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Surfing Mobile Internet Motivated by Fashion Attentiveness:

An Empirical Study of Mobile Internet Use in China

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Abstract: The research purpose of this paper is threefold: first, to test and verify the influences of fashion attentiveness on mobile communication in the context of China, and second, to analyze how fashion attentiveness moderate other demographical variables' influence on mobile Internet use, and third, to analyze how new mobile service influence the mobile Internet use. This paper confirms that fashion attentiveness has positive influence on the use of mobile Internet, and it moderates the influences of income, education, use of mobile. Further, fashion attentiveness's influences on new mobile Internet services are tested. The findings imply that first, fashion attentiveness is very important because of its moderation effect on other variables' influence, and second, new mobile Internet technology and services are of great significance for their mediation effects of fashion attentiveness's influence.

Key Words: fashion attentiveness, mobile Internet, communication technology/service, mobile communication

Introduction

China is under quickly development of mobile Internet communication in both services and technology. There are 181 million mobile Internet users by August 2009 (CNNIC, 2010), which supplies with us good opportunity to test our theory of fashion's influence on mobile communication, especially in the aspect of mobile Internet.

Previous studies confirm how fashion attentiveness affects mobile communication, especially the adoption and use of mobile phone (Campbell, 2008; Fortunati, 2002; J. E. Katz & Sugiyama, 2006; Ling & Yttri, 2002). However, the moderation effects between fashion attentiveness and demographical variables are not sufficiently discussed. Further, the influence of new mobile service may also be underestimated. This paper focuses on how fashion attentiveness influence the use of mobile Internet, how fashion attentiveness moderates demographical variables' influence, and how new mobile Internet service influence the mobile Internet use.

In this research, we claim that people's fashion attentiveness will moderate other variables' influence on mobile Internet use, and new mobile Internet service will mediate fashion attentiveness's influence on mobile Internet use.

From value to fashion

Technology Acceptance Model (TAM) is developed by Davis, and is widely used to explain the adoption and use of different technologies, including the media (Davis, 1985, 1986; Davis, Bagozzi, & Warshaw, 1989; S. Taylor & Todd, 1995). To extend the explanatory power to TAM, scholars try to combine TAM with other theories or concepts. Per E. Pedersen et al.,

for example, introduced subjective norms into the model of TAM (Pedersen, 2005), and Hee-Woong Kim developed the model of TAM into Value-based Adoption Model (VAM) (Kim, Chan, & Gupta, 2007).

It's necessary to introduce fashion attentiveness into mobile communication. Compared with stationary Internet (PC Internet), mobile Internet is more personal and individual, and it accesses users to Internet anywhere and anyplace (Chae & Kim, 2003). Mobile phone is used as fashion statements which are of great symbolic significance (J. E. Katz & Sugiyama, 2006; Ling, 2001a).

Fashion is constructed by society. Blumer defines fashion as collective behaviors which is constructed by all the individuals in the society (Blumer, 1969). Fashion is one kind of social control. Bourdieu (1984, p233) regards fashion as one kind of symbolic capital and social space. The endless changes of fashion result in the objective orchestration between the logic of the struggle internal the field of production and the logic of the struggle internal the field of dominant class. By making distinction between what's fashion, dominant class get and maintain their symbolic capital (Bourdieu, 1984).

Further, fashion is a symbolic form of communication, and also the producer of identity (J. E. Katz & Sugiyama, 2006). Fashion is considered as symbolic system produced by the interplay between individuals and collective (Fortunati, 2002). Fortunati (2005, p 37) asserts that fashion "gives a great contribution to self presentation as by expressing itself over a wide expanse of body it offers one of the most important communicative codes" (Fortunati, 2005). Fashion gives rhythm to the constant updating of self presentation, and mobile phone is viewed as fashion accessories. Mobile phone is now a forming part of clothing (Fortunati,

2002).

Fashion attentiveness and mobile communication

The purpose of mobile phone use can be categorized as security use, instrumental use, and expressive use (Campbell, 2008; Ling & Yttri, 2002). People might expect that socially expressive use of the mobile phone is linked to perceptions of the technology as fashion, much more than security use and instrumental use (Campbell, 2008).

