An Exploratory Study of the Motives Engaged in the Dissemination of Social Word-of-Mouth via Mobile Device

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Abstract
Based on the observed difference in the timing of publishing word-of-mouth, this study attempts to clarify whether there are differences in motivation between word-of-mouth that is published from a computer and from a mobile device. In this study, we use exploratory factor analysis and find the motivation to disseminate word-of-mouth by mobile devices are divided into five dimensions: personal, social, consumption-based, perceptual and monetary conditions. This research further concludes that, social, perceptual and consumption-based conditions are more influential on sWOM dissemination. The findings of this study provide useful implications of the motives to disseminate social word-of-mouth via mobile device and can be further extended to be references and suggestions for the marketing practitioners.

Key words: social word-of-mouth, mobile device, motive, dissemination

1. Introduction
With the widespread of smart phone and wireless Internet, “check-in” has become one of the most important activity in modern mobile life [1]. The “check-in” service that SNS (social networking site) provided were designed to be used on mobile devices. The “check-in” function can be used spontaneously or specifically induced by events, such as “Check-in” to earn purchase discount [2]. Apart from announcing location users can also share location-related information, such as photographs and brief descriptions of surroundings and activities they are engaged in. Therefore, consumers can respond to the environment immediately by mobile device, rather than post the photos and article after the purchase activity in the past can now be move to when the time of purchase [12,13]. In other words, compared to original WOM, consumers can respond to the environmental stimulation immediately by mobile device, rather than post the photos and article after go back to a PC or a labtop. The disappearance of constraint related to time and space provides flexibility to consumers to share information [14]. With mobile devices and social network application services, people are able to publish their status, photo, and review online with much less time and space constraints. The development of mobile devices, wireless Internet, and SNS has changed user behavior significantly. Therefore, with the widespread mobile devices and social network website, it is worthwhile to clarify the motivation of WOM based on the current situation. The application of this research can be a reference for future mobile and social network studies. Furthermore, in practical aspect, this research may be a reference for mobile application related user experience design, marketing plan and operation strategy development for the Post - PC era.

Since there were no established method to examine motives for dissemination sWOM. This study adopt the model from the research of Palka, Poushchi and
Wiedemann [15] and discuss the factors of motivation from psychological theory and prior WOM research to define seventeen factors and to further explore the motivation of “Check-in” activity. Among the factors, altruism, expressiveness and perceived social benefit are adopted the scale developed by Dholakia, Bagozzi and Pearo [16]. Narcissism is from the scale in Meh dizadeh’s research [17]. Subjective norm and image-building are from Shimp and Kavas [18]. Perceived enjoyment and customer satisfaction and commitment are from a research conducted by Verhoef, Franses and Hoeckstra [19]. Perceived user friendliness and perceived value scale are from the study by Palka, Pou sttchi and Wiedemann [15]. Social support scale is built on Gefen and Ridings [20]. Tie strength is built on Chu and Kim [21]. With a process of factor analysis, this study further develop a model of five motive conditions, which include personal, social, consumption-based, perceptual and monetary conditions.

This study contributes to the existing literature in several ways. First of all, this study integrates the theory and studies of motivation in the past and combines the result of pretest and generalizes seventeen factors and five motive conditions which affect sWOM dissemination via mobile device. Secondly, the results verified the main motivation to disseminate sWOM via mobile device has changed from altruism as shown in previous WOM studies to social purpose. The result of this study shown that individual disseminates the sWOM via mobile devices in order to strengthen the tie and link between their friends.

2. Theoretical Background
2.1. WOM
Word-of-mouth (WOM) refers to person-to-person communication between communicators and recipients who perceives the respective message as non-commercial information sources while subject is about a brand, product, or service [22]. Information from non-commercial source is one of the important factor in consumer decision-making. Shimp et al. [6] and Chatterjee [7] suggested that consumer-generated messages would be more effective in generating referrals for non-regulated and low-involvement products. Those opinions people may ask before purchasing any product are WOM, as the opinion shared by their friends are neither controlled by vendors. WOM not only influences consumers’ choices and purchase decisions [23], but also shapes pre-usage attitude [24] toward the brand and the website [25]. The form of WOM is not limited to face to face, with the development of social network website and mobile device, there emerge new forms of WOM - sWOM and mWOM.

