



## Effective marketing communication via social networking site: The moderating role of the social tie<sup>☆</sup>



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### ABSTRACT

Facebook provides a way of connecting with friends online that increases the effectiveness of Internet advertising. This study investigates what factors influence the impact of consumers sharing advertisement (peer-to-peer) on communication effectiveness. The conceptual framework relies on social capital and communication theory, including tie strength, type of message, and advertising literacy. To test the research hypotheses, the study carries out two experiments involving 346 participants. The results show that interactive advertising gains greater consumer attitude toward the ad and higher message-sharing intention than non-interactive advertising does. The social tie is an important factor in moderating the effects of the message format and advertising literacy on communication effectiveness. This research advances the social capital and communication literature by explaining the effectiveness of consumers sharing advertising based on Internet-mediated communication. Research findings provide managerial implication for companies to better plan online marketing strategies in this social-networking era.

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### 1. Introduction

With Internet applications like instant messaging and social networking sites, people can easily establish friendships without the constraints of geographic borders or time zones (Zhou, 2011). Nowadays, people have more channels through which to link up (e.g., Facebook, Twitter, Line). Past research confirms that the Internet does not only help people to maintain social relationships with distant relatives or friends but also to create extensive relationships online (e.g., Lewis, Kaufman, Gonzalez, Wimmer, & Christakis, 2008). Online social network communities bring people together; thus, companies can more effectively communicate to target consumer groups in social network communities than in other types of media. Online communities with larger member bases are good channels through which companies can advertise their products.

More companies increasingly adopt Facebook as a communication channel so that they can forward their messages broadly. Viral

marketing refers to pass-along messages such as videos, stories, and pictures through e-mail that aim to increase product awareness or brand equity (e.g., Ho & Dempsey, 2010). Facebook brings about a new revolution of viral marketing by using social networking sites to share peer-to-peer ads in a number of ways.

Online social networking service providers and companies need to generate profit through effective advertising on social network media. Because firms can execute advertising by using the Internet in a variety of ways, the appropriateness of Internet ads determine the benefits that firms can gain from the Internet. For example, peer-to-peer ads on social networking sites have the advantage of gaining the receiver's trust same as the power of word-of-mouth in interpersonal communication, knowledge of how to manage personal communication channels, and message design will affect the outcome of Internet marketing.

However, despite the large amount of literature concerning advertising and social networking sites, a gap exists in the research on how peer-to-peer viral marketing tool affects consumers' attitudes. The effect of social networking site on message sharing intention is discrepant. For example, Lewis et al. (2008) find that Facebook increases user's sharing behavior in the social networking site, but Chu (2011) states that a user's participation in a Facebook group does not exert an influence on their viral advertising pass-on behaviors. To achieve a better understanding of effective communication outcomes through online social networks, this study aims to identify the factors affecting advertising effectiveness from three angles: Advertising type and advertising

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literacy from the perspective of communication theory, and social tie strength from the perspective social psychology.

## 2. Literature review and research hypotheses

### 2.1. Theoretical background

#### 2.1.1. Social networks

Social networks comprise social transactions, links, and structural characteristics. These three aspects are useful in depicting people's interactive activities in online surroundings. Transactional content defines four types of purposes for which people use social networks to communicate: (1) exchange of affect, (2) exchange of influence or power, (3) exchange of information, and (4) exchange of goods and services (Tichy, Tushman, & Fombrun, 1979). A social network may have the characteristics of internal and/or external linkages, and people may not be equally important in the social network nodes in terms of the role they play (Mathwick, Wiertz, & Ruyter, 2008).

Social capital is an intangible force that helps to bind society together by transforming self-seeking individuals into members of a community with common interests, common assumptions about social relations, and a sense of the common good (Etzioni, 1996). Social capital applies at individual and collective levels (Lappé & du Bois, 1997). One reason for Facebook's rapid growth is the role Facebook plays in helping people connect online and build up their social capital via information sharing and interpersonal interaction in this vast virtual social network (Shu & Chuang, 2011).

