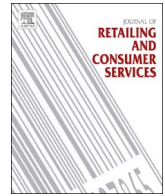




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## Social media marketing: Comparative effect of advertisement sources

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## ABSTRACT

This study was conducted to conceptualise advertising value and consumer attitudes towards advertisements. The research was developed to reveal the effect of the source of advertisements on credibility perception through the theoretical framework of Ducoffe's (1995) advertising value model. The research objective is to identify source derogation in terms of credibility to create advertising value and a positive attitude towards advertisements launched through the Facebook social network. In this regard, the study used three distinct sources to generate and introduce product promotional messages: an associative reference group, an aspirational reference group and marketers themselves. This research revealed significant differences in developing advertisement value and forming a favourable attitude towards advertisements when the product-related message was developed by these three distinct groups, who have different source derogations.

## 1. Introduction

Marketers and consumers are at present extending their communication through a dynamic new media called the social network. This is the latest development in advertising products and communicating with consumers. Facebook, in particular, is one of the fastest-growing social media, which encompasses enormous spontaneous brainstorming among its network members for developing an opinion (Akar and Topcu, 2011; Kim and Ko, 2012). Actually, this robust social media platform has created an exemplary scope for any brand to advertise its product through exposure, attention and perception; to develop opinions; and to create values (Kim and Ko, 2010). The use of traditional one-way communication to promote consumer perception and boost favourable attitudes towards product value has been dramatically losing its persuasive influence due to the overarching appeal of Facebook as a method of connection for peers (Akar and Topcu, 2011; Kim and Ko, 2010). Now product judgement, evaluation and perception and the final attitude development processes have been drastically aligned with a new pattern of multidimensional communications where consumers are more interested in and find more credibility through pursuing and streamlining peered opinions instead of getting traditional marketing advertisements (Algharabat et al., 2018, 2017; Aswani et al., 2018; Hayes and King, 2014; Logan et al., 2012; Lu et al., 2005). Most

of the fastest-growing companies are eagerly striving to promote product attention and exposure to gain a favourable perception through viral marketing on social networks; marketers of these companies have acknowledged that social media space is the fundamental hub they now consider when generating initial consciousness about the existence of a product and the motivation to use it (Barnes and Mattson, 2009; Dwivedi et al., 2015; Kapoor et al., 2016). Facebook users now number almost 1.6 billion individuals, and nearly 60% of them use the social network to view product advertisements (Hampton et al., 2011). According to Kim and Ko (2012), 70% of the active users of social networks visit social media sites for product information before buying a product. Facebook has opened up an excellent platform for marketers to increase their product promotion through viral marketing that is viewed by more than one billion connected consumers (Schulze et al., 2014).

The persuasive effect of any kind of product information depends significantly on its source derogation (Chu, 2011; Lu et al., 2005; Pelling and White, 2009). The advertising source that generates this information can have a strong potential impact on consumers based on its credibility, trustworthiness and pursuit of value in promoting a favourable attitude (Chu, 2011; Logan et al., 2012; Lu et al., 2005; Shareef et al., 2008a). As the social network has proliferated, marketers are now very keen to advance the use of viral marketing through the

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application of social networks for different groups (Hughes and Palen, 2009; Pelling and White, 2009). Viral marketing through a social network such as Facebook allows for continuous two-way interactivity from anywhere and at any time; this is now treated as a robust and ubiquitous alternative channel for providing information (Chu, 2011; Ju and Chung, 2002; Nantel and Sekhavat, 2008; Posey et al., 2010; Schulze et al., 2014). Nevertheless, the persuasive effect of advertisements on Facebook differs significantly based on the sources initiating the viral marketing (Kim and Ko, 2012; Lee et al., 2011). Advertising credibility is a significant factor in creating a favourable attitude among consumers towards this type of advertising (Akar and Topcu, 2011; Kim and Ko, 2012). Chatterjee (2001) identified, from extensive research on the referral behaviour of consumers, that there is a potential difference among consumers in belief and reaction to any viral marketing that accentuates the source of this initiation and communication. The author also asserted that consumers have more trust in and give a higher value to any information that is passed on to them if it has been created by peers and not by marketers. Hovland and Weiss (1951-1952) postulated that when any message regarding product promotion is created and communicated to others, its source is recognised by the members of this community, and they attempt to evaluate the credibility of the source before responding, whether favourably or not. As a result, marketers are now gradually becoming aware of this unique behaviour of consumers, which is fundamentally streamlined through social networks. Social networks have basically created this method of generating a brainstorming message from different sources, such as different kinds of opinion leaders including peers, celebrities and marketers (Bearden and Etzel, 1982; Logan et al., 2012; Pelling and White, 2009; Schulze et al., 2014; Shareef et al., 2015b).

Now consumers are more aligned to develop collective decisions through group brainstorming by generating, passing on and receiving product information through internal non-marketing groups by placing product information in connected loop networks on Facebook (Chu, 2011; Logan et al., 2012). Social identity theory (Tajfel and Turner, 1986) explains this consumer behaviour by identifying personal consciousness for affiliation with peers as the emotional connector and driving force (Pelling and White, 2009; Sirgy, 1982).

Shedding light on social identity theory, it is evident that consumers feel a group affiliation to collectively generate, gather and develop a unified opinion that will ultimately be persuasive for them as the determinant of a favourable attitude. Hogg and Vaughan (2002) asserted that actually the self-concept of any member who is working in a connected group can resemble the image of the group. Consequently, in a social network, viral advertisements generated substantially through collective peer opinion exaggerate the impression of the opinion leader and become persuasive. A self-schema heuristically encompasses a person's unconscious belief of acting and representing personal traits. So, when members of a social network participate in developing and sharing different opinions, they are unconsciously motivated to form a unified opinion which each promotes as an opinion leader. Rhetorically, in social networks such as Facebook, consumer perceptions about the derogation of sources substantially differ, reflecting source credibility, trustworthiness and reputation (Chu, 2011; Hayes and King, 2014; Lu et al., 2005).