James E. Katz et al. (2006) propose fashion attentiveness as one important aspect of mobile communication. “Ambivalence related to fashion stems from people’s emotional need to keep abreast of fashion changes in order to maintain their social identity. This ambivalence fosters people’s attentiveness toward fashion” (J. E. Katz & Sugiyama, 2006). Mobile phone is one part of personal out-looking. As an accessory of body, mobile phone is the object of fashion, and the motivations underlying mobile phone adoption and use follow the logic of fashion (Fortunati, 2002, 2005).

Ling’s study of teen’s adoption of mobile phone in Norway confirms fashion as intension of mobile phone adoption. Fashion dominants the diffusion of mobile phone (Ling, 2001a). “There is the use of comments about style and fashion as a way to integrate a group and maintain its inner solidarity (Ling, 2001a).”

Katz et al. (2006) also conducted a survey of college students in the United States and Japan, and they confirmed fashion attentiveness’s influence on acquisition, use, and replacement of the mobile phone (J. E. Katz & Sugiyama, 2006). However, their research is preliminary, and merely scratches the surface of the issue. The samples were limited to college students (J. E. Katz & Sugiyama, 2006).

Mobile communication technology/services and fashion attentiveness

Mobile communication technology/services can be understood by Apparageist theory (“spirit of the machine”) which was proposed to explain the global regularity of mobile communication (J. Katz, 2006). Apparageist theory asserts that peoples’ reactions to personal communication techniques are similar. People endow mobile with spirit which is apparageist. Apparageist not only influence mobile phone design, it also influences the significance given to mobile phone.

New mobile communication technology/services supply more ways of communication. In addition to view mobile phone as fashion, it’s important to address the role of mobile phone as the tool of social interaction. Mobile phone is important for maintaining the social relationship, especially the emotional relationship of the individuals (Ishii, 2004). Fashion is generated from the social interaction (Fortunati, 2005).

Peoples’ fashion attentiveness tends to promote the use of mobile Internet technology and services. The interplay between people and personal communication technology leads to standardized infrastructure, similar taste and characteristics which gives rise to fashion attentiveness (J. E. Katz & Aakhus, 2002). The symbolic significance of mobile phone, especially the emotional aspect, deserves more attention (J. Katz, 2006). Peoples’ attention to mobile use will be drawn by endless changes and updates of new mobile technologies and services.

To sum up, fashion attentiveness supplies with us new perspective of understanding mobile communication. However, the studies of treating mobile phone as fashion (Ling, 2001a), “ritual gift giving” (A. S. Taylor & Harper, 2003), “symbolic capital,” “family

differentiation and a symbol of individuality” (Ling, 2001b), and “self-identifier” (Alexander, 2000), should all be treated as tentative because none of them has undergone formal hypothesis development and confirmatory testing (Pedersen, 2005). To formally confirm previous studies’ findings, based on the review of pre-existing studies, I focus on testing fashion attentiveness’s influence on mobile Internet use. In this study, we will first test and verify fashion attentiveness’s influence on mobile Internet use after controlling demographic variables, and second, analyzing how fashion attentiveness influence specific mobile Internet use behavior.

Hypotheses

On the basis of literature review and our theoretical framework, the hypotheses can be categorized into two parts: fashion attentiveness, and mobile Internet services. James E. Katz’s study confirms the claim that students with more fashion attentiveness are more likely to use mobile phone (J. E. Katz & Sugiyama, 2006). We propose our main claim for mainland China mobile Internet use.

H1: people with more fashion attentiveness are more likely to adopt and use mobile Internet.

Baron et al. find that females are more likely to present themselves by decorating their mobile phones (Baron & Ling, 2007). Sri Kurniawan’s study (2006) indicates that the most important reason of old people using mobile for asking help when they are in trouble.

Compared with young people, old people care more about the characteristics of mobile usage rather than fashion (Kurniawan, 2006). Young people are more likely to adopt new technology, and usually, the young people have more high fashion attentiveness, they are

more likely to adopt and use mobile Internet. We claim that fashion attentiveness will moderate the influence of age, sex, respectively, so we propose our hypothesis H1a and H1b:

H1a: Compared with male, female with higher fashion attentiveness has more influence on their mobile Internet use.

H1b: Compared with old people, young people with higher fashion attentiveness are more likely to adopt and use mobile Internet.