#### 2.1.2. Tie strength

*Social tie* is an umbrella concept that covers both the process of social capital accumulation as well as its outcomes (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998). Tie strength is a multidimensional construct that represents the strength of dyadic interpersonal relationships in the context of social networks, including closeness, intimacy, support, and association. The strength of the tie may range from strong (e.g., close friend) to weak (e.g., seldom-contacted acquaintance), depending on the number and types of resources the relationship exchanges, the frequency of exchanges, and the intimacy of the exchanges (Marsden & Campbell, 1984).

Word-of-mouth (WOM) is a social phenomenon through which referral marketing draws on interpersonal relationships. Analysis of social relationships drawing on social ties is helpful for understanding the referrals' flow among individuals (Brown & Reingen, 1987). eWOM such as online reviews or message sharing are particularly prevalent in online social networking sites. Some scholars consider sharing text messages or videos via social networking sites like Facebook as delivering eWOM, a new medium through which delivering firms' ads over a longer period is possible (Barnes & Pressey, 2011).

### 2.2. Research hypotheses

#### 2.2.1. Interactivity of advertising

Interactivity is the capability of a communication system to allow reciprocal exchanges between senders and receivers whether in real time or not (Rice, 1984). Meyer and Zark (1996) pose the degree to which consumers choose, handle, integrate, and format a message reflects the interactivity of a communication act. Two-way communication can improve an ads' effect because receivers can provide feedback to advertising companies. Williams, Rice, and Rogers (1988) argue that the ability of participants to control a conversation can also measure interactivity. Li and Leckenby (2004) define interactive advertising as the "paid and unpaid presentation and promotion of products, services, and ideas by an identified sponsor through mediated means involving mutual action between consumers and producers." With interactive characteristics, the new media allow users to perform a variety of functions such as receiving messages, making inquiries, responding to

question, and making purchases that traditional one-way communication cannot perform at one time (Belch & Belch, 2012).

The Internet enlarges the interactivity of advertising (Li & Leckenby, 2004). One reason explaining the interactive advantage of Internet advertising is that consumers have more control over the Internet than they do over firms, which might increase consumers' interest in advertising (Roehm & Haugtvedt, 1999). Raman (1996) states that interactive advertising has advantages in the delivery of advertising because interactive advertising uses various methods, types, formats, and features. On Facebook, users can browse a friend's wall or receive invitations from friends to view an advertisement; this ad can be non-interactive advertising, with only text and/or photos, or interactive, as in a mental test or game. Interactive advertising is more effective because interactive advertising has more vivid characteristics to attract and persuade target audiences than standard advertising has (e.g., Cheng, Blankson, Wang, & Chen, 2009; Li & Leckenby, 2004). Nowadays, a company can employ tools supporting Web 2.0 to place its brand or product in a game, video, or Facebook wall. Such interactive advertising might increase users' attention to the advertisement. Thus:

**H1.** Communication effectiveness in the form of (a) attitude toward advertising and (b) message-sharing intention is higher in an interactive advertising format than in a non-interactive format.

#### 2.2.2. The moderating effect of tie strength and advertising format

Haythornthwaite (2001) suggests that people in a strong tie condition are more likely to communicate more frequently and make more effort to maintain the relationship. Strong ties building on close relationships encourage people to exchange information by using various media and to exchange information with a high frequency that can support the tie. Wellman and Berkowitz (1998) point out that strong ties involve higher levels of intimacy, more self-disclosure, emotional as well as instrumental exchanges, reciprocity in exchanges, and more frequent interaction. The communication effectiveness of the ad varies with the degree of tie strength because the interactivity of the and the conduit for dissemination of the advertising information influence the receiver's attention to the ad.

People are more likely to forward an advertising message from a close friend than from other sources regardless of the message format (Levin & Cross, 2004) because the information comes from a trustworthy source. In addition, sharing information from a close friend may be a way of advocating the friend's voice. Thus, receivers in strong tie groups might have higher motivation to share the message regardless of the type of message (De Bruyn & Lilien, 2008).

However, people in weak tie relationships have relatively less motivation to communicate because a lack of trust or little source credibility increases people's resistance to untrustworthy sources (Levin & Cross, 2004). In this circumstance, communication relies on organizationally (or socially) sanctioned means that provide an instrumental contact. Therefore, receivers may have higher attitudes toward the message and message-sharing intention only if the message itself consists of highly interactive features (e.g., entertaining game). In contrast, non-interactive messages have fewer anchors to attract an audience's eye, which might result in lower intention to forward the message because weak ties lack the social capital to bind people.