Several researchers have attempted to conceptualise and establish the effects of viral marketing and how consumers, as peer members of any social loop on Facebook, develop their attitude towards viral marketing (Chu, 2011; Dwivedi et al., 2017b, 2017c; Kim and Ko, 2012; Logan et al., 2012; Lu et al., 2005; Schulze et al., 2014). So far no researcher has explored the effect of advertisements generated in a social loop on Facebook by a general member of the network as an opinion leader, by a special member attempting to introduce a persuasive opinion as a celebrity or by marketers. The sources of advertisements introduced on Facebook may have varying impacts on members of that social network as far as their acceptance of that advertisement is concerned. This is also evident considering different trust

disposition models (Chu, 2011; Hess and Story, 2005; Shareef et al., 2013), credibility and reputation development concepts (Shareef et al., 2008b, 2015b), and human psychological theories (Ajzen, 1991; Roloff, 1981). These studies show that consumers offset different amounts of trustworthiness in evaluating whether a promotional message is persuasive and whether to align their attitude with the implied notion of that message. The cognitive learning theory (Nicosia, 1966) shows that the intended meaning of any advertisement may not be persuasive because consumers may interpret it differently. This fragmentation in interpretation can be especially affected by the source of an advertisement. Therefore, a vital concern of marketers who are launching any provocative viral marketing is whether the primary promotion message should be promoted by peers of the social network, by celebrities introduced as opinion leaders who then let others of this group pass on that opinion promoting the product or by the marketers themselves. This question has not, so far, been studied to understand the effect of different sources on promoting a product on Facebook. We can summarise the research questions of this present study as follows:

1. What are the effects of different sources – network peers, external celebrities or marketers as the opinion leader – in formulating opinions on the value of and attitudes towards advertisements?
2. Are there any differences in terms of source derogation or perceived credibility of the advertisement among different reference groups who are primarily responsible for generating a positive opinion towards a product?

In this context, an empirical study among consumers who are active members of Facebook can provide deep insights for marketers and academics into the advertisement sources that are persuasive and impart a favourable attitude. This current study has enormous theoretical and practical value in terms of extending the existing literature of viral marketing for Facebook, which is now considered the panacea for future promotional marketing. The present literature on Facebook-centred advertising has not focused specifically on this important topic. For this reason this current study attempts to answer these research questions in order to contribute to existing promotional marketing literature concerning social networks like Facebook.

## 2. Comparative study of advertisement sources

Researchers (Akar and Topcu, 2011; Kim and Ko, 2012; Lu et al., 2005; Pietro and Pantano, 2012; Schulze et al., 2014) have recommended creating some consumers who can deliberately participate in enhancing product images to other consumers as opinion leaders. These consumers, who deliberately persuade or influence other consumers to develop a favourable attitude towards a product, are known as market mavens (Hoyer et al., 2008, pp. 392–393). This unique involvement is made easier by social networks, where informal and formal reference groups can promote a product. This enhanced product information can be initiated by a peer member of a network loop or a member injected into that group by a permanent member. A market maven can be an agent of marketers or non-marketers. Their message can be delivered personally face-to-face or through mass media (Hoyer et al., 2008). According to Hoyer et al. (2008, pp. 392–393), different sources of advertisement generation and communication have significantly different values in relation to credibility, methods and type of interaction; thus, presumably, they have a potentially unique ability to create source derogation impact.

By showing the influencing capability of different sources, this study has examined the effect of credibility on creating advertising value among members of a social network on Facebook, whether the source is two traditional sources or one social network source by a market maven. The following are formulated and defined:

### 2.1. Associative reference group

This is a non-referral reference group with the ability to act as a market maven and demonstrate opinion leadership in creating and passing on opinions of a product, similar to informal advertisement (Hoyer et al., 2008 and any). Fundamentally, a general peer of a network on Facebook can informally generate an influential statement on a product, disseminate it as a regular network activity among loop peers and substantially influence a favourable attitude towards the product. This current research has explored the impact of creating advertising value and favourable attitudes towards advertisements among consumers in a social network on Facebook by having an active peer of a Facebook network initiate opinions of a product. This initial opinion was sent to other members as that of a peer.

### 2.2. Aspirational reference group

This reference group consists of any member of the network who we would like to follow as a welcoming influencer (Hoyer et al., 2008). This member can have normative impact or hedonic influence. Due to their encouraging and influencing capability, this member can reshape some member attitudes and be persuasive (Lu et al., 2005; Pietro and Pantano, 2012). Aspirational references can influence a society due to their image, characteristics and leadership. Any celebrities – such as a film actor/actress, a commercial model or other motivating members – can be an aspirational reference and act as a market maven (Hoyer et al., 2008). This research has experimented with the impact of creating advertising value and favourable attitudes towards advertisements among consumers who are involved in a social network on Facebook by inviting an external celebrity to join the Facebook network and initiate an opinion of a product. This celebrity generates the initial opinion and sends it to known members. These members then pass on this message to other active members of their network loop on Facebook.

### 2.3. Marketer-generated

This is traditional viral marketing initiated and disseminated by the marketers themselves. For the last few years, this viral marketing has become more popular and marketers have augmented their reliance on this type of viral marketing through different social networks, such as Facebook (Chu, 2011; Kim and Ko, 2012; Logan et al., 2012; Pietro and Pantano, 2012; Schulze et al., 2014). Since Facebook is extremely popular and expanding very fast, engaging active consumers who have a social media identity, marketers realised that this media can be an effective outlet for diffusing their advertising among network members (Kim and Ko, 2012; Pietro and Pantano, 2012; Schulze et al., 2014). Fundamentally, any attempt at viral marketing on Facebook can easily be sent and passed on, and therefore received by thousands of active members who are also consumers, and can thus contribute in developing favourable attitudes towards products (Kim and Ko, 2012; Lee et al., 2011; Lu et al., 2005; Pelling and White, 2009; Schulze et al., 2014). This study is designed to understand the relative impact of creating advertising value and favourable attitudes towards advertisements among consumers who are involved in a social network on Facebook through initiating an opinion of a product by introducing an advertisement in that network by a marketer.

## 3. Experimental framework

The aim of this study is to understand the effect of source derogation on advertising effectiveness among members of a social network on Facebook – i.e., the impact of the credibility of an advertisement on perceptions of advertising value and consumers' attitude towards the advertisement. Consumers, particularly after the proliferation of social networks as a medium for developing informal opinions about a

product, are increasingly interested in gathering real consumer opinions before buying a product (Bearden and Etzel, 1982; Pelling and White, 2009; Schulze et al., 2014). They certainly put much more value on collecting brainstorming opinions from peers, who are deemed as transparent and real disseminators of practical consumption experience (Lu et al., 2005). Nevertheless, generation of this type of advertisement can have a detrimental effect, as the marketers have no control over the language of the statement (Pelling and White, 2009). So, often marketers rely on an aspirational reference group to promote their desired statement through models with whom general consumers might not have any informal affiliation. Marketers also identify viral marketing generated by themselves as having strong reliability, as it is persuasive in its content, organisation and structure (Logan et al., 2012; Pietro and Pantano, 2012; Schulze et al., 2014). After developing an effective and well-communicated advertisement, marketers introduce it into a social network for exposure to millions of social network members.

