

# Information Adoption Model, a Review of the Literature

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**Abstract**—Along with the popularity of electronic word of mouth (eWOM) communication, the issue about how individuals adopt online information becomes one of the hottest topics in the research fields related to consumer behavior. Obviously, understanding the relevant mechanism contributes greatly to utilizing the influential factors to affect the information adoption process of consumers and their final purchase decision. Among relevant researches, the researches based on the Information Adoption Model (IAM) are comparatively new, valuable and practical. Consequently, this article analyzes and summarizes the existing studies on IAM by dividing them into three categories: studies by using original IAM, studies by adding variables in IAM and studies by building up complex models based on IAM. Further, the research perspectives, model variables, research conclusions and others of every relevant research are analyzed. Finally, implications are provided for future research and applications of IAM.

**Index Terms**—Electronic word of mouth (eWOM), consumer behavior, information adoption model (IAM).

## I. INTRODUCTION

Information technology and information system now develop at an unprecedented speed and become indispensable parts in individuals' life. With the appearance of online platforms, individuals begin to share various kinds of information online, and meanwhile search for necessary and valuable information online. Hence, the question about the information adoption process of consumers becomes one of the most popular topics in the research fields of consumer behavior. It is crucial for companies to understand the influential factors which affect the potential consumers' information adoption processes and thus companies can make full use of these factors to promote their products or services online.

According to the previous researches, consumer behavior is analyzed from different perspectives and explained by different variables. In the existing researches, the most typical and most convincing models and theories on the consumer behavior include Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975) [1], Technology Acceptance Model (TAM) (Davis, 1989) [2], Theory of Planned Behavior (TPB) (Ajzen, 1991) [3], Information Adoption Model (IAM) (Sussman *et al.*, 2003) [4] and so on.

### A. Theory of Reasoned Action (TRA)

Theory of Reasoned Action (TRA) is pointed out by Ajzen

& Fishbein (1975) [1]. It is mainly used to explain the relationships between attitudes and behaviors. According to this theory, both the attitude toward performing the behavior and the subjective norm affect the intentions and further affect the behavior. Meanwhile, this theory emphasizes that the attitude toward performing the behavior affects intention directly and via the subjective norm indirectly (see Fig. 1). Hence, this model can be used to predict individuals' behavior based on their attitude toward performing their behavior, the subjective norm and intentions.

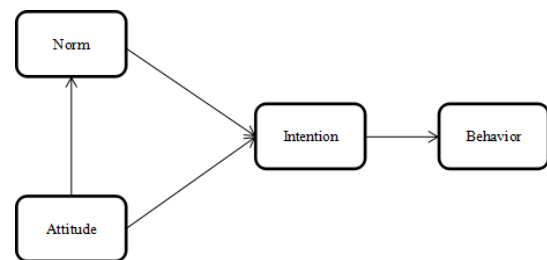


Fig. 1. TRA.

### B. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is illustrated by Davis (1986) [3]. It is an extended model of TRA with additional factors, including perceived usefulness, perceived ease of use and external variables. Here, according to Davis (1986) [3], perceived usefulness is defined as “the prospective user’s subjective probability that using a specific application system will increase his or her job performance within an organizational context”, while perceived ease of use refers to “the degree to which the prospective user expects the target system to be free of effort.”

This model can be used to explain the determinants of user acceptance of information systems and technology by measuring individuals' intentions, and to explain their intentions by their attitudes, subjective norms, perceived usefulness, perceived ease of use, and external variables (See Fig. 2).

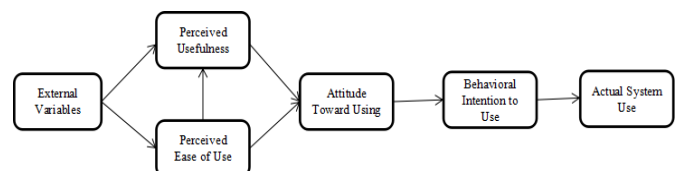


Fig. 2. TAM.

### C. Theory of Planned Behavior (TPB)

Theory of Planned Behavior (TPB) is proposed by Ajzen (1991) [2]. It is also an extended model of TRA by adding the concept of perceived behavioral control and thus it can be used to explain individuals' behaviors under incomplete volitional control.