Social Word of Mouth (sWOM). WOM dissemination through social networking site is defined as social word-of-mouth (sWOM) [4]. Since most of the social networking sites offer a closed and non-anonymous social circle structure, both communicator and receiver know each other in the physical world with a true friendship [26]. Facebook, for example, even asks users, after accepting a friend request, whether know the sender in reality on occasion. The credibility of the sWOM was therefore higher than traditional anonymous Internet WOM [3,5]. Moreover, the target group of sWOM is narrowed down from every consumer to our friend list, thus sWOM is helpful for decision-making than before [21,27]. For example, it is common that we expect responses from friends after publishing a question on Facebook; companies use SNS to disseminate WOM; Blogger marketing and social network marketing are built on user opinion.

Mobile Word of Mouth (mWOM). Another form of WOM brought by wireless Internet is mobile word-of-mouth, which is also called mWOM. mWOM is defined as spreading, gathering, transmitting, or retransmitting WOM through mobile device [13]. Compare with PC, the feature of mobile device, eliminate the constraint related to time and space, as long as there is wireless Internet service. Thus, it provides consumers with a portable, flexible, and a means of universal access to information [14]. However, the environment of mWOM is dominated by anonymous information, without reliable source, the anonymity decreases the credibility of information [28,29].

Currently, with the appearance of Location Based SNS service, the boundary between mWOM and sWOM has become blurred. With the development of technology, the post-PC devices have been invented and those functions used to be processed on PC, now can be processed on all kinds of mobile devices. More and more mobile apps and cross-platform applications have been developed including social services, such as Google plus and Facebook for mobile users. Moreover, SNS vendors release Location Based Services for mobile devices – “Check-in”. This research used Facebook “Check-in” data to examine the motivation behind sWOM via mobile devices.

Location-Based Services and Check-in. Location-based service (LBS) that uses a smart phones GPS signal to let user easily share where they are, what they are doing and who they are with, photos or videos of the environment can also be attached directly from their mobile [30]. Check-in as the LBS provided by Facebook, users can communicate with members in their network anytime and anywhere instead of sitting in front of a computer. In fact, this information appear on the Place page, friends’ news feed and their Timeline when people share their experience and any kind of content or consumption information. For example, when people dine in a restaurant, they can take a picture of a dish, write a review of the restaurant, and tag friend son Facebook. This “Check-in” record will then be shown on the Newsfeed of the user who public, friend who has been tagged, and other friends who has been in this restaurant. With the mobility of mobile devices, unlike traditional sWOM that need to be back to a place with computers, these sWOM via mobile device, “Check-in”, can be published immediately. Therefore, to optimize a marketing plan, it is worthwhile to study the motivation behind the “check-in” activity via mobile.

2.2. The motive to disseminate WOM and s-WOM
Motives are the general drivers that direct a
consumer's behavior toward attaining their needs [31]. How word of mouth influences consumers' attitudes and perceptions was first presented by Dichter [32], which classified motivation of positive WOM into four categories: product involvement, message involvement, other involvement, and self-involvement. However, the detailed explanations of each category have not been discussed in this study. In the following study, with the development of Internet, the motivation of Internet WOM has been shown to be different compared to traditional WOM. The major differences are that the Internet anonymity enhances the Altruism, and the pattern of dissemination has changed from one-to-one to one-to-many. sWOM has been developed from Internet WOM; the major differences between sWOM and Internet WOM are: the writers are anonymous and the target readers is difference. Currently, major social network website, including the largest Social network Facebook and Google plus, adopt real-name based registration system. According to Mehdizadeh [17], those who post frequently are motivated by a tendency of narcissism and wish to obtain social identity. The desire to be praised by the society when doing something good is likely due to that people are motivated by social identity and building self-image. Balasubramanian [14] supported that the features of sWOM induce individual to spread WOM in order to obtain a sense of accomplishment and social identity. Furthermore, Chu and Kim [21] mentioned that the tie strength and trust are also factors that influence the dissemination of WOM. In briefs, the motivation of sWOM might focus on the response of social interaction than traditional WOM before.

