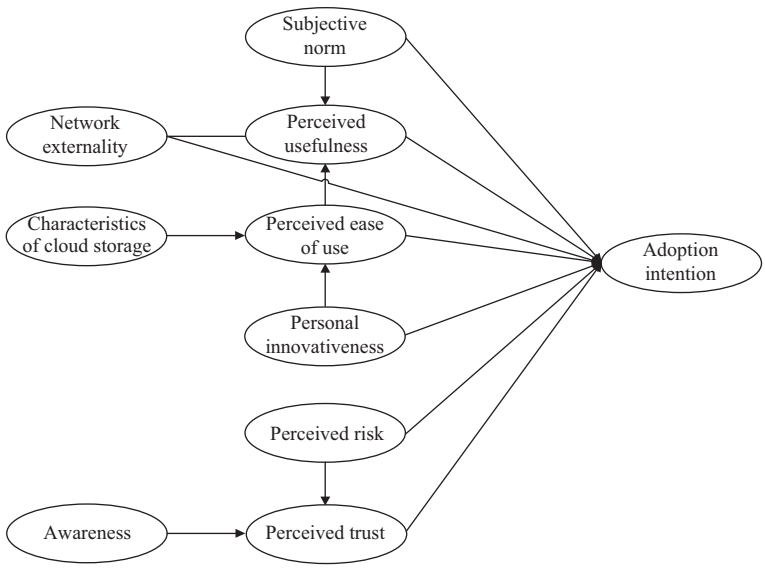

Figure 1. The proposed research model.

3.2 Research Hypotheses

Personal cloud storage is an application of cloud computing technology in the personal domain, which has characteristics of cloud computing. Because existing studies on personal cloud storage are few, we cited some research on cloud computing adoption as support for our hypothesis.

3.2.1 Perceived Usefulness and Perceived Ease of Use

In 1996, Davis and Venkatesh revised TAM, eliminating attitude, and keeping perceived usefulness (PU) and perceived ease of use (PE), which positively influence

adoption intention (Davis & Venkatesh, 1996). Furthermore, PE has an indirect influence on adoption intention, by way of PU. Many empirical studies show that the relationships among PE, PU, and adoption intention are nearly constant. According to some related studies, such as Seo (Seo, 2013), Du (Du, et al., 2013), Ratten (Ratten, 2014), and Shin (Shin, et al., 2014), higher perceived usefulness (PU) and higher perceived ease of use (PE) increase personal cloud storage adoption intention, and higher perceived ease of use increases perceived usefulness. Thus we present the following hypotheses:

H1: Perceived usefulness (PU) positively influences intention to adopt personal cloud storage.
H2: Perceived ease of use (PE) positively influences intention to adopt personal cloud storage.
H3: Perceived ease of use (PE) positively influences perceived usefulness (PU).

3.2.2 Perceived Risk and Perceived Trust

According to innovation diffusion theory, the innovation diffusion rate is influenced by risk. Trust is a kind of emotion produced by users, and it means that users depend on others. If a user feels at risk, they would tend to choose a credible supplier. Bharadwaj and Lal (2012) found that vendor credibility has a positive influence on adoption of cloud computing through a case study (Bharadwaj & Lal, 2012). Furthermore, Heart (2010) found that vendor credibility has a positive impact on SaaS adoption intention and a negative impact on perceived risk (Heart, 2010). Similarly, Shin (2013) conducted an empirical study whose results showed that security affects cloud computing adoption (Shin, 2013). Thus we present the following hypotheses:

H4: Perceived risk (PR) negatively influences intention to adopt personal cloud storage.
H5: Perceived trust (PT) positively influences intention to adopt personal cloud storage.
H6: Perceived risk (PR) negatively influences perceived trust (PT).

