

# A Conceptual Framework and Propositions for the Acceptance of Mobile Advertising

XIAO Shuang<sup>1,2</sup>

1. School of Information Management, Wuhan University, Wuhan, China

2. School of business, Jiangnan University, Wuhan, China

e-mail: xsxxx2003@yahoo.com.cn

**Abstract:** As mobile technology continues to diffuse, the number of mobile advertising continues to grow. With the rapid development of mobile advertising, some problems happened such as spam short messages. Understanding user adoption of mobile advertising become important in explaining mobile advertising growing at an exponential rate in these years. The purpose of this study was to analyze factors possibly affecting user' adoption in mobile advertising. Based on the literature of the technology acceptance model and attitude toward advertising model, this paper proposed a conceptual framework for analyzing mobile advertising adoption of Chinese users. The relationship among social influence, permission, attitude toward advertising and PU/PEOU is also explained. The moderating variables of user' gender and age help further understanding consumer adoption of mobile advertising. Constructs affecting consumer adoption behaviour are discussed and eleven propositions are made. Empirical testing of this proposed model are expected in future research using survey instrument.

**Keywords:** technology acceptance model; m-advertising; social influence; permission; adoption

## 1 Introduction

Mobile phones and other mobile devices has been growing at an exponential rate in recent years. The rapid development of modern wireless and wire communication technology is promoting Internet commerce and mobile commerce as an important application for consumers<sup>[1]</sup>. M-Advertising has not only shifted many aspects of our daily life, but also attracted many researchers' interests in studying various factors of M-advertising adoption. It is clear that m-advertising will also gain greater importance in the future<sup>[2]</sup>. It is crucial to analyse the cause of consumer perception and adoption of m-advertising. Early research in m-advertising adopted focus on the applicability of the technology acceptance model (TAM), innovation diffusion theory (IDT) and TPB to explain individuals' adoption of m-advertising<sup>[3,4,5]</sup>. In recent studies, researchers have analysed that permission is one of the fundamental requirements for adoption of m-advertising. They realized permission is an important element affecting consumer behaviour, they integrate permission into TAM and think permission determines the success of technologies adoption such as e-commerce<sup>[6]</sup>.

Therefore, our study was intended to integrate permission, social influence into technology acceptance model, we analysis their and customers attitude toward mobile advertising impact on customers' adoption of m-advertising in china. The moderating variables of user' gender and age to help further understanding consumer adoption of mobile advertising These addition elements could provide a better understanding of many factors that affect the relationships between customers and m-advertising.

## 2 Mobile Advertising

With the application of 3G in china, 3G network could provide data rates up to 384Kbit/s. The growing network speed make transferring image and video become true. So the expectations of mobile commerce are increasing. Especially mobile advertising is a very important m-commerce applications. In china, the high penetration rate of mobile phones has resulted in the increasing use of handheld devices to deliver advertisements for products and services. Thus, as mobile technology continues to develop, the mobile phone and network is promotly becoming a feasible marketing channel in china. Salo & Tahtinen defined mobile advertising is advertisement sent to and received by mobile devices, i. e. cellular phones, personal digital assistants, and other handheld devices which people carry with them<sup>[7]</sup>. Maneesoonthorn & Fortin think mobile advertising is creating a new marketing and advertising channel, they think mobile advertising has the potential to reach millions of wireless devices at the right time, the right place and to the right consumer<sup>[8]</sup>.

## 3 Reseach Model and Hypotheses for M-advertising Adoption

We develop our research a conceptual framework and hypotheses based on the theory of technology acceptance model. In our model, we integrate social norm into the technology acceptance model and studies PU/PEOU and customers' attitude impact on customer's adoption of M-advertising in china.

### 3.1 Technology Acceptance Model

In 1989 the technology acceptance model was proposed to explain customer adoption of technologies by Davis<sup>[3]</sup>. The origins of TAM can be traced to the theory of reasoned action by ajzen and fishbein<sup>[9]</sup> The technology acceptance model suggests that the intention to use a new information technology are based on the two variables: perceived usefulness and perceived ease of use. Perceived ease of use is defined as the degree to which a person believes that using a particular system would be free from effort. Perceived use refers to the degree to which a person believes that using a particular system would enhance his or her job performance. In the original TAM, Davis proposes Perceived use have a significantly greater influence customer adoption of IT than perceived ease of use, perceived ease of use also affects the perceived usefulness. The model provides a tool to study the factors influencing the adoption of system use and software usage. Figure 1 shows the TAM.

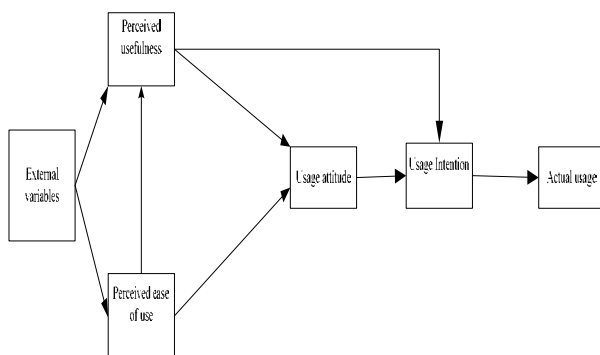


Figure 1. Technology acceptance model (TAM)

TAM have been widely used in studies examining why consumers adopted new technologies<sup>[10]</sup>. TAM include perceived usefulness (PU) and perceived-ease-f-use (PEOU), PU is defines as “the degree to which a person believes that using a particular system would enhance his or her job performance”, PEOU is defined as “the degree to which a person believes that using a particular system would be free from effort”<sup>[11]</sup>. For mobile advertising users to adopt mobile advertising, they need first find mobile advertising as a useful tool in improving their gain information performance, enabling them to more conveniently gain information. Mobile advertising users need feel that mobile advertising is easy to use. Both PU and PEOU will affect a user’s attitude according to TAM. TAM states that perceived usefulness will have a direct effect on user’s behavioral intention. Perceived ease of use affects behavioral intention indirectly through perceived usefulness. Perceived ease of use direct effect perceived usefulness. Considering the arguments above we define the following propositions:

[H1]: Perceived usefulness has a positive influence on

the attitude of users towards adopting mobile advertising.