This research investigates the behavior of “Check-in”, which combined the foundation of sWOM and mobile devices. This research applied a model from the study of Palka, Pousttchi and Wiedemann [15] as base to analysis the motives of users disseminate sWOM via mobile device. As a result, this research involves motive of sWOM dissemination into the model of Palka, Pousttchi and Wiedemann [15], and concludes four dimensions, social, perceptual, consumption-based and personal condition which have several factors, to cover and to clarify all the motives of sWOM dissemination. Figure 1 is the research model which base on prior studies mentioned above and proposes the hypothesis as below.

**Identifying Motives**

**Social conditions** emphasize the determinants that consider the recipients and their anticipated response to the recommendation include tie strength, subjective norm, expressiveness, and social support.

**Tie strength**, a multidimensional construct that represents the strength of the dyadic interpersonal relationships in the contact between members of a network [33]. Steffes and Burgee [34] suggested that tie strength is the level of intensity of the social relationship between consumers or degree of overlap of two individuals' friendship varies greatly across a consumers' social network. All of these ties affect and support us when we are going to disseminate WOM [21,35]. For example, information of a sensitive or personal nature is more likely to be shared by strong ties than weak ties [37]. Palka, Pousttchi and Wiedemann [15] also suggested that strong ties positively influence the likelihood that forwarding occurs.

**Subjective norm**, the consistence between behavior and social norm for the reason that respondents will worry about being perceived unfavorably or differently once their behavior is a discrepancy with social norm [37]. Tsai et al. [2] mentioned that whether continue using mobile location sharing technology or not, peer opinion plays a very important rule. Besides, recently, sharing information and location to friends in one’s network has become a well-known social manner [2].

**Expressiveness**, the degree to which a communicator perceives and sends mWOM as suitable for expressing his or her emotions and social or personal identity [15]. Social identity means the need for a sense of belonging to a specific community that makes the individual acknowledges himself as a part of the community [16], and is positively affected by trust among members [38]. Hence, this research further holds the opinion that Expressiveness is one other factor that influences one’s willingness to pass down sWOM via mobile device.

**Social support**, a continuous social cohesion that help individual to maintain the mental health, one will expect to receive information, consolation and aegis from others [20]. Svensson [4] and Zhao, Lu and Gupta [39] mentioned that lots of users of Facebook hope obtain a positive appraisal and comfort from another, which further increases satisfaction with life, “Like” button is an obvious example. Thus, this study hold the opinion that social support impacts the intention to disseminate the sWOM via mobile device.

**Disseminate sWOM via mobile device**

- **Social conditions (H1)**
  - Tie strength (H1a)
  - Subjective norm (H1b)
  - Expressiveness (H1c)
  - Social support (H1d)

- **Perceptual conditions (H2)**
  - Perceived usefulness of communicator (H2a)
  - Reward (H2a-1)
  - Donation (H2a-2)
  - Perceived social benefit (H2a-3)
  - Perceived user friendliness (H2b)
  - Perceived enjoyment (H2c)
  - Perceived value (H2d)

- **Consumption-based conditions (H3)**
  - Customer Satisfaction (H3a)
  - Commitment (H3b)

- **Personal conditions (H4)**
  - Altruism (H4a)
  - Narcissism (H4b)
  - Image-building (H4c)
  - Achievement (H4d)
  - Memorial record (H4e)

**H1**: Social conditions are positively related to their engagement in sWOM behavior via mobile device.

**H1a**: Tie strength is positively related to their engagement in sWOM behavior via mobile device.

**H1b**: Subjective norm is positively related to their engagement in sWOM behavior via mobile device.
H1c: Expressiveness is positively related to their engagement in sWOM behavior via mobile device.

H1d: Social support is positively related to their engagement in sWOM behavior via mobile device.

Perceptual conditions can be interpreted as an indicator for the different subjectivity/objectivity of different perception attributes. Perception is the process by which an individual is exposed to, attends to, selects, organises, and interprets stimuli [39]. This process is influenced by a consumer’s involvement level, which determines the information to which they pay attention and dissemination. Perceptual conditions include perceived usefulness of communicator, perceived user friendliness, perceived enjoyment and perceived value.

