

## **Mobile word of mouth (MWOM) in messaging applications: An integrative framework of the impact of MWOM communication**

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### **Abstract**

Electronic word of mouth simply refers to brand-related conversations between consumers, and it has been considered as one of the most helpful information sources. The advent of mobile messaging applications (e.g. WhatsApp, Viber, Line) has freely and easily allowed customers to do brand-related conversations using their smartphones, which is called mobile word of mouth (MWOM). The aim of this research is to develop an integrative framework of the impact of MWOM communication among consumers. To do this, we applied five well-established robust marketing and information systems theories: Theory of Reasoned Action, Theory of Planned Behaviour, Technology Acceptance Model, Information Adoption Model, and Information Acceptance Model. The framework developed in this study provides an important foundation for future MWOM research work.

**Key words:** mobile word of mouth (MWOM), electronic word of mouth (eWOM), messaging applications, mobile purchase intention, mobile purchase, whatsapp, viber, line

### **1. Introduction**

Consumers who need information about the products or services of brands have two main sources: 1) marketer-generated information, 2) user-generated information. The first one usually refers to advertisements, while the latter one refers to word of mouth (WOM) communications. WOM conversations consist of former customers' opinions and experiences about brands and their products or services. Since they do not have selling intent, WOM conversations are considered as one of the most powerful information sources for consumers

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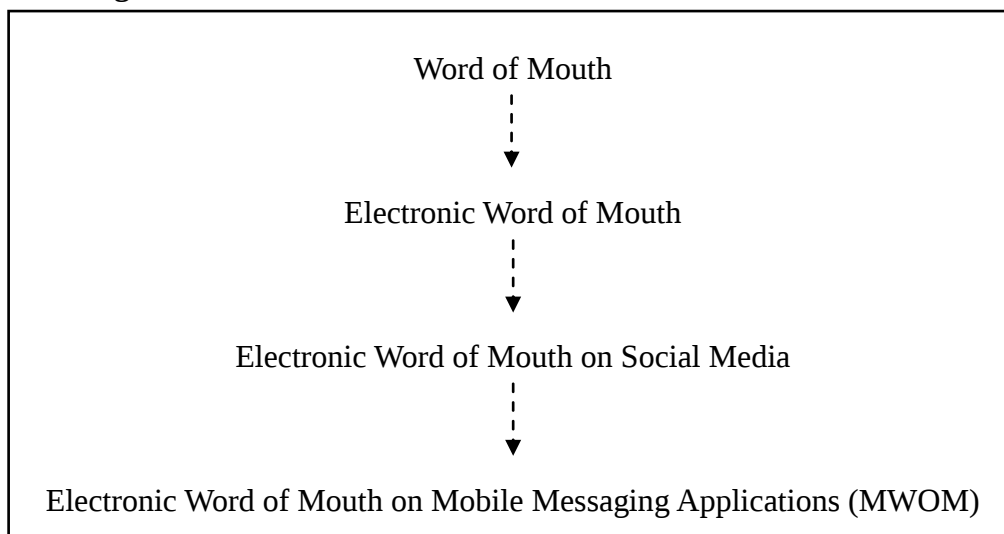
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(Arndt, 1967). In fact, in both early and recent studies, WOM has been found more influential on consumers than traditional form of advertisements (Engel, Blackwell, & Kegerreis, 1969; Trusov, Bucklin, & Pauwels, 2009).

The advent of the Internet and mobile technologies brought new aspects to WOM. In the past, WOM was only referring to information exchange in personal conversations of consumers'. Then the Internet brought discussion forums, and provided an opportunity for consumers to learn more peoples' opinions and experiences (Bickart & Schindler, 2001). These online conversations have been called electronic word of mouth (eWOM) (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). However, although eWOM has been found influential on consumers (Bickart & Schindler, 2001; Kumar & Benbasat, 2006; Park, Lee, & Han, 2007; Zhang, Craciun, & Shin, 2010), the conversations used to occur between anonymous people on the Internet. Yet the advent of social media websites has brought a new, pioneering perspective to eWOM by letting users to chat with their real identities (Chu & Choi, 2011; Erkan & Evans, 2016a). Finally, the advent of mobile applications gave people opportunity to send visually enriched instant messages to their friends. Figure 1 demonstrates the diversification of WOM (Erkan, 2014).