**H2a.** Social ties moderate the effect of advertising format on attitude toward the ad. An interactive message is more efficient when weak tie delivers the message than when a strong tie does.

**H2b.** Social ties moderate the effect of advertising format on message-sharing intention. An interactive message is more efficient when a weak tie delivers the message than when a strong tie does.

#### 2.2.3. The moderating effect of tie strength and advertising literacy

Literacy refers to the ability to read and understand texts. Many recent definitions offer a broader perspective and refer to the ability to produce,

understand, and use texts in culturally appropriate ways (Graddol, 1993). Advertising literature adopts the concept of literacy to measure the audience's ability to analyze or criticize the media surrounding them.

Previous researchers confirm that advertising literacy comprises two constructs: advertising skepticism and advertising resistance (O'Donahoe & Tynan, 1998). The higher the advertising literacy of audiences, the greater their resistance to the advertising and the more effort they make to analyze the content of the advertising (Lannon, 1985; Meadows, 1983). Advertising literacy is crucial for communication effectiveness because consumers' ability to understand advertising and to recognize various types of commercial phenomena in the media affects their attitude toward an advertisement. Advertising literacy is the consumers' ability to recognize or analyze ads that enables them to resist advertising messages.

Because a consumer's advertising literacy may threaten the communication effect of advertising, tie strength regarding interpersonal relationships in the context of social networks may increase participants' trust in others building on closeness, intimacy, support, and association relationship. When consumers receive an advertisement from a strong tie, advertising literacy may play a minimal role in helping consumers analyze the reality and purpose of the advertisement. In contrast, a consumer's skepticism and resistance to advertising plays a greater role if the advertising message comes from a weak tie, which results in the consumer's inclination to lower the rating of an advertising message. Specifically, advertising literacy drives consumers' attitude toward the advertising, and message-sharing intention depends on the tie strength between senders and receivers.

**H3a.** Social ties moderate the effect of advertising literacy on attitude toward ads. Consumers with higher advertising literacy hold a lower attitude toward the ad if the message comes from a weak tie rather than from a strong tie.

**H3b.** Social ties moderate the effect of advertising literacy on message-sharing intention. Consumers with higher advertising literacy have less intention to share ads if the message comes from a weak tie rather than from a strong tie.

### 2.3. Overview of the research model

Fig. 1 shows the conceptual research model. This model depicts tie strength as a reflection of social capital, which plays a crucial role in moderating the relationship between advertising message format, advertising literacy, and advertising effectiveness.

## 3. Method

### 3.1. Participants and procedure

The study conducted two experiments to test the research hypotheses. In Study 1, 100 participants randomly received either an interactive

or a non-interactive advertisement from a friend. In Study 2, the research randomly assigned 246 undergraduate and graduate students to one of the eight conditions, with each condition having between 30 and 31 participants. The study uses a 2 (weak vs. strong tie)  $\times$  2 (non-interactive vs. interactive advertising)  $\times$  2 (low vs. high advertising literacy) between-subjects design to test the research hypotheses. The study presented the conditions and collected the questionnaires via personal computer. To ensure the relevance of the product, the study presented to the subjects in the experiment, the study also conducted a pre-test using sixty participants to gather a rating on these prospect products. Results showed that coffee is a most affordable product to students. In addition, while designing the experiment, some chain cafés were using Facebook to deliver promotional messages, which facilitated developing advertising stimuli for this research. The questionnaire informed participants that they were in the scenario of interacting with friends on Facebook. After completing the reading, they were to complete the dependent measure at their own pace.

### 3.2. Stimuli

#### 3.2.1. Advertising format

The study adapts Raman's (1996) suggestion to select two types of advertising. On the one hand, non-interactive advertising emphasizes one-way communication that might be incapable of receiving consumers' responses to firms or advertisements. On the other hand, interactive advertising is advertising that contains features that allow consumers to express ideas and assess goods or services. After a pilot study on message format, the study selected an advertisement appearing on a web page with only text and pictures as non-interactive advertising. The study also selected an application for a mental test/game with brand and product information inside as interactive advertising. The interactive advertising communicates product information to consumers through game playing rather than just reading a page of advertising.