In this connection, this research has developed its study framework using the advertising value model of Ducoffe (1995). This author, through extensive experiment, proposed this theoretical framework to reveal and measure consumer perceptions about the effectiveness of advertisements. In many studies, Ducoffe (1995, 1996) proposed a model to understand consumer perceptions about the source derogation through three independent constructs: Entertainment, Informativeness and Irritation. These three constructs, as per the model, can collectively estimate consumer perceptions of advertising value and their attitudes towards an advertisement.

Analysing the effectiveness of advertisements and source derogation, several researchers (Barnes and Mattson, 2009; Bonds-Raacke and Raacke, 2010; Schudson, 2013) revealed that the impact of viral marketing potentially depends on how consumers perceive its value in terms of discourse and hedonic enjoyment. Eckler and Bolls (2011) investigated the emotional impact of viral advertising and showed that perception of advertisement value can perfectly reflect consumers' attitudes towards an advertisement. In that sense, as the fundamental model to conceive consumers' value perception, it was deemed appropriate to use Ducoffe's (1995) model as the foundation of perceiving consumer attitudes towards advertisements on social media (Logan et al., 2012).

Researchers of virtual media who have explored consumers' behaviour have used or are using many ICT-related or behavioural theories. For instance, Shareef et al. (2011) used a GAM model to perceive citizens' behaviour for eGov. Dwivedi et al. (2016) investigated the unified theory of acceptance and use of technology (UTAUT) model (Venkatesh et al., 2003) and extended it to conceive consumers' attitude for mobile-health. AlAlwan et al. (2018) used the same model to understand consumers' behaviour in relation to mobile banking. Dwivedi et al. (2017a) also examined the applicability of different behavioural theories to consumers' perception and adoption behaviour, including the decomposed theory of planned behaviour (DTPB) (Taylor and Todd, 1995), the technology acceptance model (Davis, 1989) and social cognitive theory (SCT) (Bandura, 1986). However, these examinations, extensions and developments are grounded on technology and consumer behaviour. So, although these developments reflect consumer behaviour in recent settings, they cannot completely capture sole behavioural phenomena of consumers in perceiving derogation of advertisements. Ducoffe's model (1995) is therefore more appropriate for the present study.

### 3.1. Entertainment

Through extensive market research, several researchers (Hughes and Palen, 2009; Logan et al., 2012; Pietro and Pantano, 2012; Shareef et al., 2015b) have affirmed that hedonic benefit is an important predictor for prospective consumers to be persuaded by an advertisement. This identification is particularly effective and appropriate for a social network where different members generate, receive and pass on

messages about a product (Hayes and King, 2014). On Facebook, active members pass on and receive a product message and attempt to attach their own views from experience; their main interest is to conduct the entire cycle with one kind of social affiliation and enjoyment (Akar and Topcu, 2011; Kim and Ko, 2012; Pietro and Pantano, 2012; Shareef et al., 2015b). Researchers have revealed that social network members always search for pleasure while communicating with other peers for the purpose of generating, receiving and disseminating any kind of message, whether commercial or general information (Hayes and King, 2014; Logan et al., 2012; Pelling and White, 2009). According to the model proposed by Ducoffe (1995), Entertainment, measured by four scale items, has the following cause-and-effect relations:

H<sub>a</sub>: Entertainment has a positive impact in influencing consumer perceptions of advertising value.

H<sub>a1</sub>: Entertainment has a positive impact in influencing consumers' attitude towards the advertisement.

### 3.2. Informativeness

Several promotional marketing researchers (Chu, 2011; Kim and Ko, 2012; Logan et al., 2012; Lu et al., 2005) have rhetorically acknowledged that the value and credibility of any advertisement potentially depends on the argument and counterargument in the advertising statement. Behavioural learning theory (Bloch and Marsha, 1983; Ertmer and Newby, 1993; Nord and Peter, 1980) has explained that consumers learn from the intended meaning of the statement. It is certain that the Informativeness of the content is extremely important in being persuasive. The cognitive learning theory (Nicosia, 1966) has also affirmed that consumers are always motivated to analyse the information of the advertisement through personal ability. The split brain theory (Kumar, 2009, p. 163; Oliver, 2015) has postulated that consumers are basically using two parts of the brain for analysis and imagination; however, in both cases the information in the message is the predictor to influence consumers to receive greater value from the advertisement. Researchers identified that, for any kind of advertisement, whether traditional or online, Informativeness is imperative to create consumer exposure, attention and positive perception towards the advertisement (Hayes and King, 2014; Logan et al., 2012; Pietro and Pantano, 2012). Therefore, based on the model, it is proposed that:

H<sub>b</sub>: Informativeness has a positive impact in influencing consumer perceptions of advertising value.

### 3.3. Irritation

The cognitive response model (Greenwald, 1968; Nicosia, 1966) illustrated that consumers may learn from any advertisement; however, whether they will be persuaded or not depends not only on the cognitive function but also on the affective function. The logical inference that can be drawn from this is that if anything about the advertisement is irritating, consumers will presumably feel disturbed and will not be persuaded by the advertisement. Many researchers (Chu, 2011; Hayes and King, 2014; Kim and Ko, 2012; Logan et al., 2012; Pelling and White, 2009; Shareef et al., 2015b) have argued that if consumers feel Irritation about the message for any reason, they are unwilling to be exposed to, be attentive to or receive a positive impression from the advertisement. Taylor et al. (2011) asserted that Irritation due to any advertisement can distract consumers from receiving the intended meaning of the statement, and thus can have a negative effect on the value of the advertising. Based on Ducoffe's model, Irritation causes a negative response to the advertising. Thus, the following hypothesis is proposed:

H<sub>c</sub>: Irritation from an advertisement has a negative impact on consumer perceptions.

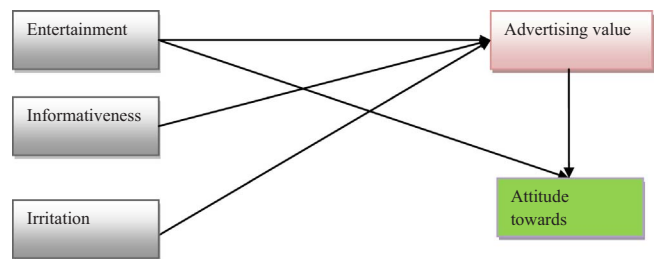


Fig. 1. Advertising value model.

### 3.4. Advertising value

Ducoffe's model recommended that if consumers attach a higher value to the advertisement, they will gain a favourable attitude towards the advertisement. Several researchers of viral marketing (Akar and Topcu, 2011; Chu, 2011; Hayes and King, 2014; Kim and Ko, 2012; Logan et al., 2012; Schulze et al., 2014) have asserted that a higher value of a social network advertisement can positively enhance favourable consumer attitudes towards an advertisement. The following cause-effect relation depicts this relationship:

H<sub>d</sub>: Advertising value has a positive impact in shaping consumer attitudes towards an advertisement.