Similar with this, making age, education, and income as controlling variables, we propose the following hypotheses.

H1c: Compared with low educated people, high educated people with higher fashion attentiveness are more likely to adopt and use mobile Internet.

H1d: Compared with low-income people, people of high-income, who have higher fashion attentiveness, are more likely to adopt and use mobile Internet.

H1e: Compared with fewer year of mobile use, people of more mobile use with higher fashion attentiveness, are more likely to adopt and use mobile Internet.

One important reason of Surfing mobile internet being popular in China is new communication technology, such as WAP and 3G, another reason is new forms of media, such as SNS, email, Instant message, search engine. Accompanied by the popular of mobile phone, more and more mobile Internet services emerge. New mobile Internet service will stimulate the use of mobile Internet.

H2: fashion attentiveness will promote the use of specific mobile Internet services, including mobile search engine, mobile BBS, mobile SNS, and mobile instant message service (such as QQ, MSN, Fection).

Measure

Fashion attentiveness

Fashion attentiveness is measured by five indicators, including “I am innovative and would like to be different”, “I pay great attention to fashion trend”, “I know the new fashion”, “I want to be innovative”, “I would like to express myself”, “I would like to lead a fashionable life”. This concept is measured by Likert 5 points scale, “1” stands for strongly against, and “5” stands for strong support. Fashion attentiveness is examined by running factor analysis (KMO value= 0.823, df= 10, and sig= 0). The factor explains 54.1% of all the variances.

Mobile Internet Use

Mobile Internet use is measured by two variables, one is years of mobile Internet use, another one is the frequency of mobile Internet use, 1 stands for less than one time a month, 2 stands for one month per month, 3 stands for 2-3 times a month, 4 stands for a times a week, 5 stands for 2-3 times per week, and 6 stands for 4-5 times per week, 7 stands for many times one day.

Mobile Internet service use

Mobile Internet services of this study include four aspects: the use of mobile SNS, the use of mobile instant messages (IM), the use of mobile email, and the use of mobile search engine, and all of which are measured by 7-points Likert scales.

Methodology

Using survey data of mainland China collected in 2009, this paper tries to use regression and structural equation model to analysis the impacts of both perceived emotional value and fashion attentiveness on the use of mobile Internet which is promoted by the 3G technology

and industry.

Findings

Table 1

Demographical characteristics of China mobile phone users

	N	Minimum	Maximum	Mean	Std. Deviation
Age	5016	15	65	27.85646	8.806920268
Female	5016	0	1	0.408293	0.491566968
Income (month)	5016	1	12	3.65949	2.110809113
Family income(month)	5016	2	12	7.874003	3.001108802
Education	5016	1	6	3.130383	1.058293898
Single	5016	0	1	0.504386	0.500030609
Only Child	5016	0	1	0.433214	0.495568919
Year of mobile Internet use	4996	1	10	3.998999	2.182054161
Valid N (listwise)	4987				

The sample size of this study is 5016 , among which 40.82% are women. The average age is 28, and average income is 3000 Yuan per month. The average education is junior college. About half of them are single, and their average time of mobile Internet use is 4 years.

To examine H1and H1a-H1e, we establish two multiple regression models using Frequency of mobile phone use as dependent variables (see table 3).

H1 asserts that people with higher fashion attentiveness are more likely to use mobile

Internet. As table 2 demonstrates, the main effect of fashion attentiveness's influence on dependent variable is positive and significant ($B = 0.452$, $\text{sig} = 0.021$). So we confirm H1.

Table 2

Year of mobile Internet use and fashion attentiveness

	Model 1		Model 2	
	B	SE	B	SE
(Constant)	5.647***	.732	5.799***	.623
Age	.029	.020	.039***	.004
Female	.683*	.324	.364***	.060
Income	.146	.079	.143**	.077
Education	.362*	.147	.378*	.147
Year of mobile use	-.087	.052	-.100**	.049
Fashion attentiveness	.452*	.196	.437*	.165
Age*fashion attentiveness	.002	.006	Null	Null
Female*fashion attentiveness	-.092	.087	Null	Null
Income*fashion attentiveness	-.041*	.021	-.041*	.020
Education*fashion attentiveness	-.089*	.040	-.093*	.040
Year of mobile use*fashion attentiveness	-.036**	.014	-.032*	.013
R Square	0.122		0.111	
N	5016		5016	

* $P < 0.05$. ** $P < 0.01$. *** $P < 0.001$.