3.2.3 Subjective Norm

Subjective norm (SN) is defined as an individual's perception of whether it is important for people to think the behavior should be performed. Rogers (2002) believes that most individuals would evaluate a technology innovation in terms of subjective evaluations by other adopters who are their intimate friends or colleagues (Rogers, 2002), rather than relying on those with a specialized knowledge of the technology. Shin found that subjective norm affects adoption intention and perceived usefulness (PU) (Shin 2013; Shin et al., 2014). Both Cao and Bi, and Park and Ryoo found that social influence has a positive impact on cloud storage service adoption (Cao & Bi, 2014; Park & Ryoo, 2013). Given that the SN is that cloud storage has been widely adopted in various computing environments, we present the following hypotheses:

H7: Subjective norm (SN) positively influences intention to adopt personal cloud storage.
H8: Subjective norm (SN) positively influences perceived usefulness.

3.2.4 Network Externality

In studies of Rohlfs and Katz (Rohlfs, 1974; Karz & Shapiro, 1985), network externality is found. Network externality means that the value of a product or service increases with growth of the number of users. Chun and Hahn (2007) found that network externality influenced the user's intention to adopt online community (Chun & Hahn, 2007). Similarly, Wang, Hus, and Fang found that network externality affected a user's intention to adopt IM tools (Wang, Hsu, & Fang, 2005). According to a study of e-government adoption by (Jiang, 2010), network externality has a positive impact on the citizen deciding to adopt e-government. We present the following hypotheses:

H9: Network externality (NE) positively influences perceived usefulness (PU).
H10: Network externality (NE) positively influences intention to adopt personal cloud storage.

3.2.5 Characteristics of Cloud Storage

The TAM model points out that researchers need to set some external variables according to the characteristics of the actual system. Behrend et al. (2011) found that mobility positively influences perceived usefulness and perceived ease of use for community college students who are considering adopting cloud computing (Behrend et al., 2011). Park and Ryoo (2013) also found that mobility has a positive impact on perceived usefulness on user adoption of mobile cloud services (Park & Ryoo, 2013). According to our interviews, users are most concerned about the mobility and sharing features of personal cloud storage. So we defined the characteristics of cloud storage as mobility and sharing features. Thus we present the following hypotheses:

H11: Characteristics of cloud storage (CC) positively influence perceived usefulness (PU).
H12: Characteristics of cloud storage (CC) positively influence perceived ease of use (PE).

3.2.6 Personal Innovativeness

Personal innovativeness (PI) refers to the user's curiosity—their spirit of adventure. Behrend et al. (2011) found that personal innovativeness had a positive impact on perceived ease of use (PE) in college students considering a cloud learning platform, but no significant impact on perceived usefulness (PU) (Behrend et al., 2011). Similarly, Park and Ryoo (2013) found that personal innovativeness (PI) had a positive impact on terminal user adoption of cloud computing (Park & Ryoo, 2013). According to Ratten (2014), personal innovativeness positively influenced American college students to adopt cloud computing (Ratten, 2014), but not Chinese college students. Thus we present the following hypotheses:

H13: Personal innovativeness (PI) positively influences intention to adopt personal cloud storage.
H14: Personal innovativeness (PI) positively influences perceived ease of use (PU).

3.2.7 Awareness

Awareness (AW) means understanding of and familiarity with the connotations and value of things. It is the antecedent of trust. Trust is a result of familiarity, and can affect user behavior. Luhmann (2000) proposed that familiarity is a precondition of trust, and trust is generated in a familiar environment (Luhmann, 2000). Furthermore, trust is affected by a change in familiarity. Low, Chen, and Wu completed a survey analysis that showed that due to a lack of familiarity with cloud computing, many users would not adopt it (Low, Chen, & Wu, et al., 2011). Onwudebelu and Chukuka (2012) also conducted a qualitative analysis, and found that users need to know their data is safe in the cloud before they can trust a cloud service provider (Onwudebelu & Chukuka, 2012). Thus we present the following hypothesis:

H15: Awareness positively influences perceived trust (PT).