The hypotheses are summarised in a generic model for advertising value, which is depicted in Fig. 1.

## 4. Research methodology

The research methodology applied in this study adopted an innovative way to explore and capture prospective consumer attitudes towards an advertisement. It was designed to reveal the effect of advertisement source derogation for the users of a Facebook social network when the advertisement is generated and sent through three different sources: an aspirational reference group, an associative reference group and the actual marketer. Respondents were taken from a group who use Facebook as their social network and are actual consumers.

The advertising value model proposed by Ducoffe (1995) is used here to measure consumer perceptions about the Samsung Galaxy Tab S. Here the message was derived through brainstorming by network members. This self-generated advertisement was first promoted by three peers who use Facebook and then communicated to their peers through Facebook. Three research students studying for an MBA at a leading private university were asked to launch this self-generated brainstorming discussion-type advertisement about the Samsung Galaxy Tab S and share it with their peers on Facebook. These three research students were informed about the design of the study, but did not disclose it to their peers. This self-generating and passing of advertisements among the connected members of this Facebook network was done for one week. Then a questionnaire – which contained 13 questions relating to the three independent variables developed by Ducoffe (1995), three questions relating to the dependent variable advertising value and five questions relating to attitude towards advertising – was used to measure the source derogation effect of this peer-generated advertisement. The statements and intended meanings of all the measuring items were scrutinised by three university professors from Bangladesh. The scale items of the independent and dependent variables were measured by a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaires were sent to the home addresses of 400 peers in Bangladesh and were collected by the three peers engaged as research students. These 400 members were randomly chosen from the members of that network loop. They were asked to respond to this questionnaire if they had bought this kind of product in the last six months. A total of 238

members filled out the questionnaire, giving their perceptions about the value of the advertisement and their attitude in response to the advertisement generated by the associative reference group.

Three months after the first experiment, a similar advertisement for the same product was communicated to the same network members; however, this time the advertisement was initiated by a renowned movie actor and commercial model as a peer of the same network. This movie actor and commercial model, serving as an aspirational reference, was connected with this group by the same three research fellows. The advertisement initiated by this person was passed to all the members by the three research fellows, who also attached a response liking the advertisement. Then the members of this network on Facebook participated in providing their perception of this advertisement by generating and passing on further brainstorming opinions. In a similar way to before, the same questionnaire was distributed among 400 peers randomly chosen from the members who were actively involved in receiving and/or generating an opinion on the advertisement promoted by the movie actor and commercial model. A total of 215 members filled out the questionnaire, giving their perceptions about the value of the advertisement and their attitude in response to the effect of the advertisement generated by the aspirational reference group.

To capture the perceptions of the members from the same group of Facebook, a promotional advertisement launching this product was crafted by a marketing company and introduced by the three researchers in their network loop three months after the second experiment. Then, following the same procedure, a total of 210 members filled out the questionnaire, giving their perceptions about the value of the advertisement and their attitude in response to the marketer-generated advertisement.

The entire study was conducted over a seven-month period. This research study was carried out to capture consumer perceptions of an advertisement that was communicated by these three sources, each having different credibility. Since the study has five constructs, a sample size of any number close to 200 or higher is good enough for the measurement method (Hoe, 2008).

## 5. Structural equation modelling (SEM)

Since the measurement part of the proposed model was developed based on the indicators suggested by Ducoffe (1995), the research did not complete any exploratory factor analysis. However, this research used a confirmatory factor analysis (CFA) to examine the validity and contribution of the measuring items and formative constructs. All five constructs with measuring items showed an over-identified model; they satisfied the requirements of the CFA and were loaded on the respective constructs with a causal effect greater than 0.50. This loading value satisfied the minimum cut-off point requirements (Fornell and Larcker, 1981; Kline, 2005). In this way, convergent validity was confirmed, as the retained scale items for each construct had average variances extracted (AVE) for each factor and measuring item of at least 0.50 (Fornell and Larcker, 1981). Discriminant validity among the five

constructs was also verified, as the largest shared variance between these factors was lower than the least AVE value for each factor and its measures (Espinoza, 1999).

Then we examined the reliability of all the constructs using Cronbach's alpha (Cronbach, 1951). Since the coefficient alpha for the five variables scored in the range from 0.812 to 0.950, we acknowledged construct reliability (Nunnally and Bernstein, 1994).

### 5.1. Advertisement generated through the associative reference group

To examine the hypothesised cause-effect relations developed based on the theoretical understandings, structural equation modelling was used through the path analysis. For the associative reference group, we took the average of the scale items of each of the variables individually for the 238 consumers who responded. As the data input, a correlation matrix was used for a maximum likelihood procedure of LISREL.

Initially, structural equation analysis exhibited both the unstandardised and standardised regression weights (factor loadings) for the cause-effect relations of the associative reference group. After several iterations with the inclusion of error covariances among several constructs of advertisement value and attitude, it was observed that Entertainment and Informativeness have positive effects on the advertisement value. Irritation is non-significant at the 0.05 level, and even at the 0.10 level (z score for 0.1 level is 1.645). The path coefficient for this non-significant factor is very low (– 0.05). So this construct does not appear to make a significant contribution towards developing the value of advertising. Although the output of fitness indices (chi-square = 2.46, df = 2, P-value = .29216) and root mean square error of approximation (RMSEA) (= 0.031) fitted well with the model, this non-significant relation was removed from the cause-effect relation. After removal, the model syntax was run. This time, the primary fit indices (chi-square = 2.35, df = 1, P-value = .12511, RMSEA = 0.075) reflected the acceptance of the model. This indicates that the null hypothesis of the model is a good fit for the data, or at least cannot be rejected.

At the same time, Advertisement Value and Entertainment have positive causal effects on Attitude towards Advertisement. So, this analysis outcome approves all the hypotheses except the cause-effect relation of Irritation with Advertising Value. All of these relations are significant at the 0.05 level (z score for 0.05 level is 1.96). We also verified other parameters of model fitness, such as comparative fit index (CFI), goodness of fit index (GFI), normed fit index (NFI), relative fit index (RFI) and adjusted goodness of fit index (AGFI), with recommended values (Jacobucci, 2010; Kline, 2005, pp. 133–144). The recommended values in the literature and the authors' findings are shown in Table 1. The cause-effect relation by numerical value and the correlation matrix are shown in the Appendix. The accepted advertisement value model for the associative reference group is shown in Fig. 2.