**Figure 1** The diversification of word of mouth communication.



Mobile word of mouth has been considered worth studying by previous researchers. The motivations for MWOM (Palka, Pousttchi, & Wiedemann, 2009), the influence of MWOM on decision making (Shen, Wang, Sun, & Xiang, 2013), the role of trust in adoption of MWOM services (Wang, Shen, & Sun, 2013), determinants of mobile purchase intention (Zhou, 2013) have been examined. However, although the messaging applications such as WhatsApp, Viber, and Line became so popular in recent years, the possible influence of MWOM in messaging applications is relatively ignored. The messaging application platforms are not only different context for MWOM, but also new aspect for MWOM since they allow

consumers to send visually enriched messages to each other. Before these applications, the MWOM conversations were limited to short message services (SMS) and phone calls. However, people now can instantly send pictures, videos, or even their locations to each other thanks to the messaging applications. We therefore think that the MWOM on messaging applications is worth studying. Thus, the aim of this research is to develop an integrative framework of the impact of MWOM communication on messaging applications. To do so, we applied five well-known marketing and information systems theories: Theory of Reasoned Action, Theory of Planned Behaviour, Technology Acceptance Model, Information Adoption Model, and Information Acceptance Model. The framework we developed in this study provides theoretical insights regarding MWOM and contributes to the related literature. On the managerial side, understanding the possible determinants of MWOM communication on messaging applications could help marketers to apply MWOM in their digital marketing activities.

## **2. Literature review**

### ***Mobile word-of-mouth communication***

Nowadays, it is not unexpected to use smart phones and mobile applications to spread and/or reach the information about a product or service. Because of developing internet technologies and rapid growth of smart phone ownership, it is possible to access global information in any place and any time. So the mobile and smart devices are suitable for consumers to connect to other people to get recommendation and give advice about anything (Shintaro, 2008).

Viral is one of three strategies that is offered by marketing instrument, helps people to exchange information between each other. The latter strategy is one of the most important innovations right after word of mouth marketing and known as mobile viral marketing or mobile word of mouth (MWOM) (Palka et al., 2009). MWOM is a marketing strategy that is used to deliver information about products, services and ideas to potential customers through digital media of internet such as short video clips and messages distributed by mobile phones (Klopper, 2002; Wiedemann, 2007). According to Barutçu (2011), the main aim of mobile word of mouth is to make a customer to be a volunteer sales person of the company.

Qiu (2016) found that user's dependency on mobile application, the relationship between the users, perceived ease of use of mobile device are effective on credibility of MWOM. Burtch and Hong (2014) found that mobile device users are likely to post short, quick and emotional messages. Yang and Zhou (2011) found that young people have positive attitude towards MWOM and think that mobile messages are funny, useful, relevant and easy to spread when the message offers personal benefit. Palka et al. (2009) stated that mobile devices were new tools for WOM. Bibby (2008) and Coyle and Vaughn (2008) suggested that "to keep in touch with friends" is the most common and important reason to use mobile devices and

applications. Wiedemann (2007) found that MWOM has an important potential to build an effective relationship with targeted customer groups and spread marketing messages.

People carry their mobile devices everywhere and they are online almost every time. In this way, it is possible to connect to each other face to face audibly and visually. Additionally, they are able to send voice message, photo or video, may record them and reply them later. Because of all these possibilities, MWOM is a new and popular research area. In this study we therefore focused on MWOM and developed an integrative framework of the impact of MWOM communication on messaging applications.

### **3. An integrative framework of the impact of MWOM communication**

In order to build our framework, we applied five well-known marketing and information systems theories: Theory of Reasoned Action, Theory of Planned Behaviour, Technology Acceptance Model, Information Adoption Model, and Information Acceptance Model.

We therefore have 15 propositions which are as follows:

#### ***Information quality***

Localization, immediacy, and customization are considered as possible antecedents of mobile information quality (Shen et al., 2013). Localization defined as perception of user when the information is specific to their location; localization helps the customers to meet their requests for that local area. Immediacy refers to the perception of users about how information is renewed quickly in actual time and sensitive to time. Customization refers to perception of users about how information is differentiated according to customer's authentic identity and profile; customisation will be able to help customers get the information immediately (Shen et al., 2013). Thus, this study proposes that, the localization, immediacy and customization of information that obtained from mobile messaging applications would positively affect the MWOM quality.