H1a-H2e assert that fashion attentiveness has moderation effects on age, sex, income,

education, mobile use, respectively. To test and verify these hypotheses, we introduce one way interaction between these variables and fashion attentiveness (see model 1 in Table2). However, we don't find significant moderation effects between fashion attentiveness and age, income, respectively. So we fail in confirming H1a and H2b. The older people are more likely to use mobile Internet than young people after controlling other factors, which is different with theoretical deduction. Compared with male, females are more likely to use mobile Internet, this is consistent with previous studies (Baron & Ling, 2007).

However, we do find significant moderation effects between fashion attentiveness and income, education, year of mobile use, respectively. For H1c, see Figure 1, on the whole, income has positive influence on mobile Internet use, that is, people with high income use mobile Internet more than others. On this basis, the people with higher fashion attentiveness, their income has more influence on mobile Internet use. So we confirm H1c.

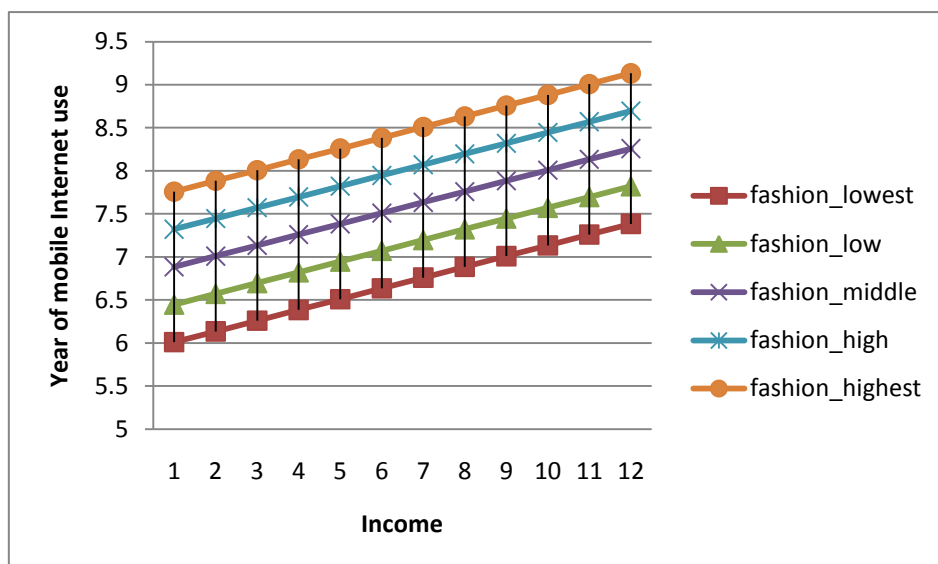


Figure 1 Year of mobile Internet use, income, and Fashion attentiveness

The influence of education and fashion attentiveness is quite complicated (see Figure 2): for the relatively low education people, the higher fashion attentiveness they have, the

more they will use mobile Internet. However, the influence of high education people is opposite, and people with higher fashion attentiveness have comparatively low level of mobile Internet use. This finding is very significant, because fashion attentiveness tend to weaken income's influence on mobile Internet use. So H1d is confirmed.