**Table 1**  
Model fitness values for advertisement value.

Fit measures	Recommended values	Advertising value model		
		Aspirational reference	Associative reference	Marketer-generated
Chi-square ( $\chi^2$ )	$p \geq .05$	0.08 (0.96065)	2.35 (0.12511)	3 (0.08316)
Degrees of Freedom		2	1	1
$\chi^2$ /Degree of freedom (DF)	$\leq 3.0$	0.04	2.35	3
Comparative Fit Index (CFI)	$\geq 0.90$	1	0.997	0.986
Goodness of Fit Index (GFI)	$\geq 0.90$	1	0.995	0.993
RMSEA	$< 0.06$	0.01	0.075	0.098
Normed Fit Index (NFI)	$\geq 0.90$	1	0.995	0.979
Adjusted Goodness of Fit Index (AGFI)	$\geq 0.90$	0.999	0.951	0.931
Relative Fit Index (RFI)	$\geq 0.90$	0.998	0.97	0.875

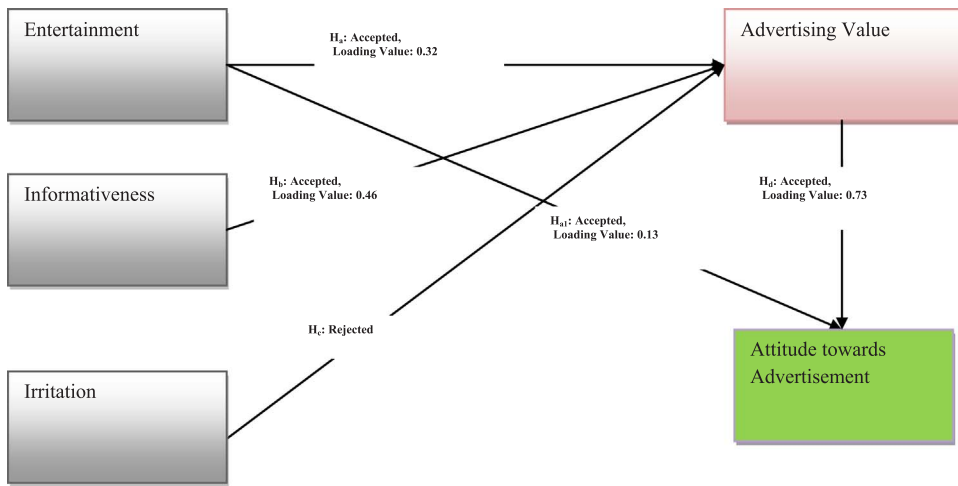


Fig. 2. Advertising value model for the associative reference group.

5.2. Advertisement generated through the aspirational reference group

For the aspirational reference group, we took the average of the scale items of each of the variables individually for the 215 consumers who responded. Following the same procedure, after several iterations with the inclusion of error covariances among several constructs of advertisement value and attitude, it was observed that Entertainment and Informativeness have positive and Irritation has negative effects on Advertisement Value. At the same time, Advertisement Value has positive causal effects on Attitude towards Advertisement. However, the effect of Entertainment on Attitude towards Advertisement is non-significant at the 0.05 level, and even at the 0.10 level. The path coefficient for this non-significant factor does not appear to make a significant contribution towards developing a favourable attitude towards an advertisement. Instead, modification indices suggested a causal effect of Informativeness on Attitude towards Advertising. This means that although consumers do not find any entertainment value in the message initiated by the aspirational reference group, the information embedded in the message can cause the development of a certain attitude of the members using that social network. This suggested causal effect is supported by several authors engaged in social marketing research (Hayes and King, 2014; Logan et al., 2012). Based on the correlation coefficient and theoretical understanding, we removed the non-significant relation and added the new suggested relation. This time, the analysis outcome approved all the hypotheses. All of these relations were significant at the 0.05 level (z score for 0.05 level is 1.96). The analysis shows that chi-square = 0.08, df = 2, P-value = .96065 and RMSEA = 0.01. This indicates that the null hypothesis of the model is a good fit for the data, or at least cannot be rejected. The recommended values in the literature and the authors' findings are shown in Table 1. The cause-effect relation by numerical value and the correlation matrix are shown in the Appendix. The accepted advertisement value model

for the aspirational reference group is shown in Fig. 3.

5.3. Advertisement generated by marketers

For the advertising model generated by the marketer, we took the average of the scale items of each of the variables individually for the 210 consumers who responded. Following the same procedure, after several iterations that included error covariances among several constructs of advertisement value and attitude, it was observed that Informativeness has a positive effect and Irritation has a negative effect on the Advertisement Value. However, the causal effects of Entertainment on both the Advertisement Value and Attitude towards Advertisement are non-significant at the 0.05 level, and even at the 0.10 level. The path coefficient for this non-significant factor is very low, with a "t" value of 1.16. So this construct does not appear to make a significant contribution to developing a positive value of and attitude towards advertising. At the same time, like the aspirational reference group, the modification indices suggested that there is a causal effect of Informativeness on Attitude towards Advertising. After removing the non-significant relations and adding the new suggested relation, we ran the model again. This time, the primary fit indices (chi-square = 3, df = 1, P-value = .08316, RMSEA = 0.098) reflected the marginal acceptance of the model. This indicated that the null hypothesis of the model could not be rejected.

The  $\chi^2$  statistic indicates that the null hypothesis of the model is not a good fit for the data. However, chi-square is not a very good-fit index in practice under many situations because it is affected by factors such as sample size. Larger samples produce larger chi-squares that are more likely to be significant (Type I error). Therefore, it is difficult to get a non-significant chi-square when the sample size is larger than 200 (Tanaka, 1993; Maruyama, 1998). RMSEA (0.083) may not be rejected as GFI (Iacobucci, 2010; Kline, 2005, pp. 133–144); however, RMSEA

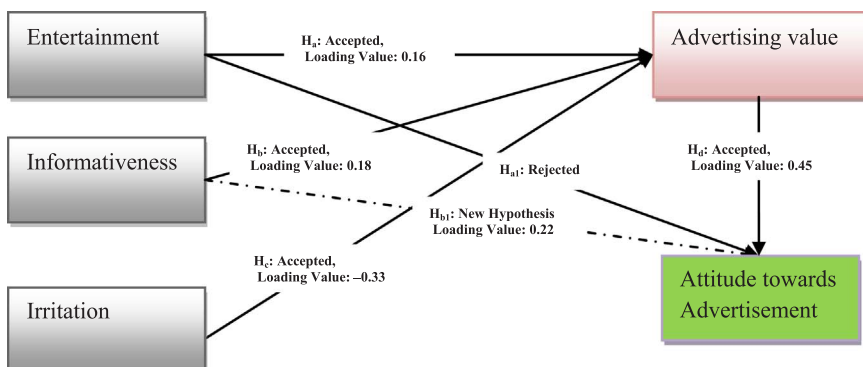


Fig. 3. Advertising value model for the aspirational reference group.

