

# HOW E-WOM CONTRIBUTES TO NEW PRODUCT ADOPTION. TESTING COMPETITIVE COMMUNICATION STRATEGIES

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## ABSTRACT

*Communication strategy is a critical element of new product adoption, the element most directly responsible for aiding consumers' acceptance of it. The decision to adopt a new product is determined by the success of a sequence of two stages: product awareness and product adoption. Previous studies have shown advertising is the best way to start new product launch because advertising is necessary to people start to talk about the new product. However, nowadays firms can easily promote WOM communication by the Internet. This medium provides numerous venues to share consumers' views, preferences or experiences with others. The main contribution of this study relies on the test for two competitive communication strategies. Preliminary results show firms should start new product communication with e-WOM and then continue it with advertising.*

## KEYWORDS

*E-WOM, advertising, awareness, adoption, new products*

## **1. Introduction**

Successful new product introduction is important for a firm's long-term performance (Prins and Verhoef, 2007). At the introduction stage, Communication strategy is a critical element of adoption, the element most directly responsible for aiding the consumers' acceptance of it (Lee and O'Connor, 2003). Innovations can be transmitted by mass media and interpersonal communication, also referred to as word of mouth (Mahajan et al., 1990). Previous studies have demonstrated that personal influences have a great importance in consumer behaviour. In particular, opinions by other consumers have a significant impact on consumer choices (Arndt, 1967; Chatterjee, 2001; Katz and Lazarfeld, 1955). In the area of new product development, Bass' (1969) product diffusion model suggested that consumers adopt products because of the influence of their friends and direct contacts who have already adopted the product rather than the influence of marketers. Diffusion then takes off as a result of internal influences, such as social contagion, spreading through networks of consumers (Delre et al., 2007a). Despite of the importance of these interpersonal influences, advertising continues to be the first communication tool to be used when introducing a new product in the market (Manchanda et al. 2008; Narayanan et al., 2005; Rogers and Adhikarya, 1979; Van den Bulte and Lilien, 2001).

Nowadays, social media tools enable consumers to extend their connections and conduct word of mouth (WOM) with fewer restrictions. New technologies make it easier for consumers to share product related information with each other (Stephen and Lehmann, 2009). Therefore, electronic WOM (e-WOM) allows consumers to transmit information faster than traditional WOM and reach far beyond the local community through Internet (Chatterjee, 2001; Lee et al., 2008). In response to this tendency, firms are increasingly interested in developing e-WOM campaigns as a potential new communication tool (Keller and Berry, 2003). However, although there are some studies on product diffusion in offline WOM, there are very few empirical studies on product diffusion which consider e-WOM (Thompson and Sinha, 2008; Xu et al., 2008).

From a marketer perspective, it is very relevant to analyze which communication strategy should be followed when a new product is introduced in the market. The selection of the optimal communication strategy is a very difficult task (Delre et al., 2007a). Research on new products has extensively focused on product development while attention to the impact of marketing communication efforts on new product adoption remains limited (Delre et al., 2007a; Prins and Verhoef, 2007). Very little is known about how to market successfully in online environments, as e-WOM marketing is still very experimental in nature (Spaulding, 2010). Furthermore, few studies have attempted to integrate mass and interpersonal communication influences (Lee et al., 2007). In this paper we address this issue by investigating how a firm should orchestrate a communication campaign that drives consumer awareness and adoption of a new product. Particularly interesting is to determine which communication tool should be the first one to be used, e-WOM or advertising. To the best of our knowledge, this is one of the first studies in analyzing whether firms should actively promote e-WOM or whether it should be naturally promoted by its customers as a result of advertising campaigns.

## **2. Literature review and hypotheses development**

The decision to adopt a new product is determined by the success of a sequence of two stages: product awareness and product evaluation (Van den Bulte and Lilien, 2001; Weenig and Midden, 1991). Literature in new products diffusion has demonstrated that commercial communication is more important at creating awareness-knowledge of the new idea, while more personal and non-commercial sources are more important at the evaluation stage (Narayanan et al., 2005; Rogers and Adhikarya, 1979; Van den Bulte and Lilien, 2001). Similarly, Delre et al. (2007a; 2007b) state that from a marketing perspective it is of great importance to understand how information starting from mass media (external influence) and travelling through WOM

(internal influence) affects the adoption decision of consumers and consequently the diffusion of the new product. According to Hogan et al. (2004), it is the initial marketing communication that triggers a customer's initial purchase. That purchase experience subsequently triggers the spread of WOM, as customers share their experience with others. The whole process would never be initiated without the customer's initial exposure to the ad. All these studies support the idea that advertising is the tool that best works at the first stage of the introduction as WOM needs informed individuals to start the process (Goldenberg et al., 2001).