#### 3.2.2. Tie strength

Granovetter (1973) proposes that the strength of a tie is a combination of the time investment, the emotional intensity, the intimacy, and the reciprocal services that characterize the tie. For this study, a strong tie was the relationship between friends who meet face to face. Participants in the strong tie group received advertising from the student who had more interactions with more class members because of their status as teaching assistant. In contrast, the weak tie group comprised participants who received a message from a friend they had just met.

#### 3.2.3. Advertising literacy

This study adapted advertising literacy scales from Boush, Friestad, and Rose (1994) and Botvin, Schinke, Epstein, Diaz, and Botvin (1995), including skepticism toward advertising and resistance to advertising.

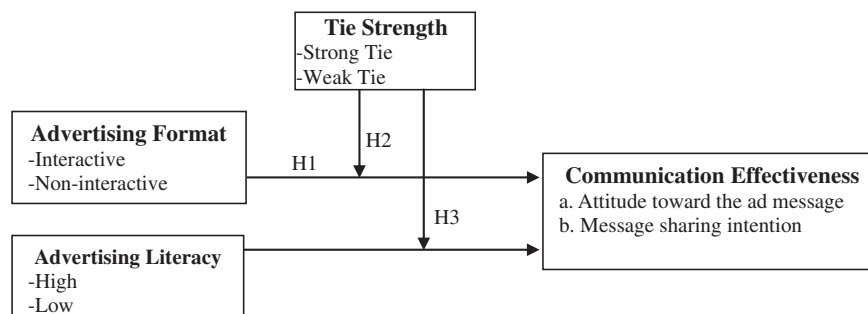


Fig. 1. Research framework.

### 3.3. Dependent variables

The study adapts scales for attitude toward the advertising message from Mitchell and Olson (1981), MacKenzie, Lutz, and Belch (1986), and Bezjian-Avery, Calder, and Lacobucci (1998). Three measurement items were “the advertising is favorable,” “the advertising is interesting,” and “the advertising is impressive.” The study also adapted sharing-intention scales from Homer (1990) and MacKenzie et al. (1986). The measurement items were “I am likely to share the advertising message I received from my friends” and “I am likely to post the advertising message I received on my wall on Facebook.” The study measured all dependent variables on 5-point scales indicating respondents' level of agreement from 1 (*strongly disagree*) to 5 (*strongly agree*).

## 4. Results

### 4.1. Manipulation check and reliability

The t-test for interactivity of advertising messages demonstrates that participants in different message-format conditions have different degrees of perceived message interactivity. Participants in the interactive advertising conditions rate interactivity higher (Study 1:  $M = 4.31$ ; Study 2:  $M = 4.12$ ) than participants in the non-interactive condition do (Study 1:  $M = 2.27$ ; Study 2:  $M = 2.09$ ), with t-values of 24.36 and 21.39, respectively.

The tie-strength manipulation check for Study 2 shows significant differences between strong ties ( $M = 4.42$ ) and weak ties ( $M = 2.38$ ), with t-value significantly below 0.01. Thus, the manipulation check confirms that the study successfully manipulated research stimuli in the experiment.

Both measurements of dependent variables possess appropriate reliability. Cronbach's  $\alpha$  for attitude toward the advertising message is .91 for Study 1 and .90 for Study 2; message-sharing intention is .89 for Study 1 and .87 for Study 2.

### 4.2. Hypotheses test

#### 4.2.1. Study 1

Participants rate attitude toward the advertising message higher ( $M = 3.70$ ,  $SE = .68$ ) when the advertising they receive is interactive vs. non-interactive ( $M = 3.54$ ,  $SE = .69$ ),  $F(1, 100) = 5.34$ ,  $p < 0.05$ . Consistent with the study's prediction, intention to share advertising is significantly higher in the interactive advertising group ( $M = 3.44$ ,  $SE = .93$ ) than in the non-interactive advertising group ( $M = 3.13$ ,  $SE = .89$ ),  $F(1, 100) = 3.96$ ,  $p < 0.05$ . Thus, the results support H1a and H1b regarding the main effect of advertising type on communication effectiveness.