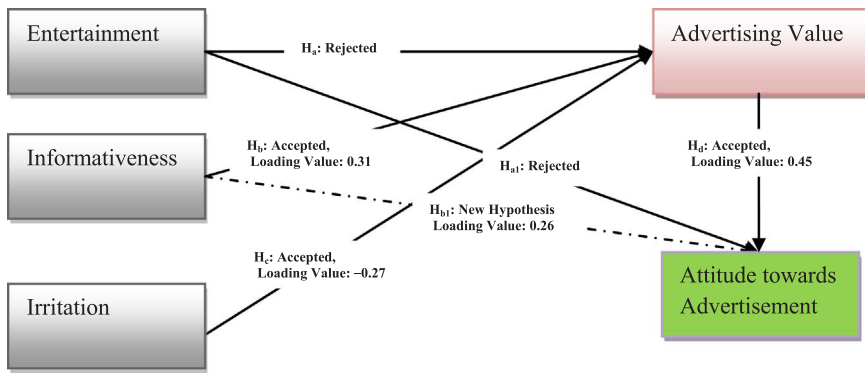


Fig. 4. Advertising value model for marketers.

for this model is slightly over the recommended value for a close model fit (the recommended value is shown in Table 1). But any value of RMSEA less than 0.10 is reasonable for fitness (Iacobucci, 2010; Kline, 2005, p. 139).

After removing the causal relations of Entertainment with Advertisement Value and Attitude towards Advertisement, the Advertisement Value exhibits a significant effect on Attitude towards Advertisement (loading value is 0.45 and “t” value is 7.61). So, this analysis outcome approves all the hypotheses except the cause-effect relations of Entertainment on Advertisement Value and Attitude towards Advertisement. All of these relations are significant at the 0.05 level. We have also revealed a new relation of Informativeness with Attitude towards Advertisement. We also verified other parameters of model fitness. The recommended values in the literature and the authors’ findings are shown in Table 1. The cause-effect relation by numerical value and the correlation matrix are shown in the Appendix. The accepted advertisement value model for the marketers is shown in Fig. 4.

6. Result interpretation and discussion

All of the cause-effect relations for three kinds of advertisement sources are depicted in Table 2 with their loading values. The squared multiple correlation coefficient (R<sup>2</sup>) for the associative reference group – explaining the amount of variance that the independent constructs Entertainment and Informativeness have as the driving forces in creating advertising value – is 0.463. This means that 46.3% of the variance in advertising value is explained by the direct causes of the two independent variables. For an exploratory study in social science, this amount of variance explained by the independent variables is quite satisfactory (Kline, 2005). At the same time, Entertainment and

Advertising Value explained 65.7% of the variance for Attitude towards Advertisement.

The accepted Advertising Value model for the associative reference group has shown that out of the three independent constructs of advertising value, Entertainment and Informativeness are the driving forces that persuade consumers to perceive a higher value of the advertising when it is approved by peers who are closely affiliated with developing their opinion. Consumers do not feel any Irritation while developing opinions on the advertising value if the promotional information about the product is generated, communicated and shared by their peers who do not have any commercial or formal stakes in product promotion. So, the cause-effect relation of Irritation with advertising value is non-significant and the hypothesis is rejected. The most important predictor in perceiving the value of the advertisement is the message, i.e., Informativeness. This clearly denotes that the content, rather than informal message sharing, is the key to developing an impression of credibility towards the advertisement. It has a loading value of 0.46. This denotes a unit positive change on Informativeness, which caused a 0.46 unit positive change on advertising value when the effect of the other construct, Entertainment, was kept constant. Both Entertainment and Advertising Value are persuasive factors in forming a favourable attitude towards an advertisement. The contribution of Entertainment to the development of advertising value is 0.32. This identification clearly reflects consumers’ enjoyment in receiving product information from informal sources.

For the aspirational reference group, all the proposed hypotheses of Ducoffe’s (1995) model are revealed as significant. Unlike the associative reference group, consumers perceive substantial Irritation when they receive any promotional campaign about any product from a formal reference who is not a peer in their network loop. Social network members as consumers do not like to receive or pass on product

Table 2 Loading value and relative contribution for advertisement value model.

Experimented hypothesis	Advertising value model					
	Associative reference		Aspirational reference		Marketer-generated	
	Status	Loading value of hypothesis	Status	Loading value of hypothesis	Status	Loading value of hypothesis
H <sub>a</sub> : Entertainment has a positive impact in influencing consumer perceptions of Advertising Value	Accepted	0.32	Accepted	0.16	Rejected	N/A
H <sub>a1</sub> : Entertainment has a positive impact in influencing consumers’ Attitude towards the Advertisement	Accepted	0.13	Rejected	N/A	Rejected	N/A
H <sub>b</sub> : Informativeness has a positive impact in influencing consumer perceptions of Advertising Value	Accepted	0.46	Accepted	0.18	Accepted	0.31
H <sub>b1</sub> : Informativeness has a positive impact in influencing consumers’ Attitude towards the Advertisement	–	–	Accepted	0.22	Accepted	0.26
H <sub>c</sub> : Irritation has a negative impact in influencing consumer perceptions of Advertising Value	Rejected	N/A	Accepted	–0.33	Accepted	–0.27
H <sub>d</sub> : Advertising value has a positive impact in influencing consumers’ Attitude towards the Advertisement	Accepted	0.73	Accepted	0.45	Accepted	0.45

information from an external formal source that has injected this message as an opinion leader in order to influence the members. Consumers may find some level of Entertainment in getting a message from this source, but its effect is much less than the previous case. And, unlike advertisements from informal sources, Entertainment does not have any favourable effect on consumers' attitude towards an advertisement. Receiving a product message from a formal source in their social network is not entertaining for consumers in a way that will encourage them to develop a positive attitude towards the advertisement. The most significant contribution in forming advertising value is Irritation, which is  $-0.33$ . Informativeness has a moderate contribution in forming advertising value, as the meaning of the message generated artificially by any external formal social model is well organised and structured (Kim and Ko, 2012; Pietro and Pantano, 2012; Roloff, 1981; Schulze et al., 2014).

Marketer-generated advertisements are traditionally and structurally well organised, with content that is focused and motivating and has appropriate disbursement time. Nevertheless, viral marketing is not very effective in product promotion in a social network like Facebook, because active members of Facebook are not interested enough in this advertising to provide enough credibility on an artificial opinion forcefully injected by marketers (Chu, 2011; Hayes and King, 2014; Logan et al., 2012). This assumption was evident in this study. Like the aspirational reference group and unlike the associative reference group, marketer-generated advertisements displayed on Facebook can create Irritation among active members of a social network loop. Its contribution in creating advertising value is equal to  $-0.273$ . For marketer-generated formal advertisements, Entertainment does not have any impact on creating advertising value and attitude towards advertisement, and thus both the hypotheses exploring the causal effects of entertainment are rejected. For this kind of viral marketing, users of Facebook do not find any entertainment in pursuing attitude towards advertisements.