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This model shows that the attitude toward the behavior, the subjective norm and the perceived behavioral control can affect the intentions and further affect the behaviors (see Fig. 3).

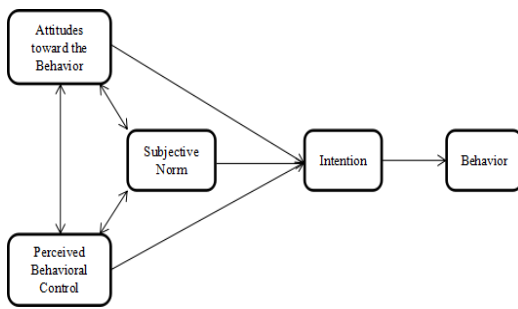


Fig. 3. TPB.

D. Information Adoption Model

Information Adoption Model (IAM) is pointed out by Sussman *et al.* (2003) [4] and it can explain how individuals adopt information and thus change their intentions and behaviors within the computer-mediated communication platforms.

IAM is based on both TAM and dual process model of informational influence (e.g. Elaboration Likelihood Model). On one hand, although TAM is a widely accepted theory, its explanatory power is actually limited. It mainly focuses on information systems and on the individual usage of a computer, but neglects the social processes (Riffai *et al.*, 2012 [5]). On the other hand, ELM is useful to explain how the receivers are affected by the information within the message and thus can be used to describe the change of attitudes form and to explain the processes underlying the effectiveness of persuasive communication (Petty & Cacioppo, 1986 [6]). According to ELM, informational influence can occur at any degree of receiver elaboration, and two different influence routes, including a central route and a peripheral route, affect the results. If the individual has a deep and careful consideration on the information, a high level elaboration is obtained and the information influence occur in the central route. Contrarily, if the individual has only a little consideration on the information, a low level elaboration is obtained and the information influence occur in the peripheral route.

Hence, Sussman *et al.*, (2003) [4] integrates TAM and ELM, and uses the argument quality as the central route, the source quality as the peripheral route, the perceived information usefulness as a mediator (see Fig. 4).

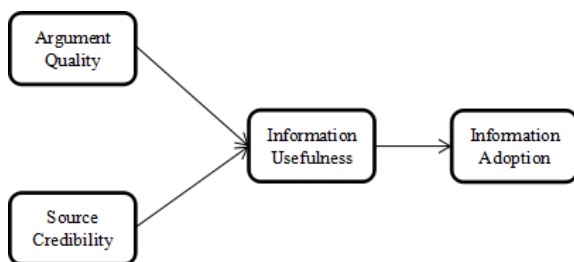


Fig. 4. IAM.

With the rapid development of social media, especially online communities, researchers begin to focus on the information adoption process in these environments. Since

the IAM is comparatively new, its significance makes itself be worthy for researchers’ attentions.

This article collects and analyses the applications of IAM on information adoption processes of online users, compares these applications by their different research perspectives, model variables, conclusions and other details, and points out future research directions so as to help researchers get a basic understanding of the relevant applications of IAM.

II. THE APPLICATIONS OF IAM

Based on different research directions, the searches on the applications of IAM on information adoption processes of online users can be divided into three categories, including researches on 1) using original IAM; 2) adding variables to IAM and 3) building up complex models based on IAM.

A. Using the Original IAM

Christy, Matthew & Neil (2008)<sup>[7]</sup> use IAM to study the factors affecting the adoption of online opinions in the online communities. The variables used in this empirical study are four dimensions of argument quality (including relevancy, timeliness, accuracy and comprehensiveness), two dimensions of source credibility (including source expertise and source trustworthiness), the usefulness of information and information adoption. This study conducted a survey and tested the research model within an online consumer community, which is called Openrice and which is a platform used for sharing information on restaurants and food in Hongkong. The target respondents were individuals who used this platform and who were affected by the comments shared within it. With 154 valid questionnaire answers, this study concludes that only the relevance and comprehensive of argument quality have shown significance influences on information usefulness, which further affect consumers’ decisions to adopt information in the online communities greatly.