#### 4.2.2. Study 2

Whereas Study 1 examines the effect of advertising type on advertising effectiveness, Study 2 examines the moderating role of tie strength and advertising literacy. Results show a significant interaction effect of tie strength on the relationship between advertising type and attitude toward advertising,  $F(1, 246) = 11.15$ ,  $p < 0.01$ . This result indicates that the interactivity of advertising affects more the attitude toward the advertising when a weak tie delivers the message; however, attitude toward the advertising remains steady across different advertising types when a strong tie delivers the message. Participants receiving non-interactive advertising from a weak-tie friend have a lower attitude toward the advertisement than participants receiving the ad from a strong-tie friend (see Fig. 2). In contrast, interactive advertising coming from a weak-tie friend results in a higher attitude than if coming from a strong-tie friend. Thus, the results support H2a.

Consistent with H2a, the interacting effect between tie strength and advertising literacy on attitude toward advertising is significant,  $F(1, 246) = 6.28$ ,  $p < 0.05$ . Fig. 3 indicates that participants in the

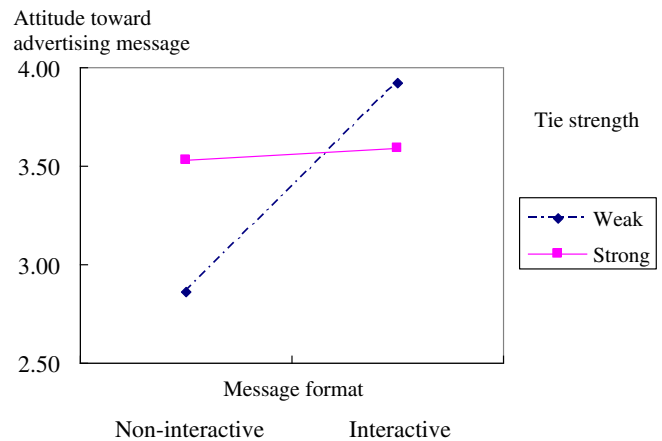


Fig. 2. The influence of message format on attitude toward advertising message under a strong tie versus a weak tie condition.

strong-tie condition maintain a similar degree of attitude toward the advertising regardless of their advertising literacy, and that the advertisement's effect is higher than for participants with high advertising literacy receiving the message from a weak tie. Thus, the results support H3a.

The moderating effect on message-sharing intention is not significant (message format  $\times$  tie strength:  $F(1, 246) = 2.13$ ,  $p > 0.05$ ). Thus, the results do not support H2b. Social tie and advertising literacy have a moderating effect on consumers' intention to share an advertising message,  $F(1, 246) = 4.78$ ,  $p < 0.05$  (see Fig. 4). For participants in low advertising literacy groups, those in a weak-tie condition have equivalent degrees of message-sharing intention ( $M = 3.82$ ) as those in a strong-tie condition ( $M = 3.81$ ). In contrast, participants with higher advertising literacy have lower intention to share the advertising message; specifically, participants in a weak-tie condition show a greater decline in message-sharing intention ( $M = 2.61$ ) than those in the strong-tie condition ( $M = 3.43$ ). Thus, the results support H3b.

### 4.3. fsQCA analysis

Fuzzy-set qualitative comparative analysis allows testing which combination of variables leads to a specific outcome (Ragin, 2008; Woodside, 2013). The study uses the eight experimental conditions as the cases for fsQCA. The results show that advertising format highly associates with message-sharing intentions (consistency = .812; coverage = .903), which is different from the ANOVA approach. Case 8, which is in the interactive advertising, strong tie, and low advertising

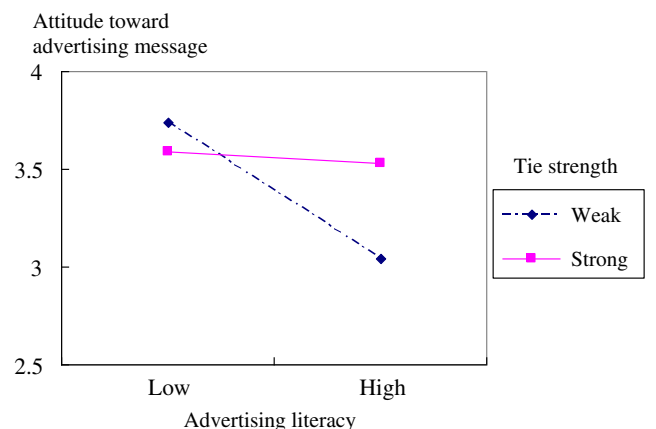


Fig. 3. The influence of advertising interactivity on attitude toward advertising message under a strong tie versus a weak tie condition.