As in the other two groups, Informativeness does have a potential impact on creating perception about advertising value among members of the social network. And like the aspirational group, this Informativeness has a confounding effect on developing attitudes towards advertisements.

## 7. Theoretical and managerial implications

These results provide some excellent knowledge for academics and marketers to learn and implement in their new wave of social network promotional activities and viral marketing. In any attempt to promote a product through social media, marketers must realise this vulnerability of advertisements. Traditionally, for printing media such as newspapers and billboards or for electronic media like television, radio and the Internet, marketers develop the content of the advertisement, design the context and finally implement the promotion for consumer exposure, attention and positive perception (Chu, 2011). For these advertisements, formal source derogation, argument and counter-argument are significant factors in being persuasive (Akar and Topcu, 2011; Hayes and King, 2014; Pelling and White, 2009; Robertson, 1974; Roloff, 1981).

Following the cognitive learning theory, heuristically, consumers are likely to evaluate the merit of any advertisement based on its persuasive strength (Kim and Ko, 2012; Logan et al., 2012; Schulze et al., 2014). Here, the capability of this advertisement depends on the content of the advertisement, not the context. Shedding light on the cognitive response model (Nicosia, 1966), consumers will be persuaded if they have thoughts that agree with the message content and support argument, counterargument and source derogation. The behavioural learning theory also acknowledges a similar argument reflecting the way consumers are persuaded. This theory shows that consumers are inherently inclined to be trained by the marketers depending on the intended meaning of the content of the message.

However, social media marketing has drastically changed the dimension of persuasion. Shedding light on the theory of mere exposure (Zajonc, 1968), we find strong theoretical explanation that when consumers are exposed to product information through multiple interactions evolved from peers, they find an emotional affiliation with this message. From Bandura's (1986) social learning theory, consumers are overwhelmingly biased to learn from peers. This learning process can enhance their understanding due to their mental affiliation with the same kind of behavioural attitude. People who are involved on Facebook are fundamentally engaged in an environment where they generate, share and exchange information, learning from the observation of peers, not from external members. The findings of this study clearly demonstrate that consumers who are connected socially through a virtual robust media, are frequent users and may also be physically connected are more concerned with the informal source derogation and its credibility, i.e., the context of the message, than the content. That is why they look to receive and pass on any product information message that might support or oppose the product promotion from their peers who are, presumably, initiating their message informally and not for any commercial result. As a result, consumers of social media are very cautious about the source. They do not have resistance to exposure to, giving attention to or being persuaded by informal sources. So, for associative reference, the initiation of product information can have great Entertainment and Informative value and can be strongly persuasive towards creating a positive attitude. For informal message sharing, Entertainment contributes in developing their perception of the value of the advertisement and their attitude towards the advertisement. On the other hand, messages such as viral marketing created by a formal commercial representative in any social network may cause active members of this social group to feel Irritation towards strangers who have trespassed. The generation of any organised message related to product promotion can have a negative impact on the advertising value and might prevent the creation of a favourable attitude towards the advertisement. Consequently, viral marketing conducted by marketers or injected by any aspirational reference may not be very persuasive (Bearden and Etzel, 1982). For the aspirational reference group, Entertainment may have a marginal effect on creating a favourable attitude towards an advertisement, but for a marketer-generated advertisement it is neither significant in influencing advertising value nor significant in influencing a favourable attitude.

These findings have significant implications for marketers and policymakers. They show that the credibility of the introducer of the advertisement is the most crucial factor in persuading consumers to like social media-based marketing. As for the trustworthiness of the advertisement, consumers tend to focus on a number of issues:

1. The hedonic benefit they want to experience from receiving and passing on messages and creating a response to the value of the advertisement, which may lead to a favourable attitude.
2. Cognitive and affective functions are equally important in persuading social network members, or prospective customers, to form their overall attitude towards the meaning of the product message.
3. The context of the message information is extremely important.
4. An informal message has a strong potential to be persuasive for social network members.
5. Social network members put more reliance on information initiated by peers of the network because they feel more emotional adherence.
6. Organised information created formally has less persuasion power.
7. Multi interaction is now the new wave for creating persuasive opinion about product promotion. So, traditional one-way, and/or even two-way, communications are now not effective in social media marketing.

Today any promotional marketing on a social media platform such as Facebook should be conducted through an informal, non-referral



source like peers of that social network. It is definitely risky, as it can also lead to the generation of an unfavourable message that can be communicated to many prospective consumers (Chu, 2011; Hughes and Palen, 2009; Kim and Ko, 2012; Pietro and Pantano, 2012). But for launching a product promotion campaign through social media that has the potential to persuade consumers, marketers should take the risk of generating a favourable or unfavourable message. So, the dimension of risk is now shifting. Previously, the risk was in the issue that the message might fail to convey the marketers' intended meaning to the consumers and not be persuasive (see the cognitive response model). In contrast, the dimension of risk is now associated with the explicit information of the message, which might be completely subversive.

Therefore, to alleviate this risk or reduce the level of risk to a lower level, marketers may introduce some members of the social network and motivate them to initiate product information instead of picking up a formal aspirational reference group. These active members of social networks, who often generate product information, can be secretly selected by the marketers and informally encouraged by any type of reward to generate product promotional information. A potential concern, in this regard, is the trade-off between freedom of choice in initiating an informal message for the product on the informal social network and the level of control the marketers want to maintain to manipulate their message content. Rigid control may potentially harm the benefit of the informal message, because the message might lose the appeal of informality and peers might be suspicious of its origin. They might be critical in evaluating whether it is generated by peers, an aspirational group or marketers (Bearden and Etzel, 1982). On the other hand, too much freedom for the members of any social network in creating product information may lead to the creation of an unfavourable message. So, it is important to have a thoughtful strategy in product promotion through social media.

## 8. Limitations and future research direction

This study created a message, both formally and informally, about a particular type of Samsung product. Many researchers have identified that viral marketing substantially depends on the type of product. So, before making any concluding theory about the findings, this study should be replicated for other kinds of products. The cultural orientation of the consumers can also have a strong influence on consumer online behaviour, and thus this result, in a developing country, may not be replicated for consumers of a different cultural background.

The model used in this study as the theoretical framework may have some moderating effects by certain variables. Moderating variables like age, gender and self-concept could be tested by future researchers to reveal their effects on the independent constructs. If gender is found to have a moderating effect, then future researchers could replicate this finding in different settings, considering peers from both genders on any network.