Perceived usefulness of communicator describes the degree to which a communicator believes that forwarding the mobile viral content would gain some benefit. Several concepts are developed, include perceived efficiency added value, reward (based on tangible or intangible compensation), perceived enhancement of network size, and perceived social benefit [15]. This research holds the opinion that reward (based on tangible or intangible compensation) and perceived social benefit has closer relation to the willingness of consumers to pass the sWOM via mobile device. Reward is defined as extrinsic motivation that is based on tangible or intangible compensation, which affects consumer decision through discounts or free gifts. For example, stores hold the activity of Facebook check-in to earn extra discount to publicize their promotional events and event information. Premazzi et al. [40] found that in the presence of incentives, people actually conduct more disclosure behavior than what they claim. Deci, Koestner and Ryan [41] and Hennig-Thurau and Walsh [31] also declared that the monetary incentive plays an important role in WOM activities. Besides the monetary discount, donation by the stores to the society is another type of incentive to attract customers to check-in. For example, every check-ins in the coffee shop earns1 dollar donation to the fund of Green Peace by the shop. On the other hand, perceived social benefit is defined as the degree to which a communicator perceives the efficiency of interpersonal relationship maintenance by passing the WOM. Furthermore, Tang et al. [1] and Zhao, Lu and Gupta [39] indicated that sharing real time location and the related information with the social network members increase one individual’s social capital. Therefore, this research plans to verify the influence of reward, donation and perceived social benefit to sWOM via mobile device.

Perceived user friendliness, the concepts perceived ease of disseminates and perceived expenditure of time. With the development of mobile device and wireless network, sWOM has become facile. One simple bottom can share a individual’s location and any event information to all members in one’s network. On the other hand, as has been pointed out by Tsai et al. [2], the frequency of using technology decreases the standard of individual’s privacy concerns. Individuals, therefore, are more willing to share their location with the social network. Thus, this study suggests that perceived user friendliness will impact the intention to disseminate the sWOM via mobile device.

Perceived enjoyment, extreme mind stimulation, in order to bring out personal interest and involvement in activities [42]. Okazaki [13] mentioned that take part in WOM activities brings out the feeling of perceived enjoyment. Palka, Poustchi and Wiedemann [15] further indicated that perceived enjoyment is an important variable that influences forwarding intention. This study plans to verify that perceived enjoyment impacts the intention to disseminate the sWOM via mobile device.

Perceived value, consumers’ overall assessment of the utility of a product or service based on perceptions of gain and given, in other words, the trade-off between benefit and cost [43,44]. The higher the perceived value is, the higher possibility of positive WOM be dissemination [13,43]. Therefore, this study suggests that perceived value impacts the intention to disseminate the sWOM via mobile device. In summary of previous few paragraphs, this study plans to verify that:

H2: Perception conditions are positively related to their engagement in sWOM behavior via mobile device.

H2a: Perceived usefulness of communicator is positively related to their engagement in sWOM behavior via mobile device.

H2a-1: Reward is positively related to their engagement in sWOM behavior via mobile device.

H2a-2: Donation is positively related to their engagement in sWOM behavior via mobile device.

H2a-3: Perceived social benefit is positively related to their engagement in sWOM behavior via mobile device.

H2b: Perceived user friendliness is positively related to their engagement in sWOM behavior via mobile device.

H2c: Perceived enjoyment is positively related to their engagement in sWOM behavior via mobile device.

H2d: Perceived value is positively related to their engagement in sWOM behavior via mobile device.

Consumption-based conditions include customer satisfaction and commitment. Customer satisfaction is defined as a pleasurable level of consumption-related fulfillment [45]. Chu and Kim [21] suggested that customer satisfaction plays a critical role in studies of WOM behavior as it affects individual motivations to recommend products or services. Thus, this study suggests that customer satisfaction impacts the intention to disseminate the sWOM via mobile device.