[H2]: Perceived ease of use has a positive influence on the attitude of users towards adopting mobile advertising.

[H3]: Perceived ease of use has a positive influence on perceived usefulness of mobile advertising.

[H4]: Perceived usefulness has a positive influence on the intention to use mobile advertising.

### 3.2 Social Influence

Two important concepts of social influence are external influence and interpersonal influence. External influence includes the mass media reports, expert opinions, and other noninterpersonal influences<sup>[12]</sup>. Interpersonal influence refers to word of mouth influence by referent group<sup>[13]</sup>. Interpersonal influence includes friends, superiors and IT experts. A. Weilenmann and C. Larsson research on young users adoption of mobile services, they find that use of mobile services is a group marker or social identifier. Thus, we make the following propositions:

[H5]: Social influence has a positive influence on the PU of mobile advertising

[H6]: Social influence has a positive influence on the PEOU of mobile advertising.

### 3.3 Attitude Toward Mobile Advertising

#### 3.3.1 Entertainment, Information, Irritation, Credibility

The customers will fix attention on funny mobile advertising. The entertainment of the advertising is significantly related to advertising value of traditional advertising<sup>[14]</sup>. Mobile advertising deliver consumers’ interests information to customers by mobile devices, and the content of mobile advertising is accuracy, timeliness and usefulness<sup>[15]</sup>. Consumers may feel confused about mobile advertising and react negatively. Advertising credibility is defined as consumers’ perception of the truthfulness and believability of advertising in general<sup>[16]</sup>. Facilitating conditions refers to external control and catalysts in the adoption and diffusion of new technologies<sup>[17]</sup>. In the context of mobile advertising adoption, these conditions can be provided by mobile operators, mobile content providers, the government<sup>[18]</sup>. Thus we make the following proposition:

[H7]: The perceived entertainment, information, irritation, credibility and facilitating conditions of mobile advertising affect the attitude toward mobile advertising.

#### 3.3.2 Permission

Permission-based advertising is defines as giving consumers the opportunity to say yes or no, Godin’s study suggested that a more precise targeting were achieved by gaining permission<sup>[19]</sup>. Permission is a doorway consumers can open if desired, or not open at all. so we make the following proposition:

[H8]: The perceived permission of mobile advertising has a positive influence on the attitude toward mobile

advertising.

### 3.4 Moderating variables

Many evidence shows that gender and age might influence the adoption of mobile advertising due to their moderating effects on other constructs<sup>[20]</sup>. S. Okazaki think mobile advertising will generally lead to greater trust among males than among females<sup>[21]</sup>. So I define the following propositions:

[H9]: Gender and age moderate user PU, PEOU, permission and attitude towards adopting mobile advertising.

ing.

To summarise the constructs discussed in this paper, we proposed framework of mobile advertising adoption in Figure 2. According to the framework, we make the following propositions:

[H10]: Consumers attitude toward mobile advertising affect consumers intention to receive mobile advertising.

[H11]: Consumers intention to receive mobile advertising affect their behavior of receiving mobile advertising.

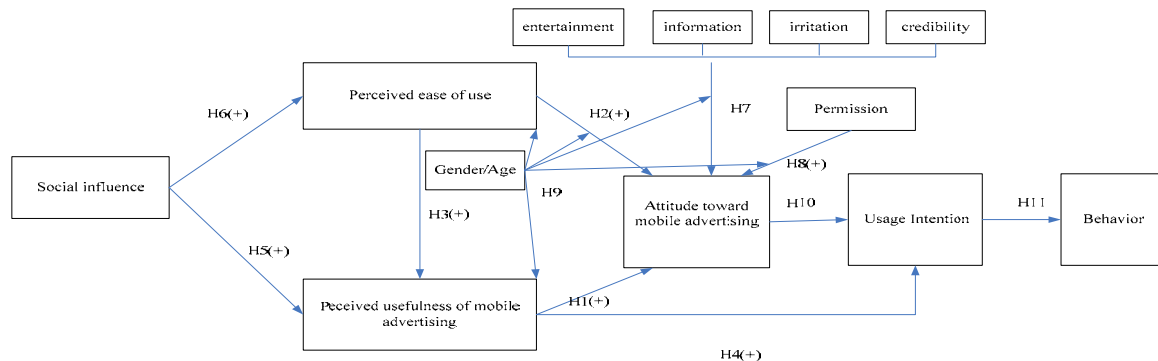


Figure 2a. conceptual framework of mobile advertising adoption.

## 4 Future Research

We plan to measure the variables using questionnaire and analyze the data using SEM (structural equation modeling). These data will be collected within the context of individual mobile advertising service. The questionnaire will be based on existing literatures on consumers' adoption of mobile commerce and mobile advertising. Now we are collecting data online.

## 5 Conclusion

For a better understanding of consumers' adoption of mobile advertising, we need to understand and predict individuals' adoption decisions. This paper integrates social norm into the technology acceptance model and studies their impact on customers' adoption of mobile advertising in China. The theoretical model and ten propositions proposed in this paper integrate five additional constructs: entertainment, information, irritation, credibility, and user's permission.

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