4 Research Approach and Data Collection

Given that this study focuses on examining why users tend to use personal cloud storage, it was important to probe perceptions of users who had previous experiences with personal cloud storage. Therefore, we conducted a survey to test the model. We designed a questionnaire to collect data. Based on interviews and literature review, the scale items were redesigned. We used a Likert 5 scale with expressing respondents varying degrees to support their viewpoints. Level 5 represents the respondents have a strong agreement, and level 1 is in contrast. Each latent variable was designed to represent more than 3 observed variables. In total, ten latent variables were used in the questionnaire and 51 observed variables were allowed to enter the model (Appendix A). Through consulting experts and small-scale testing, we adjusted some items in the questionnaires.

Our survey was designed according to a series of principles: (1) To ensure the representativeness of the sample, we constrained its population. (2) Investigation was through both a Web-based survey and a paper questionnaire. (3) Respondents had to have some experience with personal cloud storage, or be familiar with personal cloud storage.

5 Data Analysis and Results

The data analysis has three stages. The first stage involved a descriptive analysis. The second stage was directed at testing the validity of our model. The third stage focused on hypotheses testing and model analysis.

5.1 Sample Demographics

This research defined that respondents had some experience of or were familiar with personal cloud storage. Table 1 shows the demographic profiles of our respondents. 50.7% of the subjects were male and 49.3% were female. Most respondents were in the 19 to 40 age group. The education level was mostly undergraduates and master degree students, followed by enterprise and institution researchers, and teachers. This data indicates that the main users of personal cloud storage are students and office workers.

Table 1. Demographics of respondents.

Characteristic variable	Type	Number	Percentage (%)
Sex	Male	233	50.7
	Female	227	49.3
Age	Under 18 years old	21	4.6
	19~25 years old	172	37.4
	26~30 years old	132	28.7
	31~35 years old	104	22.6
	36~40 years old	67	14.6
	Over 40 years old	23	5.0
Education	Under high school	19	4.1
	Junior college	67	14.6
	Undergraduate	213	46.3
	Master	108	23.5
	Doctor	53	11.5
Occupation	Student	203	44.1
	Teacher	65	14.1
	Enterprise and institution	101	21.9
	Party and government organ	54	11.7
	Others	37	8.1

5.2 Individual Characteristics Analysis

Respondent behaviors in different groups are different, so we examine the discrepancies (Table 2). The individual characteristics are considered control variables. The more important influence factors are the experiences of using personal cloud storage. The demographics generally have little effect, especially age and occupation. Among dependent variables, the most highly affected variable is perceived ease of use by individual characteristics, that is, gender, personal cloud storage duration, usage frequency, and scenario using personal cloud storage.

5.3 Structural Model Analysis

Our model was validated by survey analysis through structural equation model analysis with Smart PLS 2.0. This analysis is based on least-squares method (PLS), which is suitable for verifying exploratory models.

Table 2. Individual characteristics analysis.

Individual characteristics \ Dependent variables		Perceived usefulness	Perceived ease of use	Perceived trust	Adoption intention
Demographics	Sex	-	Significant	-	-
	Age	-	-	-	-
	Education	-	-	Significant	-
	Occupation	-	-	-	-
Usage behavior	Duration	Significant	Significant	-	Significant
	Frequency	Significant	Significant	Significant	Significant
	Scenario	Significant	Significant	-	Significant

5.3.1 Measurement Model

A measurement model analysis assessed convergent and discriminant validity using PLS. Convergent validity was assessed using the two criteria recommended by Fornell and Larcker (Fornell & Larcker, 1981): (1) The combined reliability (CR, a reliability composite) is higher than 0.7; (2) the average variance extracted (AVE) for each construct exceeds 0.5. In the measurement results shown in Table 3, the composite reliability is between 0.9217 and 0.9704—much larger than the standard 0.7—and the AVE is between 0.5553 and 0.7957. This result indicates that our sample data satisfies the conditions of convergent validity.