B. Adding Variables to IAM

Dong *et al.*, (2015) [8] develop a research model to investigate the influence of C2C communication on the purchase decisions of consumers in the online communities by adding variables to the original IAM. A survey was used and the valid answers came from 234 students in a large university in China. The results show that argument quality, source credibility and tie strength are all positively connected to the product usefulness evaluation and thus further affect the purchase decision.

Tseng & Wang (2015) [9] investigate how perceived risk affects individuals’ information adoption process in the travel websites by integrating perceived travel risk into IAM. The respondents to the questionnaire were potential tourists who had visited the travel websites and finally 212 pieces of valid answers were obtained. The results show that argument quality and source credibility effectively affect consumers’ information adoption intention via perceived usefulness, that perceived risk affects information adoption intention directly and via perceived information usefulness indirectly and meanwhile, play a moderating role between source credibility and perceived usefulness.

Erkan & Evans (2016) [10] study the influence of eWOM in social media on consumers' purchase intentions by integrating the IAM and related components of TRA. The variables in this model include information quality, information credibility, needs of information, attitude towards information, information usefulness, information adoption and purchase intention. The conducted questionnaire was validly answered by 384 students in UK universities. After analyzing the results, this study confirms the influences of both information adoption and attitude towards information on the purchase intention and the influence of information usefulness on information adoption. Meanwhile, information quality, information credibility and needs of information are all found to affect information usefulness.

### C. Building up Complex Models Based on IAM

Cheung *et al.* (2009) [11] investigate the influential factors towards the adoption of eWOM by adding more variables and replacing the mediated variable of information usefulness with the perceived eWOM review credibility. The research model was tested by an online survey and the respondents were from a popular online consumer discussion forum in China, called Myetone. The results conclude that three informational determinants, including argument strength, source credibility and confirmation with prior belief, and two normative determinants, including recommendation consistency and recommendation rating, all affect the eWOM review adoption via perceived eWOM review credibility.

Jin *et al.* (2009) [12] develop a model to examine how social networks promote members to use the information inside the network and to continue participating in the network, by drawing from theories of IAM and of user satisfaction. The model is validated by an online survey which was answered by 240 members of a bulletin board system of the university in China. The results show that information quality and source credibility affect information usefulness and further affect continuance intention directly and via satisfaction indirectly and that source credibility and dis-confirmation of source credibility affect the satisfaction and further affect continuance intention.

Li (2012) [13] integrates social influence theory and IAM to explore the influence of persuasive messages on information system acceptance. A questionnaire was developed for the survey and 123 pieces of answers were accepted. The results indicate that two dimensions of persuasive message, including source credibility and argument quality, have significant influences on social influence, affective response and cognitive response, that the affective response, cognitive response and behavior are interrelated, and that the moderating role of international social influence on cognitive response and behavior intention are confirmed.

Chen, Chen & Hsu (2011) [14] analyze how consumers adopt eWOM in the online communities. The research model is built based on the IAM and three additional variables, including confirmation with prior belief, recommendation consistency and message credibility. The data was gathered from online questionnaires which were sent to a specific online community focusing on information about

computer-related products in Taiwan, and 466 pieces of valid answers were accepted. The findings show that both message quality and source credibility affect information usefulness and further affect the information adoption, that message quality, source credibility, confirmation with prior belief and recommendation consistency all have significant influences on the message credibility, and that message credibility affects information adoption directly and via information usefulness indirectly.

Gunawan & Huarng (2015) [15] emphasize the importance of understanding the viral marketing effects on consumers' purchase intention in social network and media. The extended model is built by integrating IAM, Theory of Reason Action (TRA), perceived risk and social interaction together. The survey was conducted and the respondents were online users who used at least three major platforms of social network and media (e.g. Facebook, Youtube and Instagram) and who were college students in different majors in Indonesia. The results indicate that both source credibility and social influence affect users' attitude towards information usefulness and further affects behavioral intentions, that social influence affect behavioral intentions via subjective norms, and that perceived risk has a negative influence on the behavioral intentions.

### III. DISCUSSION AND FUTURE RESEARCH DIRECTIONS

According to the analysis above, several implications for future researches are concluded as the following.