Commitment, defined as exchange partner who believes that they will warrant maximum efforts at maintains an ongoing relationship [43]. Morgan and Hunt, 1994). Fullerton [12] indicated that when consumers like their service provider, they should be considered as effectively committed to it, and be willing to recommend it to others. This research holds the opinion that this phenomenon shall be the same in the
era of web-WOM and in the current era of sWOM.

H3: Consumption-based conditions are positively related to their engagement in sWOM behavior via mobile device.

H3a: Customer satisfaction is positively related to their engagement in sWOM behavior via mobile device.

H3b: Commitment is positively related to their engagement in sWOM behavior via mobile device.

H3c: Image-building is positively related to their engagement in sWOM behavior via mobile device.

Personal condition includes altruism, narcissism, image-building, achievement and memorial record. Altruism is the act of doing something for others without anticipating any reward in return [46]. When consumer wishes to make some contribution to others’ decision-making, or to help those with the same interests, they spread their consumption experience to better help people’s decision-making [47].

Narcissism, associated with positive self-views like intelligence or attractiveness, it is a pervasive pattern of grandiosity, need to be admired and exaggerated sense of self-importance [17]. Mehdizadeh [17] also pointed out that the setting of Facebook offers a gateway for hundreds of shallow relationship, and emotionally detached communication. Besides, Tang et al. [1] suggested that, in order to make themselves feel better, a greater number of users will try to attract attention and boost self-presentation by sharing locations.

Image-building, one will control the content who published considerately to match an ideal character create by himself [48]. Tang et al. [1] indicated that participants are likely to reveal their location for impression management. People would not recommend any content that might damage their good reputation.

A sense of achievement helps to make people feel positive and want to spread out the message. Memorial record means the activity are special than common one, like an anniversary or birthday. This study suggests that Altruism, Narcissism, Image-building, Achievement and Memorial record all may impacts the intention to disseminate the sWOM via mobile device.

H4: Personal conditions are positively related to their engagement in sWOM behavior via mobile device.

H4a: Altruism is positively related to their engagement in sWOM behavior via mobile device.

H4b: Narcissism is positively related to their engagement in sWOM behavior via mobile device.

H4c: Image-building is positively related to their engagement in sWOM behavior via mobile device.

H4d: Achievement is positively related to their engagement in sWOM behavior via mobile device.

H4e: Memorial record is positively related to their engagement in sWOM behavior via mobile device.

3. Methodology

3.1. Procedure and participants
Since there were no established scales on motives for dissemination of sWOM via mobile device, this study refers to prior WOM research and psychological theory to conduct study, and generalizes seventeen factors that may impact disseminate sWOM via mobile device. After used several proxies to ensure the validity of the scale, this study used a structured questionnaire and descriptive statistical methods to examine the H1 to H4.

In order to verify the main reasons for participating in sWOM activities via mobile device, the target sample focus on those who own mobile devices (like smartphone or tablet), and used check-in functions at least once to disseminate WOM. This study recruited 659 volunteers to join the formal online survey. After delete 9 samples with invalidity, this study explores their motives to disseminate sWOM via mobile device. The participants included 302 males (46.4%) and 348 females (53.6%), and the main age with these people were 21.25 years (S.D. = 1.21). With regard to smartphone usage pattern, the participants had used smartphone with 2.54 years (S.D. = 1.62), and most of the people use 2.36 hours every day. There are 585 participants (90%) will use smartphone to disseminate WOM once a week.

3.2. Measures
Before the formal survey, several proxies were used to ensure the validity of the scale. First, expert validity was secured by including expert from mobile commerce in the item-generation process. During several feedback loops, the motive items are more understandable and clarified. Second, criterion validity was ensured by asking two mobile users and two marketing academic not involved in the study to assign each item to one of the four motive categories. Items assigned to a motive different from the one they were intended to measure were reformulated until the testers assigned them to the corresponding motive. This procedure was ensured that all respondents would understand each item that would correspond to the overall meaning of the respective motive. Third, each item’s convergent validity was tested by confirmatory factor analysis. The t-values of all motive items were significant, and the average variance extracted was greater than 0.5 for every motive. Thus, the convergent validity was confirmed.