Table 3. Convergent validity.

Construct	CR	AVE	Construct	CR	AVE
AW	0.8918	0.7547	PI	0.8613	0.7834
BI	0.9141	0.7957	PR	0.9105	0.5553
CC	0.9217	0.6822	PT	0.8988	0.6229
NE	0.8552	0.6975	PU	0.8892	0.7507
PE	0.9076	0.7325	SN	0.7904	0.7039

Hence, our data sample satisfied all three conditions of convergent validity. Additionally, the Cronbach's alpha value for each of our construct exceeded 0.70, the lowest is 0.79 (subjective norm), and others all above 0.80, assuring internal consistency of our measurement scales.

To test discriminant validity, we checked whether the square root of AVE for each construct exceeds the bi-variate correlations between it and all other constructs, as proposed by Fornell and Larcker (Fornell & Larcker, 1981). The square roots of AVE are indicated along the principal diagonal of the correlation matrix in Table 4. The lowest value of these values among all constructs was 0.7452, which was higher than the highest bi-variate correlation between any pair of constructs in our study. This result assured us that each of our hypothesized constructs shared greater variance within its own block of items than with blocks of items corresponding to

other constructs, assuring discriminant validity. In sum, our measurement model provided confidence that our measurement was theoretically and empirically adequate for hypothesis testing.

Table 4. Discriminant validity.

	AW	BI	CC	NE	PE	PI	PR	PT	PU	SN
AW	**0.8687**									
BI	0.4057	**0.8919**								
CC	0.4598	0.7040	**0.8259**							
NE	0.3554	0.6248	0.6460	**0.8351**						
PE	0.5427	0.5407	0.5984	0.5028	**0.8559**					
PI	0.4791	0.5007	0.4765	0.4260	0.6093	**0.8851**				
PR	–0.0703	0.1573	0.2807	0.1982	0.1918	0.1015	**0.7452**			
PT	0.4077	0.3526	0.2592	0.3406	0.2983	0.2946	–0.3114	**0.7893**		
PU	0.3022	0.5657	0.6290	0.5243	0.6182	0.4917	0.1733	0.3131	**0.8664**	
SN	0.2441	0.4117	0.3864	0.4221	0.3181	0.2824	0.0657	0.3288	0.3347	**0.8396**

5.3.2 Structural Model

The next step in our data analysis was to examine the path significance and magnitude of each of our hypothesized effects, and the explanatory power of the proposed model. R^2 indicates the proportion to which the independent variables explain the dependent variable in the multiple regression equation model. Falk and Miller (1992) proposed that R^2 needs to be higher than 10% (Falk & Miller, 1992). Hair Ringle, and Sarstedt pointed out that R^2 results in different fields are quite different (Hair, Ringle, & Sarstedt, 2011). In consumer behavior research, it must be more than 0.2, and if it is more than 0.4, the model's predictive ability is strong.

Our analysis also performed a PLS path analysis. The analysis results on the structural model are shown in Figure 2. The model explained 52.2% of the variance in personal cloud storage adoption intention; R^2 of perceived usefulness is 49.8%; perceived ease of use, 49.5%; perceived trust, 24.7%; and all R^2 are over 0.2. This finding indicates that our model had some explanatory ability and was acceptable. According to the path analysis, except for perceived risk to adoption intention, and subjective norm to perceived usefulness, other paths were significant. That is to say, except for H4 and H8, the other hypotheses were supported, and all the significant p values were less than 0.01.