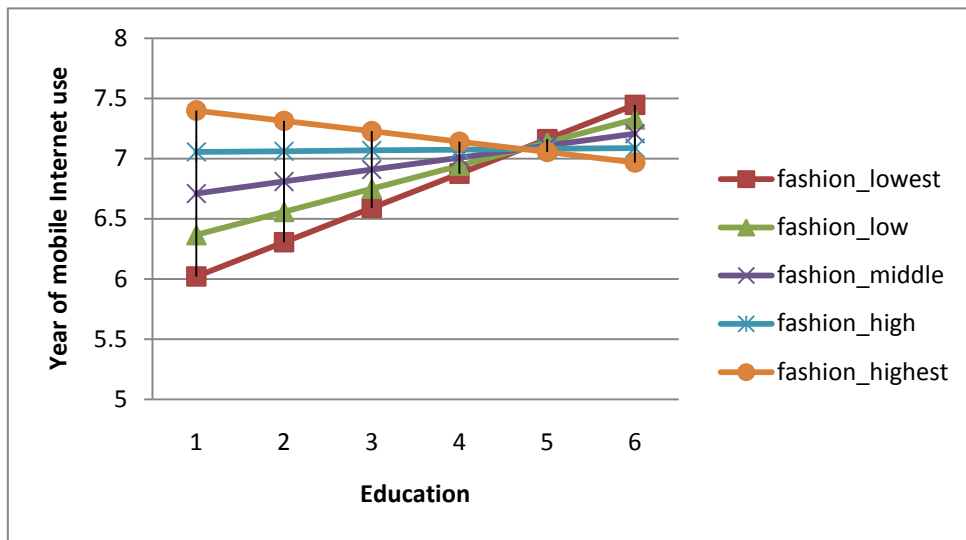


Figure 2 Year of mobile Internet use, education, and Fashion attentiveness

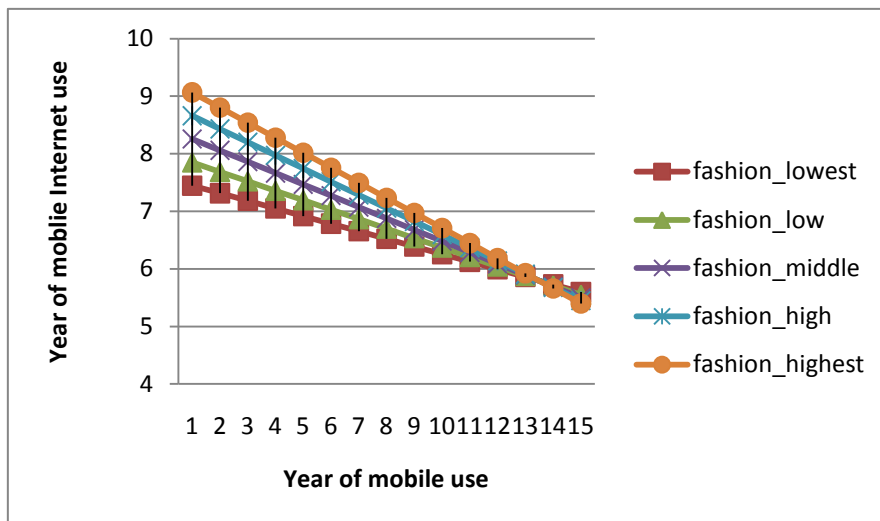


Figure 3 Year of mobile Internet use, year of mobile use, and Fashion attentiveness

Mobile use's influence on mobile Internet use is counterintuitive, and on the whole, the people with less mobile use experience tend to use mobile Internet more. So the influence of

mobile use in H1e is not confirmed. However, fashion attentiveness's moderation effect is still validated. As Figure 3 shows, Fashion reinforce this influence, and people with less mobile use experience, higher fashion attentiveness tend to use mobile Internet than the people with less mobile use experience and lower fashion attentiveness.

Fashion attentiveness and specific mobile Internet use services

Based on hypotheses H2, we construct a structural equation model (see Figure 4).