**P1.** The localization of the information obtained from mobile messaging applications is positively associated with MWOM quality.

**P2.** The immediacy of the information obtained from mobile messaging applications is positively associated with MWOM quality.

**P3.** The customization of the information obtained from mobile messaging applications is positively associated with MWOM quality.

#### ***Information credibility***

When the other factors are same, highly credible information sources, which affect the perception of user, are more effective than less credible sources (Cheung, Lee, & Rabjohn, 2008; Hovland, Janis, & Kelley, 1953; McGinnies & Ward, 1980). Users perceive the information as more useful and reliable when the information credibility is high (Ko, Kirsch, & King, 2005). In previous studies, source expertise and source trustworthiness are considered as sub-dimensions of information credibility (Cheung et al., 2008; Cheung & Thadani, 2012). Source expertise refers to “competency and knowledge” while source trustworthiness refers to “honesty and integrity of source” (McGinnies & Ward, 1980). Based on the mentioned prior studies, in this study we considered source expertise and source trustworthiness as possible antecedents of MWOM credibility and hypothesised the followings:

**P4.** Source expertise is positively associated with MWOM credibility.

**P5.** Source trustworthiness is positively associated with MWOM credibility.

### ***Information usefulness***

Information quality, information credibility, and needs of information are proposed as antecedents of information usefulness (Erkan & Evans, 2016b; Shen et al., 2013; Sussman & Siegal, 2003). Information quality refers to the perception of consumer related to specific product or service related information when it is localized, immediate and customized to satisfy consumer's needs. When information satisfy consumer's need, they are more likely to be disposed about that product or service (Olshavsky, 1985). Previous researchers found that the quality of online reviews (Lee & Shin, 2014; Park et al., 2007) and website quality (Bai, Law, & Wen, 2008) have positive effects on consumers' purchase intentions. Therefore, we propose that quality of the mobile information is positively associated with MWOM usefulness. Besides, information credibility is a significant value for information usefulness (Cheung et al., 2008). Prior studies prove that there is a positive relationship between information source credibility and usefulness of information (Hajli, 2016; Ko et al., 2005). Information credibility is thus considered as another determinant of MWOM usefulness. Moreover, in this study, we also regarded needs of information as a potential antecedent of MWOM usefulness. This construct (needs of information) has previously been proposed as a key factor which effect WOM involvement (Sundaram, Kaushik, & Webster, 1998). Researchers also used the terms “advice seeking” (Hennig-Thurau et al., 2004; Wolny & Mueller, 2013) and “opinion seeking” (Chu & Kim, 2011) to define needs of information which is a consumer behaviour regarding to eWOM information (Chu & Kim, 2011; Wolny & Mueller, 2013). We therefore hypothesised the followings:

**P6.** The quality of the mobile information is positively associated with MWOM usefulness.

**P7.** The credibility of the mobile information is positively associated with MWOM usefulness.

**P8.** The needs of mobile information are positively associated with MWOM usefulness.

### ***Information adoption***

The integrative framework we developed in this study proposes two antecedents for information adoption, which are information usefulness (Cheung et al., 2008; Shen et al., 2013; Sussman&Siegal, 2003), and platform (Cheung &Thadani, 2012). Information usefulness refers to users` perceptions about new information which increases their performance (Bailey & Pearson, 1983; Cheung et al., 2008; Erkan& Evans, 2016b). When users found information useful, they will more likely to adopt it (Erkan& Evans, 2016b). For MWOM context, users share information with the other people on their mobile phones, therefore the useful information might have positive influence on MWOM adoption. Moreover, when it is difficult to understand the quality and credibility of information provided, users focus on the platforms where information is posted, in order to understand the purpose of communicators (Lee &Youn, 2009). According to Chatterjee (2001), the environment (e.g., website, platform) people come across with the information plays important role on their decisions regarding the quality of information. The type of mobile applications is therefore considered as another determinant of MWOM adoption. Following hypotheses are proposed:

**P9.** The usefulness of mobile information is positively associated with MWOM adoption.

**P10.** The type of mobile application is positively associated with MWOM adoption.

### ***Mobile purchase intention***

Information adoption refers to a process which engages users purposefully in using information (Cheung et al., 2008). The relationship between information adoption and purchase intention has been initially proposed by Cheung and Thadani (2012). Although it had not been empirically tested, the authors proposed an integrative framework of the impact of eWOM communication. After that, in 2016, this relationship has been tested by Information Acceptance Model; and information adoption has been found influential on consumers` purchase intentions (Erkan& Evans, 2016b). In this study, however, we focus on mobile purchase intention. Based on the mentioned prior studies, we predict that consumers who adopt the information obtained from mobile messaging applications are more likely to have mobile purchase intentions.

**P11.** The adoption of the mobile information is positively associated with mobile purchase intention.

Furthermore, attitude towards information, subjective norm, and perceived behavioural control are other constructs we proposed as antecedents of mobile purchase intention. Attitude towards information refers to the what extent the user's evaluation on information is favourable or unfavourable or evaluation of information in question. Subjective norm is a social factor which refers to perceived social pressure by individuals which affect their decision about to perform or not to perform behaviour. The other antecedent of intention is perceived behavioural control which refers to perceived easiness or difficulty while performing the behaviour, it is also supposed to reflect the previous experiences, expected impediments and obstacles (Ajzen, 1991). The Theory of Planned Behaviour (TPB), which is one of the most famous theory among information systems researchers, suggested the mentioned three constructs as determinants of behavioural intention (Ajzen, 1991). It is expected to have stronger behavioural intention with more favourable attitude, subjective control and perceived behavioural control. Therefore, in this study, we propose them as antecedents of mobile purchase intention.

**P12.** Attitude towards information is positively associated with mobile purchase intention.

**P13.** Subjective norm is positively associated with mobile purchase intention.

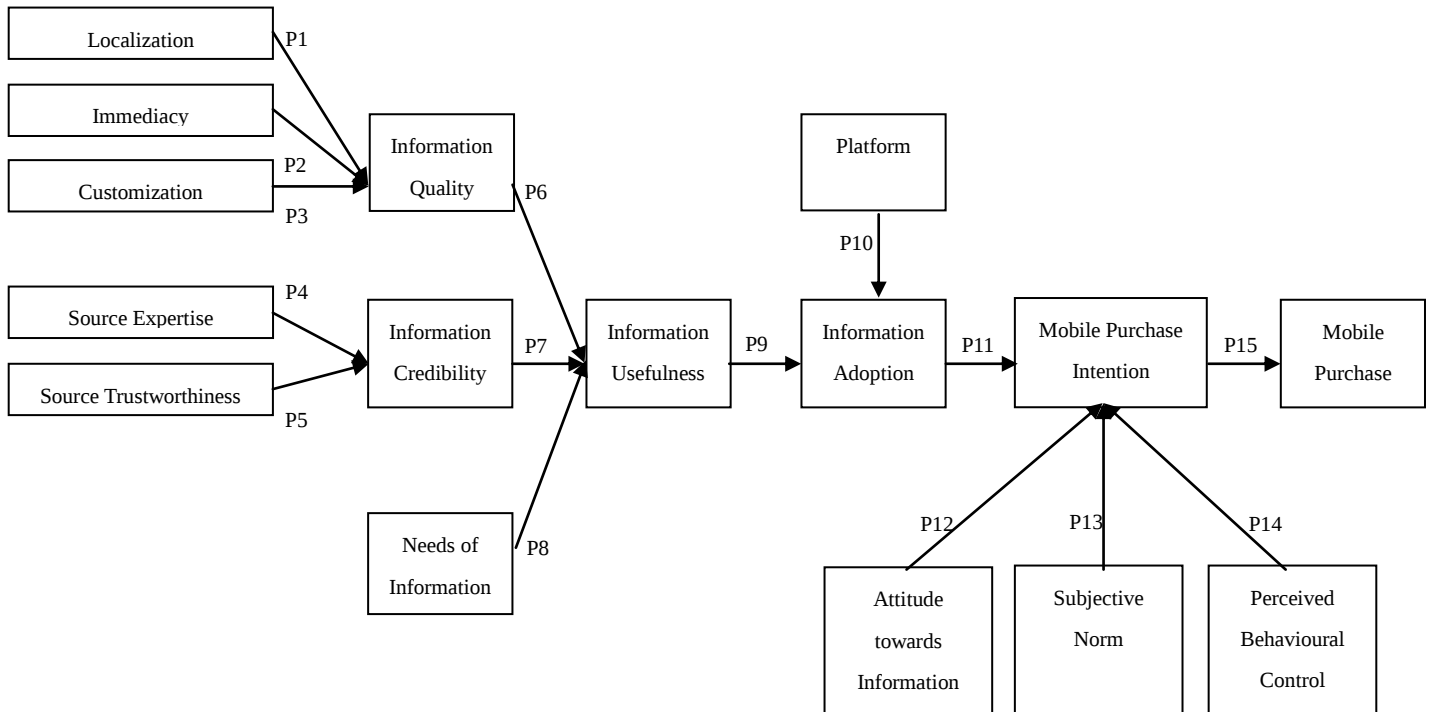
**P14.** Perceived behavioural control is positively associated with mobile purchase intention.