The questionnaire was divided into five sections. The first section focused on data regarding the place where the individual has the intention to disseminate sWOM via mobile device(such as check-in). According to the investigation with Social Backers [49], there are seven kinds of spot that people are willing to check-in, local business, tourism, entertainment, transportation, public, abroad and hotel/hostel/B&B. The second section focused on the timing of dissemination of sWOM via mobile device can be separated into 3 categories, beginning of the consumption, during the consumption and after the consumption.

The third section describes the result of whether the participants are influenced by the 17 motivational factors while making sWOM decisions on mobile devices. Among the factors, altruism, expressiveness and perceived social benefit were adapted the scale from Dholakia, Bagozzi and Pears [16]. Narcissism was adapted the scale from Mehdizadeh [17]. Subjective
The results showed that most of the participants will disseminate sWOM via mobile device at local business (M = 4.2, S.D. = 1.30), and then comes the spot of tourism (M = 4.14, S.D. = 1.28), entertainment (M = 3.5, S.D. = 1.51), transportation (M = 3.32, S.D. = 1.55), public (M = 3.25, S.D. = 1.51), abroad (M = 3.02, S.D. = 1.51) and hotel/hostal/B&B (M = 2.9, S.D. = 1.70). However, except local business and tourism, other spot have no significant difference in their intention to disseminate sWOM via mobile device.

The results also showed that the individual will have the highest intention to disseminate sWOM via mobile device with close friends (M = 4.88, S.D. = 1.43), and then is classmate/colleague (M = 4.18, S.D. = 1.22), family (M = 4, S.D. = 1.09), lover (M = 3.97, S.D. = 0.98) and then common friend (M = 3.62, S.D. = 1.54). When people are alone, they have the lower intention to disseminate sWOM via mobile device (M = 3.58, S.D. = 1.39). Besides, this study reexamine the timing consumer are willing to disseminate sWOM via mobile device. The results showed that the strongest willingness is at the beginning of the activity (M\textsubscript{beginning} = 4.48, S.D. = 1.28), and significantly higher than during (M\textsubscript{during} = 4.12, S.D. = 1.06) and after (M\textsubscript{after} = 3.01, S.D. = 1.21) the activity. During the activity is also significantly higher than after the activity (F = 120.88, p < 0.001).

4.2. Empirical assessment of motive relevance and structure

Table 1 lists the mean values for the relevance assessments for all motives. The results showed that the level of agreement varied strongly between motives, with mean values between 3.33 for a sense of achievement and 4.64 for memorial record (see Table 1). Based on the comparison of means, memorial record, perceived social benefit and tie strength can be considered the most important motives for disseminate their sWOM via mobile device. However, there are so many motives that can impact individual disseminate their sWOM via mobile device. Thus, this study takes the way of exploratory factor analysis to uncover the latent structure of these motives and clarify their relation.

<table>
<thead>
<tr>
<th>Motive</th>
<th>Mean</th>
<th>Motive</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Memorial record</td>
<td>4.64</td>
<td>10 Customer Satisfaction</td>
<td>3.73</td>
</tr>
<tr>
<td>2 Perceived social benefit</td>
<td>4.46</td>
<td>11 Narcissism</td>
<td>3.72</td>
</tr>
<tr>
<td>3 Tie strength</td>
<td>4.44</td>
<td>12 Image building</td>
<td>3.72</td>
</tr>
<tr>
<td>4 Perceived value</td>
<td>4.23</td>
<td>13 Altruism</td>
<td>3.58</td>
</tr>
<tr>
<td>5 Social support</td>
<td>4.14</td>
<td>14 Perceived user friendliness</td>
<td>3.55</td>
</tr>
<tr>
<td>6 Expressiveness</td>
<td>4.12</td>
<td>15 Commitment</td>
<td>3.39</td>
</tr>
<tr>
<td>7 Subjective norm</td>
<td>4.04</td>
<td>16 Donation</td>
<td>3.36</td>
</tr>
<tr>
<td>8 Reward</td>
<td>4.01</td>
<td>17 Achievement</td>
<td>3.33</td>
</tr>
<tr>
<td>9 Perceived enjoyment</td>
<td>3.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Scale ranges from 1=fully disagree to 6=fully agree