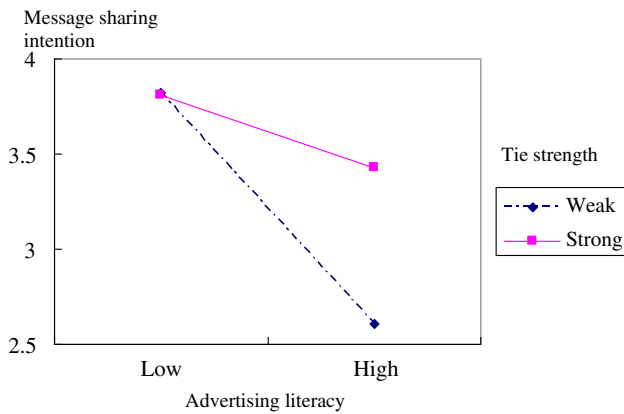


Fig. 4. The influence of advertising interactivity on message sharing intention under a strong tie versus a weak tie condition.

literacy condition, displays high information-sharing intention (see Fig. 5). fsQCA allows knowing the individual case's condition that associates with the outcome variable, even the ANOVA did not support the main effect of advertising format on message-sharing intention.

## 5. Conclusions, implications, and limitations

### 5.1. Discussion of the results

This study represents a first step toward integrating tie strength and advertising literacy to investigate the effect of advertising type on communication effectiveness in the field of Internet advertising. Drawing on advertising theory and social capital perspectives, this study focuses on understanding how message format and advertising literacy influence consumers' attitude toward advertising message sharing via Facebook, and how tie strength moderates this relationship. The findings of this study are as follows:

1. Other things being equal, interactive advertising has greater communication effectiveness. Study 1 confirms that an advertising message with interactive format will receive a higher consumer attitude toward and higher message-sharing intention. This finding shows that an increase in entertaining features in advertising is beneficial in catching consumers' attention. In particular, using the Internet to deliver messages is normal in everyday life, which in turn puts

consumers into information overload (Ho & Dempsey, 2010). The best way to develop better communication effectiveness is to create interactive advertisements, which can reduce consumers' disregard of Internet advertising.

2. Tie strength is critical for the effect of advertising type on consumers' attitude toward the advertising message. Consistent with past research, this study finds that tie strength moderates users' attitude toward an advertising message. When consumers receive a message from close friends, consumers feel confidence in the source of the advertising message; consequently, their attitude toward the advertisement remains steady regardless of the degree of interactivity in the message.

However, if consumers receive advertising information from friends in a weak-tie condition, their attitude toward the advertising message will reflect a big discrepancy for interactive versus non-interactive advertising. Specifically, interactive advertising can generate a greater attitude toward the advertising, especially when consumers receive information from friends in a weak-tie relationship.

3. Advertising literacy has a negative influence on advertising effectiveness if the advertising message comes from a weak tie. The research results show that consumers' advertising literacy decreases their attitude toward an advertising message and intention to share the advertisement; in addition, its impact varies with the strength of the social tie through which consumers receive the message. If a message comes from a strong tie, consumers who possess low and high advertising literacy will display little change in attitude toward the message because they trust the source. Regarding sharing intention, consumers who have high advertising literacy will have lower intention to share than those with low advertising literacy will. Most importantly, advertising information from a weak tie will trigger high advertising-literate consumers' skepticism and resistance to the advertising and incur lower communication effectiveness, which means that these consumers will have lower attitude toward the ad and lower intention to share.

### 5.2. Managerial implications

Owing to the growing popularity of online social network sites, consumers are more familiar with online advertising such as pop-ups, banner ads, skyscrapers, and viral marketing via e-mail and Facebook. The greater the consumers' exposure to such advertising, the higher the possibility that they ignore the advertising because of fatigue.