### ***Mobile purchase***

Mobile purchase has been defined as “any purchase-related activity conducted by smartphones or tablets through mobile Internet” (Gao et al., 2015 p.250). Mobile purchase provides time and location free shopping experience to the customers by using mobile devices and networks (Wong, Tan, Ooi, & Lin, 2014). Mobile purchase intention however refers to the willingness of customers to buy a product or service via mobile devices and networks. The Technology Acceptance Model (TAM) proposed that consumers' behavioural intention is the biggest determinant of actual behaviour (Davis, 1989). TAM is a widely accepted theory among researchers, which has been tested in many different contexts (Alenezi, Tarhini, & Sharma, 2015; Porter & Donthu, 2006; Rauniar, Rawski, Yang, & Johnson, 2014; Tarhini, Hone, & Liu, 2013). Based on TAM, we predict that consumers who have mobile purchase intentions are more likely to make mobile purchase.

**P15.** Mobile purchase intention is positively associated with mobile purchase.

**Figure 2** An integrative framework of the impact of MWOM communication.



#### 4. Discussion

The objective of this study is to develop an integrative framework of the impact of MWOM communication on messaging applications. To do so, five robust marketing and information systems theories were applied, namely Theory of Reasoned Action, Theory of Planned Behaviour, Technology Acceptance Model, Information Adoption Model, and Information Acceptance Model. The framework we developed in this study has 16 variables and 15 propositions.

Customers have showed an enormous interest in MWOM. Furthermore, MWOM has been considered worth studying by previous researchers (Palka et al., 2009; Shen et al., 2013; Wang et al., 2013; Zhou, 2013). The influence of MWOM on decision making (Shen et al., 2013), the role of trust in adoption of MWOM services (Wang et al., 2013), the motivations for MWOM (Palka et al., 2009), and determinants of mobile purchase intention (Zhou, 2013) have already been established. However, although the messaging applications such as WhatsApp, Viber, and Line became so popular in recent years, the possible influence of MWOM in messaging applications is relatively disregarded. Whereas, the messaging application platforms are not only different context for MWOM, but also new aspect for

MWOM since they allow consumers to send visually enriched messages to each other. People now can instantly send pictures, videos, or even their locations to each other thanks to the messaging applications. In this study we therefore focused on the impact of MWOM communication in messaging applications. As a result of our detailed literature review, we came across 15 factors which are likely to have positive influence on consumers' mobile purchase behaviour: localization, immediacy, customization, source expertise, source trustworthiness, information quality, information credibility, needs of information, information usefulness, platform, information adoption, attitude towards information, subjective norm, perceived behavioural control, and mobile purchase intention.

## 5. Conclusion and Recommendation

The framework we developed in this study provides theoretical insights regarding MWOM and contributes to the related literature. It provides an overview of the current status of knowledge on MWOM communication research. Moreover, the conceptual framework of this study identifies the possible key factors which may affect consumers' mobile purchase behaviour. We believe that this study will stimulate future research on MWOM. Future studies can empirically test the framework and propositions suggested in this study. On the managerial side, understanding the possible determinants of MWOM communication on messaging applications could help marketers to apply MWOM in their digital marketing activities.

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