6 Implications and Conclusion

6.1 Discussions and Implications

According to the results, subjective norm does not significantly affect perceived usefulness, and H4 is not supported. This indicates that the personnel cloud storage

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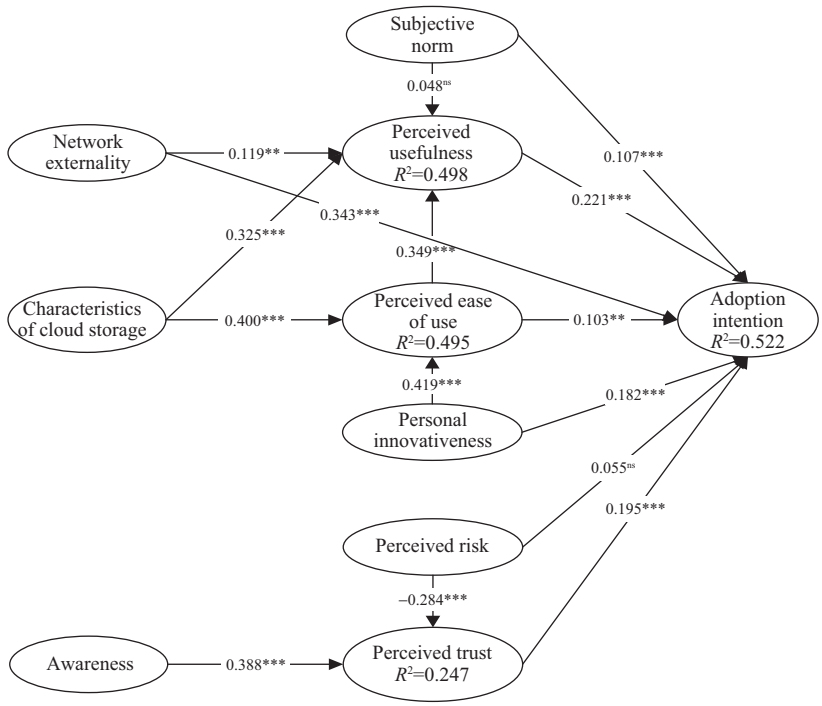

Path coefficients (*t*-value)***: $p<0.001$, **: $p<0.01$, *: $p<0.05$, ns: no significance

Figure 2. Testing results of the structure model.

users are rational. Despite subjective norm having a significant effect on users' adoption intention, users are not moved by others who have such ideas. Perceived risk has no significant effect on adoption intention, and H8 is not supported. But perceived risk reduces perceived trust, and thus indirectly affects adoption intention. Network externality is the most salient factor impacting adoption intention, which is higher than perceived usefulness (PU) and perceived ease of use (PE) in TAM (Davis & Venkatesh, 1996), and also affects perceived usefulness (PU). This finding indicates that there are some information resources available in personal cloud storage, so users will adopt it. The other reason is individual personal innovativeness (PI), which has significant influence on adoption intention. Users who have a stronger innovative spirit tend to adopt personal cloud storage earlier, or think it is simple to use.

Marston et al. believe that cloud computing stakeholders can be divided into four groups: consumers, providers, enablers, and regulators (Marston, et al., 2011). Based on their study, we propose the following suggestions to improve users' personal cloud storage adoption:

1) The designer of personal cloud storage product should be sure to offer information resources in the cloud. By virtue of advantages brought by the network resources, users would be drawn to use personal cloud storage, and would begin to see the benefits of using personal cloud storage in preference to general cloud storage.
2) We should encourage users to join adopters based on environment and cultural values. Also, we should pay more attention to the groups who have high individual innovativeness through special propaganda and marketing.
3) Public-sector regulators should guide the personal cloud storage industry, and prevent market monopolies and unfair competition. Post regulation should be introduced. Some policies to support industry development can stimulate industry investment.
4) Suppliers of personal cloud storage should improve user awareness of personal cloud storage through cooperating with the media. Joint promotion with other products with which users are already familiar might make personal cloud storage easier for users to accept.

6.2 Limitations

There are some limitations to our study: (1) The data acquisition was accomplished in a short time, and we did not conduct long-term tracking. (2) This study considered only critical factors in the current period, and many factors were ignored, such as the cost of using personal cloud storage. We will launch a study from the consumer perspective in the future.