The first step for marketers and advertisers to resolve the problem of advertising effectiveness is to increase the interactivity of advertising. For example, placing brand or product information in an interactive advertisement in the form of a game or mental test could potentially make advertising more engaging and interesting to consumers, which in turn affects their attitude.

Although a good advertising-message design benefits communication effectiveness, the design alone cannot deliver advertising success because other factors intervene in consumers' attitudes (e.g., Chang, Rizal, & Amin, 2013). According to this research's findings, tie strength affects consumers' attitude toward advertising. Using social network sites like Facebook to deliver a company's advertising without considering tie strength between sender and receiver creates a vulnerability that may result in a negative effect for viral marketing, which dumps messages that disturb consumers (e.g., Phelps, Lewis, Mobilio, Perry, & Raman, 2004). Companies may consider managing specific social networking groups for their brand or product to enhance the tie strength between them and consumers. After consumers develop affinity with companies, source credibility and trust can increase the communication effectiveness of advertising. In contrast, if companies use a social network of weak ties to advertise their brand or product, they must be

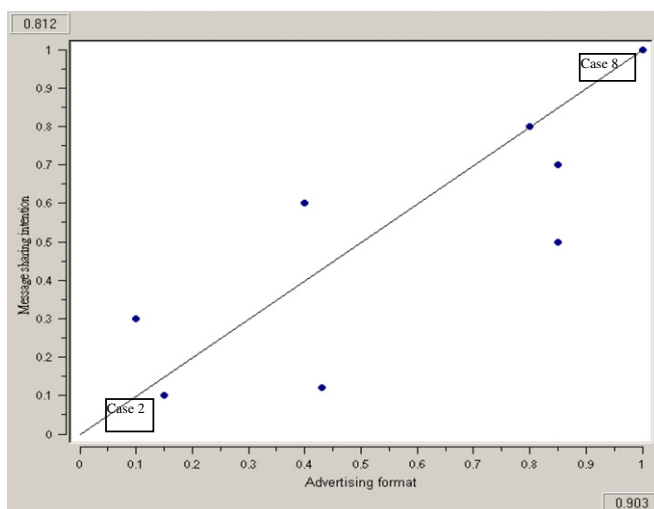


Fig. 5. fsQCA result.

aware of the interactivity of the advertising message because advertising effectiveness will decline if the advertising lacks attractive or entertaining features (e.g., Hsiao, Lu, & Lan, 2013).

Because consumers with higher advertising literacy can distinguish the sales skills in advertising, companies should choose advertising channels carefully. The results of this research show that consumers' literacy level interacts with tie strength and affects the communication effectiveness of advertising. Past research proves that consumers' advertising literacy increases as their experience or knowledge in advertising increases, which will diminish their resistance to advertising (e.g., Nairn & Berthon, 2003). Noticeably, opening more forums for revealing the facts of advertising will increase consumers' skepticism and resistance to advertising, especially if they receive the advertising message from an acquaintance or stranger in online surroundings. The best strategy to resolve consumers' resistance is to use strong-tie networks to broadcast their brand or product information; the results of this research show that participants with high advertising literacy have lower attitude and lower advertising forwarding intention. However, other avenues, such as advertising using a transformational message strategy, which conveys more affective elements to increase the recipients' emotional response, may potentially reduce the trigger of advertising literacy.

### 5.3. Limitations and future research

Although this study explains the factors affecting advertising effectiveness of online peer-to-peer marketing, the results may not necessarily apply to users sharing advertising and their comments because how they expound on the advertising may affect recipients' attitude. Future research can address situations in which advertising includes users' comments.

The experiments for this research take place in a lab, which may decrease the study's external validity. Future research can employ an experiment with users who have an account on a social networking site and mimic a real-life situation, which may improve the participants' mental perception of being close to a real online context; that is, the research can have higher ecological validity (Carlbring & Andersson, 2006).

Finally, because many other consumer traits may influence how consumers process received information, this research focuses only on consumers' advertising literacy. Future research may examine how source credibility and consumer expertise affect consumers' attitude and purchase intention.

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