To this point, this study had not checked for a possible overlap of items across dimensions. Based on the Kaiser Criterion and Varimax rotation, this study did a further exploratory factor analysis (EFA) to purify the instrument [50]. This study extracts all motive factors with eigenvalues greater than 1, and the value of KMO is 0.872. Items will be eliminated if their factor loading is below 0.6 or have cross loading above 0.3 [51]. A five-factor solution was chosen in the first place to explain the dissemination motives of sWOM via mobile device, which accounted for 61% of the variation of all items. These items which had high loadings within factors and no cross-loading with other factors showed stable. The five motive dimensions and their relationships with the original theoretically derived motives improve our understanding of articulation motives. The resulting factors are described below.

Overall, the findings of this study suggested that the motives of sWOM via mobile device can be inducted into five categories: personal, social, perceptual, consumption-based and monetary condition. All the motives showed strong reliabilities (α\textsubscript{personal} = 0.9; α\textsubscript{social} = 0.89; α\textsubscript{perceptual} = 0.85; α\textsubscript{consumption-based} = 0.88; α\textsubscript{monetary} = 0.88). First of all, personal condition means the value, characteristic, expectation and experience of a person that help oneself to build up his/her self-awareness, which include the dimension such as altruism, narcissism, image building, achievement and memorial record. The second factor combines the item from tie strength, subjective norm, expressiveness and social support, which focus on the participation and the emergence of culture and social action but neglect the audience and reaction from others. This factor is labeled social condition. Third, perceptual condition means the willingness of individuals to fulfill one's expectation or feeling. It includes perceive social benefit, perceived user friendliness, perceived enjoyment and perceived value. Factor four relates to the consumption-based condition which includes customer satisfaction and commitment. Finally, monetary condition means the expectation to get discounts or special services, which include financial incentives and donation (see Table 2).

In addition, regression analysis reveals that social condition (β = .35, p < .01), perceptual condition (β = .23, p < .05) and consumption-based condition (β = .20, p < .05)
have significant impact to the sWOM dissemination (see Table 3). However, personal condition and monetary condition were not statistically significant impact to the sWOM dissemination via mobile device.

### Table 3  The effects of motivation level on sWOM dissemination via mobile device

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Condition</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>msWOM dissemination</td>
<td>social condition</td>
<td>.35</td>
<td>2.73</td>
<td>.01**</td>
<td>.779</td>
</tr>
<tr>
<td></td>
<td>perceptual condition</td>
<td>.23</td>
<td>2.32</td>
<td>.02**</td>
<td>.578</td>
</tr>
<tr>
<td></td>
<td>consumption-based condition</td>
<td>.20</td>
<td>2.24</td>
<td>.03**</td>
<td>.670</td>
</tr>
</tbody>
</table>

Note: β is the standardized coefficient; t = t value; p = p value; R² = R-squared

5. Discussion

5.1. Conclusion

With the trend of smartphone being a standard equipment nowadays, sWOM via mobile device has become more and more important. Smartphones allow people to view e-mail, share photos and videos, and update Facebook status easily [1]. It can almost replace traditional computers as a tool to exchange information due to its mobility and multi-task function [30]. Social Word of Mouth via Mobile Device, a new user behavior of WOM that disseminate information on social network sites through mobile devices. Different from the WOM in the past, sWOM via mobile device change the communication structure, procedure and audience, which enlarged the communication distance to all the friends they really know [26]. With the increasing change of user behavior, this study aims to verify the purpose and motives of people use mobile device to disseminate WOM on social networking sites.

Overall, this study considered five categories that impact users to disseminate sWOM via mobile devices: personal, social, perceptual, consumption-based and monetary conditions. Compared to the Palka, Pousttchi and Wiedemann’s [15], this study detached monetary motivation from the perceptual conditions and form a new dimension. The reason might be that consumers are enabled to interact with brick-and-mortar stores directly...
currently via mobile device. For example, consumers are encouraged to spread information and WOM of their experience by the rewards provided by the stores, which was only happened after the development of mobile device.