Acknowledgements

This work is supported by Social Science Fund of Hebei Province (Grant No.: HB15TQ019).

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Appendix A

Table A1 Measurement items

Code	Question
PU1	Personal cloud storage can help me store personal information, and improve my personal information management efficiency.
PU2	Personal cloud storage is very useful for me for storing personal information.
PU3	Personal cloud storage can help me synchronize and share files, so I can efficiently complete my projects with my partners.
PU4	I can access my cloud files anywhere or anytime with personal cloud storage.
PE1	The guidelines of personal cloud storage are clear and easy to understand.
PE2	It is easy to learn how to use personal cloud storage.
PE3	I can install a personal cloud storage client and use it easily.
PE4	As long as I want, I can easily use all the functions of personal cloud storage.
PE5	Personal cloud storage can be used as easily as other network applications.
PT1	I think personal cloud storage is a valuable application, and it can satisfy my requirements.
PT2	The Internet is safe enough, and I use online storage nearly without worry.
PT3	Existing Internet regulations and security technology can reduce the trouble of using personal cloud storage.
PT4	It will not bring too much risk, in spite of personal cloud storage being on the Internet.
PT5	I think my personal cloud storage application is not harmful.
PT6	I think personal cloud storage vendors keep their promises to protect my data.
PT7	I think personal cloud storage vendors keep their promises not to abuse my personal information.
PR1	I think there might be some security risks when I use personal cloud storage to store my personal information.
PR2	I think existing laws and regulations are not enough to eliminate the risks of personal cloud storage.

Code	Question
PR3	Compared with other traditional storage instruments, I think the security risk of personal cloud storage is greater.
PR4	I think my data in the cloud might get lost.
PR5	I'm afraid that my cloud data might be stolen—especially, that my personal privacy might be compromised.
PR6	I think personal information on the network is not safe enough.
PR7	I'm concerned about my privacy.
PR8	I will be more careful with my private information on the Internet.
PR9	Storing personal information in the cloud might compromise my privacy.
PR10	I am afraid that my rights won't be guaranteed, in terms of security, privacy or other issues, when using personal cloud computing.
SN1	It's a good idea for people to use personal cloud storage, such as my family, friends, and colleagues, who have an important influence on me.
SN2	If someone who usually influences me greatly uses personal cloud storage, I would tend to use it.
SN3	Because of daily media campaigns, I would consider using personal cloud storage.
NE1	The more people use personal cloud storage, the more it is useful to me.
NE2	The more resources it can access, the more I would like to use the personal cloud storage.
NE3	If my partners or collaborators use personal cloud storage to share resources, I would like to use it, too.
NE4	If an application or device needs to use personal cloud storage, I would like to use it.
CC1	Due to using personal cloud storage, I can easily share my files with my collaborators.
CC2	Due to my use of personal cloud storage, I can easily synchronize data through any intelligent terminal.
CC3	Personal cloud storage can make file sharing easy.
CC4	I can access my files in the cloud at any time.
CC5	I can access my files in the cloud anywhere.
CC6	I can access my files in the cloud using a mobile terminal.
CC7	The mobility characteristics of personal cloud storage bring me convenience.
PI1	If I find a new technology, I am willing to try it.
PI2	Compared to peers around me, I am more willing to try new technologies.
PI3	I am good at discovering new network applications.
AW1	I am familiar with how to use personal cloud storage.
AW2	I am familiar with personal cloud storage's functions.
AW3	I know the privacy policies of personal cloud storage.
AW4	I am familiar with the technical mechanism of personal cloud storage, such as security technology.
BI1	I would like to share and synchronize my files through personal cloud storage.
BI2	I tend to use personal cloud storage to manage my personal information.
BI3	I am planning to use personal cloud storage more frequently.
BI4	I would like to recommend to my friends and my family to adopt personal cloud storage.