#### A. Future Researchers Could Use Combination of Multiple Models or Introduce New Variables to Improve the Explanatory Power of IAM

TABLE I: RESEARCHERS' EMPHASES

Researchers	Emphasis
Christy, Matthew & Neil (2008)	information adoption intention
Jin <i>et al.</i> , (2009)	satisfaction and continuance intention
Cheung <i>et al.</i> , (2009)	message credibility
Chen, Chen & Hsu (2011)	message credibility
Li (2012)	recipient response and social influence
Gunawan & Huarng (2015)	perceived risk and social influence
Tseng & Wang (2015)	perceived risk
Dong <i>et al.</i> , (2015)	tie strength and purchase intention
Erkan & Evans (2016)	needs of information and purchase intention

Previous researches show that a few researchers use the original IAM (Christy, Matthew & Neil, 2008) [7], that some researchers add new variables which are designed according to the specific application environment to the original IAM (Dong *et al.*, 2015 [8]; Tseng & Wang, 2015 [9]; Erkan & Evans, 2016 [10]), that some researchers replace the original mediated variables with new ones (Cheung *et al.*, 2009 [11]; Jin *et al.*, 2009 [12]; Li, 2012 [13]; Chen, Chen & Hsu, 2011 [14]), and that several researchers combine others theories or models, such as TRA, with the original IAM (Li, 2012 [13]; Gunawan & Huarng, 2015 [15]). The reason which results in

these various applications of IAM is mainly because that these researchers have different emphasis when they are building up their models (As listed in the Table I).

According to Table I, it is clear that perceived risk, message credibility, social influence and other personal factors become researchers' emphasis when they study the information adoption processes of online users. Consequently, in order to increase the explanatory power of the model, future researches could add more variables or combine IAM with other models.

#### *B. Future Researchers Could Use Different Perspectives or Add More Perspectives to Study the Information Adoption Processes of Online Users*

According to Table I, previous studies show that researchers emphasize different variables, which are derived from the perspective of message (e.g. message credibility), the perspectives of the influence of environment on information receivers (e.g. perceived risk and satisfaction), the perspective of receivers themselves (e.g. recipient response) and the perspective of interpersonal factors (e.g. tie strength and social influence). Because of these different perspectives, these researches confirm the influences of different variables on the information adoption processes of online users. Besides these perspectives, the perspective of information senders is also valuable to be analyzed, because communication is a process of which individuals (namely information senders) transmit stimuli (namely the message) to modify the behavior of others (namely information receivers) (Hovland, Janis & Kelley, 1953<sup>[16]</sup>). Hence, future researches could use different perspectives or add more perspectives to study the information adoption process.

#### *C. Future Researchers Could Adopt More Methods to Collect Data*

All the studies above used questionnaires to collect data. However, this method may be limited by many factors, such as time and place, and thus may lead to the sample data' failing to realize the real situation. Consequently, future researches could adopt other methods to collect data, such as using open and valuable data which have been collected by some professional websites or companies.

#### *D. Future Researches Could Analyze the Information Adoption Process of Different Categories of Information*

Previous studies have mainly focused on information related to online shopping, travel, restaurant and others. Actually, with the development and popularity of various social media, such as online communities, online users are able to share information which related to different areas. Hence, it is valuable for future researchers to analyze the information adoption process of other categories of information.

#### *E. Future Researches Could Focus More on the Applications of the Studies in Different Countries*

Due to the different situations in different counties, future researches could explore more variables which fit to the counties' situation to extend the original model so as to improve the effectiveness of the study and to give more valuable and more practical conclusions and implications.

## IV. CONCLUSION

In this study, the relevant typical model for studying the consumer behaviors are introduced, and the importance of the IAM is emphasized when researchers want to figure out the influential factors which affect the information adoption process of online consumers. Then, the studies based on IAM in the online context are analyzed, summarized and categorized. The previous researches about using original IAM, adding variables in IAM and building up complex models based on IAM are introduced with details. Finally, theoretical implications for further studies and applications are discussed and concluded. Accordingly, future researchers could 1) use combination of multiple models or introduce new variables to improve the explanatory power of IAM; 2) use different perspectives or add more perspectives to study the information adoption processes of online users; 3) adopt more methods to collect data; 4) analyze the information adoption process of different categories of information; and 5) focus more on the applications of the studies in different countries.

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