## 9. Conclusion

Although this study used a well-known theoretical framework to conceptualise advertising value and consumer attitudes towards advertisements, it is an exploratory-type study from the perspective of the research question and design. The study was developed to explore its research question using the theoretical framework of Ducoffe's (1995) advertising value model. Its aim was to identify source derogation in terms of credibility in creating advertising value and attitude towards an advertisement launched on the social network Facebook. In this regard, the study used three distinct sources to generate and introduce a product promotional message: an associative reference group, an aspirational reference group and marketers themselves. The research was conducted in Bangladesh.

Associative reference consists of general informal peers connected in any social network of Facebook. Three research assistants, who are

also general active members of a social network of Facebook, were hired to work as an associative reference for their peers in that network loop on Facebook. But these three Facebook members did not disclose or share this information with their peers. They informally initiated an opinion about the Samsung Galaxy Tab S as product information and sent it to their network members.

In a similar way, a message was sent to the members of the same network on Facebook by a formal external celebrity working as an aspirational reference member. Since he was an external member formally invited by a regular member of this network group, his message about the same product was considered by the regular network members as formal information created for commercial purposes. So, presumably, they were reluctant to receive this message and felt Irritation in imparting any value to the advertisement.

The third message was created by the marketer and communicated by the same peers to the same network members. Consequently, although this message was very structured and organised, network members were very irritated to receive this kind of commercial message in their informal network because it had a predetermined intention to formulate a unified opinion about a product. So, they were not encouraged to get any hedonic benefit in pursuing a favourable attitude towards the product. This demonstrated that this kind of advertisement introduced in an informal network group is less effective. Active members are very irritated to receive this type of commercial message where they are habituated to interact informally.

For the associative members, Irritation is not a significant factor and does not contribute in forming an opinion on advertisement value. Here consumers show high potential to be persuaded when the information is created by their peers. They also find enough enjoyment in activities of creating, receiving and passing on this kind of message. On the other hand, when it is created by an aspirational reference group, this may be irritating; however, consumers may still find a certain level of entertainment and they give some priority to the information of the message, as it is deemed partially commercial. On the other hand, when the message is produced and injected by the marketer, which means that it is fully commercial, regular informal members of the network feel Irritation and do not find it entertaining or helpful in formulating a favourable attitude towards the advertisement.

Consequently, answers to the second research question revealed significant differences in developing attitudes towards the advertisement value and in forming a favourable attitude towards the advertisement when the product-related message was developed by these three distinct groups who differ in source derogation. When the message was developed by an informal member of the Facebook network, such as a peer, it had the highest potential to persuade the members due to its Information and Entertainment. But if the product message, or advertisement, was produced by a formal group and introduced in an informal social network, they were extremely irritated, and that potentially contributed in developing attitudes towards the advertisement value and towards the advertisement.

So this study has contributed significantly to the existing literature on social media marketing. It has conceptualised an important theory related to the credibility and effectiveness of social media marketing. It revealed that in social media, product promotional activities are much more effective and can persuade consumers if they are initiated and passed on to regular members of the network. But if they are artificially generated and considered as a commercial statement, they lose credibility and create Irritation, which contributes towards negative opinions on the advertisement value. Secondly, it identified that for promotional marketing of the same product, informal source derogation is an important driving determinant of consumer persuasion. Thirdly, this research recognised that rather than content, the context of the message initiated in any social network has more merit to persuade consumers to create a favourable attitude towards the advertisement.

Although this study did not aim to analyse the results in terms of cultural traits – i.e., whether the results can be characterised by the

special cultural orientation of Bangladesh – we can provide some insights into the group behaviour of social network members. Researchers working on consumer behaviour in virtual media (Dwivedi et al., 2016; Shareef et al., 2016) have explicitly acknowledged that consumer behaviour can be significantly different in different cultural contexts. Since the collectivist cultural domain potentially reflects the coherence

of group members (Shareef et al., 2015a), prioritisation of peers' opinions on social media can be partially influenced by this cultural trait. In that respect, a replication of this study in developed countries, which are dominated by individualistic culture, could provide potential insights into the findings of this study.

## Appendix

### Associative reference

#### Correlation matrix

Advertis	Attitude	Entertai	Informat	
Advertis	1.000			
Attitude	0.803	1.000		
Entertai	0.552	0.536	1.000	
Informat	0.620	0.563	0.499	1.000

Total Variance = 4.000 Generalised Variance = 0.137

Largest Eigenvalue = 2.797 Smallest Eigenvalue = 0.193

Advertis = 0.323\*Entertai + 0.459\*Informat, Errorvar. = 0.537

Standerr	(0.0551)	(0.0551)	(0.0495)
Z-values	5.868	8.333	10.863
P-values	0.000	0.000	0.000

Attitude = 0.729\*Advertis + 0.133\*Entertai, Errorvar. = 0.343

Standerr	(0.0457)	(0.0457)	(0.0316)
Z-values	15.957	2.918	10.863
P-values	0.000	0.004	0.000

### Aspirational reference

#### Correlation matrix

Advertis	Attitude	Entertai	Informat	Irritati	
Advertis	1.000				
Attitude	0.513	1.000			
Entertai	0.311	0.277	1.000		
Informat	0.281	0.347	0.571	1.000	
Irritati	-0.363	-0.166	-0.162	-0.040	1.000

Total Variance = 5.000 Generalised Variance = 0.353

Largest Eigenvalue = 2.257 Smallest Eigenvalue = 0.399

Advertis = 0.155\*Entertai + 0.179\*Informat - 0.331\*Irritati, Errorvar. = 0.781

Standerr	(0.0750)	(0.0741)	(0.0617)	(0.0759)
Z-values	2.067	2.418	-5.364	10.296
P-values	0.039	0.016	0.000	0.000

Attitude = 0.451\*Advertis + 0.220\*Informat, Errorvar. = 0.692

Standerr	(0.0595)	(0.0595)	(0.0672)
Z-values	7.577	3.699	10.296
P-values	0.000	0.000	0.000

Marketer-generated

Correlation matrix

Advertis	Attitude	Informat	Irritati	
Advertis	1.000			
Attitude	0.542	1.000		
Informat	0.350	0.417	1.000	
Irritati	- 0.317	- 0.089	- 0.142	1.000

Total Variance = 4.000 Generalised Variance = 0.503  
 Largest Eigenvalue = 1.981 Smallest Eigenvalue = 0.402  
 Advertis = 0.311\*Informat - 0.273\*Irritati, Errorvar. = 0.805

Standerr	(0.0628)	(0.0628)	(0.0789)
Z-values	4.954	- 4.342	10.198
P-values	0.000	0.000	0.000

Attitude = 0.451\*Advertis + 0.259\*Informat, Errorvar. = 0.647

Standerr	(0.0596)	(0.0596)	(0.0635)
Z-values	7.579	4.349	10.198
P-values	0.000	0.000	0.000

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