The results of this study support that social, perceptual and consumption-based conditions have significant influence on disseminate sWOM via mobile devices. Social conditions motivation plays the most important role, among the two, to motivate disseminating sWOM via mobile device, which is also supported by the Okazaki’s research [13]. This study concluded the reason was that people attached importance to the interaction between friends and they hope the information they send can help to strengthen a sense of personal belonging. Therefore, consumers disseminate their WOM via mobile device when they react to the stimulation of the environment, instead of when understand or have feelings about the product or service.

On the other hand, the result shows that factors of personal condition and monetary condition have no statistically significantly influence on the dissemination of WOM. The major reason may due to that this research collects participants’ information motivation related information from the questionnaire, participants may not willing to reveal or may not aware of their individualism and a tendency of petty and thus influence the authenticity of their answers and the actual influence of the two levels. Future studies may consider another possibility of collecting data to re-examine the influence of the two levels to obtain a more precise and complete of motivation in this area. In brief, sWOM via mobile device not only emphasize expression and sharing of the feeling of the consumption activity, but record a memorial moment and relationship. No matter when and where the sWOM happens, people really care about the material and mental information exchange with their friends to satisfy their social needs.

5.2. Theoretical and practical implications

The results of this study have the following unique points in theoretical implication. First of all, studies in the past focused on the sWOM and mWOM, this study illustrate and clarify the idea and identity about sWOM via mobile device which combines the mobile accessibility and social influence. Second, this study modifies the category of the motive to disseminate WOM from Palka, Pousttchi and Wiedemann [15] and integrates the theory and studies of motive. Combining the result of pretest, seventeen factors which affect sWOM dissemination via mobile device have been generalized, and was further induced into five motive conditions, which include personal, social, perceptual, consumption-based and monetary conditions. Furthermore, the results of this study verify the disseminate motivation was changed: social purpose replaces the altruism as the main motives to disseminate sWOM via mobile device. Individual disseminates the sWOM via mobile device in order to strengthen the tie and link between their friends.

In the aspect of practical implication, the sWOM not only send a notification to their friends who also been there before or influence other's purchase behavior, but to interact with friends that show in their friend's stream post as a topic to discuss among friends that triggered by the social level incentives. Thus, the effect of traditional WOM is inappropriate for the sWOM and need to be modified and clarified. Marketers should pay more attention to the development of social media marketing. Second, sWOM via mobile device happens before or during the purchase, and with neutral or positive content mostly, so marketers should reinforce the topicality and news hook of its product and service environment to increase the willingness and times of the consumer to disseminate sWOM via mobile device. Third, marketing plan should be optimized with the characteristics mentioned below, spent much time on Facebook in everyday life, surfing Internet through mobile device 2 hours a day, check-ins twice a week, and used to check-ins at the begging and between their purchases. Based on these characteristics, we could tune and devise the social marketing activity more comatable and suitable for consumers. Finally, the five motivational levels identified in this study can help SNS and mobile platform providers to develop a more customized environment, with specific offers addressing each motive factor to fit the needs and incentives of the disseminator and receiver in the social network. Besides, it can also help marketers to develop more useful marketing plans or features to really fit the need of the user.

5.3. Limitations and implication for future research

This study indicates the difference between the motivation of the dissemination of sWOM and sWOM on mobile devices, which can be a base for future research to separate sWOM, mWOM and maybe define a whole new concept, msWOM- Mobile Social WOM. Based on limited resources, the motivation developed from previous study results and user experiences without various practical examinations. In further studies, these items should be tested for confirming the stabilization and representation. Furthermore, at the beginning of the disseminate motivation development, this study excluded the personal characters (e.g. income, age, gender, education, personality), which could be discussed with WOM dissemination in the future. In fact, there is still much to do in this area, and therefore the discussion in this article concludes with a call for further research drawing on a variety of perspectives to create a more complete picture of online consumer-to-consumer communications. Additional research is needed because the ongoing diffusion and use of the smartphone by consumers in an increasingly globalized economy is sure to make word of mouth a major challenge for online and offline companies.

6. References

Ubiquitous Computing (Ubicomp 2010), 2010, New York, USA.