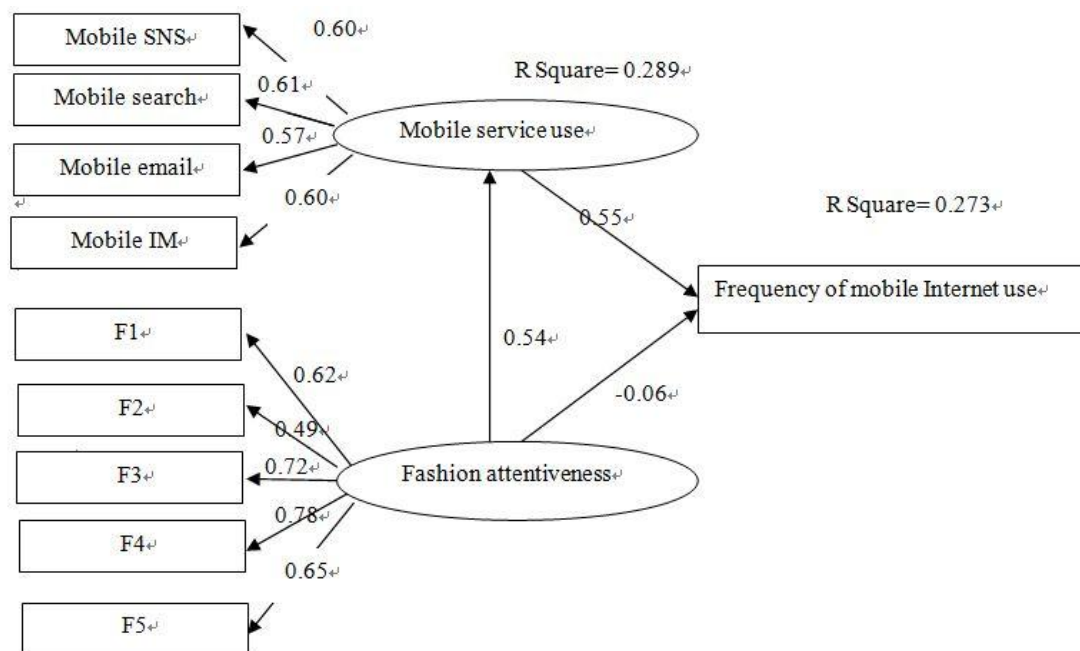


Figure 4 Fashion attentiveness, mobile service use, and frequency of mobile Internet use

As Table 3 demonstrates, the chi-square of this model is 387.916, $CFI \geq .90$, $IFI > 0.90$, and $RMSEA < .08$. The model reaches a relatively good goodness of fit, all the coefficients are significant.

Table 3 Model fit of fashion attentive, mobile service use, and frequency of mobile Internet use

	χ^2	<i>p</i>	df	χ^2/df	RMSEA	CFI	IFI	HOELTER 0.05 level
Value	387.916	0.000	31	12.513	0.048	0.969	0.969	582

Reference

< 3

<0.05

>0.90

>0.90

>200

As Figure 4 shows, fashion attentiveness can explain mobile service use well (Beta = .51, $p < .001$, R Square= 0.289). On the whole, fashion attentiveness and mobile service use can explain 27.3% of the total variance of the frequency of mobile Internet use. It's significant to note that, after adding mobile Internet services as mediation, fashion attentiveness's influence on mobile Internet use turns out to be negative, though it is fairly slight (Beta= -0.06, P = 0.002). Compared with fashion attentiveness's indirect effect ($0.54*0.55= 0.297$), the direct effect (-0.06) is very small. The overall influence of fashion attentiveness is still positive (0.237). So H2 is conformed.

Discussion and Result

Our paper builds on the emerging literature of mobile communication on fashion (Campbell, 2008; Fortunati, 2005; J. E. Katz & Sugiyama, 2006; Ling, 2001a). Using a data set collected for mobile Internet study of China, we test and verify two mechanisms of fashion attentiveness's influence: first, fashion attentiveness will moderate other demographical variables' influence, and second, fashion attentiveness will directly influence use of mobile communication technology and services, and indirectly influence mobile Internet use. New mobile Internet services will strongly mediate fashion attentiveness's influence on mobile Internet use.

The implication of this study is significant. First, neglecting the expressive function of mobile Internet use in terms of fashion will inevitably weakening our understanding of the development of mobile communication in both theoretical aspect and industrial aspect. The

basic functions of mobile use can be comparatively easily fulfilled. On the contrary, following the logic of fashion (Bourdieu, 1984), the update and change of mobile communication technology and services are endless. Accompanied by the widely spread of mobile Internet, the importance of fashion for mobile communication will become even more. Second, new mobile Internet technology and services play important role in promoting mobile Internet use by mediating fashion attentiveness's influence. The prevalence of Numberless mobile applications is consistent with this finding.

The limitation of the study is also obvious, especially the approach of mobile communication study using technological acceptance model (S. Taylor & Todd, 1995) is not involved in this study. Both TAM approach and cultural approach supply important insights of understanding mobile communication, including mobile Internet use. Mobile communication is both utilitarian and symbolic (J. E. Katz & Aakhus, 2002). It's necessary to integrate the two lines of research.

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