However, since the advent of the Internet some of these assumptions may have changed. Although e-WOM is usually spontaneously generated (Buttle, 1998), the expansion of new media facilitate firms to develop e-WOM campaigns. Firms can identify opinions leaders and give them incentives, such as new product trial, to refer other individuals (Buttle, 1998; Godes and Mayzlin, 2009; Song and Parry, 2009). Therefore, customers can know about the product through consumer reviews on the Internet, blogs, forums, or any other online communities, before an advertising campaign takes place.

Marketing literature has shown that WOM is rated by consumers as the most important source of information on purchase choices (Katz and Lazarsfeld, 1955; Mangold's, 1987; Sheth, 1971). It is more effective than traditional advertising and personal selling (Katz and Lazarsfeld, 1955). Furthermore, WOM communication has more influence on product judgements than printed information (Herr et al., 1991). In online environments, e-WOM has also more impact than firm-generated sources of information (Bickart and Schindler, 2001; Parker, 2005). Thus, starting the new product diffusion with e-WOM should have more influence on consumer awareness than starting with advertising:

**H1: In a new product launch, an e-WOM campaign generates more awareness than an advertising campaign.**

Speeding up the adoption of newly introduced product is important to many firms (Prins and Verhoef, 2007) because adoption delay may indicate product failure (O'Connor et al., 1990). According to recent research, consumers' adoption speed could become faster due to higher volume of WOM (Shen and Hahn, 2008). The more conversation there is about a product; the more likely someone is to be informed about it, thus leading to consumer awareness (Godes and Mayzlin, 2004). Therefore, companies need consumers to be involved in this e-WOM process. Several motivations for participating have been proposed in the literature. Individuals may contribute to the diffusion in an attempt to build social capital (e.g., attention from others, strengthening friendship). Therefore, their decision of having a conversation about a product will at least partly be made with certain social consequences of the conversation in mind (Dholakia et al. 2004; Stephen and Lehman, 2009). In fact, transmitting WOM can lead to potential social benefits. As we have previously stated, WOM is considered more credible than firm-generated information (Arndt, 1967), because is unbiased information (Smith, 1993), so, it is more probable that individuals refer WOM information than commercial information.

As adoption delay consumer innovation resistance is among the principals causes of new product failure (Ram and Sheth, 1989). However, very little attention has been paid to the role of resistance in the adoption process (Bagozzi and Lee, 1999; Ellen et al., 1991). The initial response of a consumer is likely to be one of either resistance or openness to communication of an innovation (Bagozzi and Lee, 1999). When resistance is beaten, adoption process continues. Then consumers develop some interest, and hence decide to learn more about the product (De Bruyn and Lilien, 2008). At this stage, some consumers may actively search information about the new product. Information search is then an indicator of innovation advance once resistance is avoided.

As e-WOM generates more awareness than advertising, more consumers will know about the new product. It will be also more likely that they recommend this product to other people,

because it generates high social contagion that speed up new product diffusion (Shen and Hahn, 2008). Furthermore, e-WOM is more likely to provoke an active search about the new product, so consumers will show a higher level of interest on the new product in comparison to consumers who heard about the product through an advertising campaign. Thus, consumer will want to learn more about it, beating new product resistance. As a result, the probability of continuing the adoption process and avoiding resistance to innovation will be higher. The above reasoning lead us to propose the following:

**H2: Campaigns which start with e-WOM make the adoption process faster than campaigns starting with advertising.**

**H3: Campaigns which start with e-WOM generate less resistance to innovation than campaigns starting with advertising.**

Consumers tend to combine information from multiple sources, and some interactions between these information sources are likely to occur (Collins and Stevens, 2002). Research has shown that the more sources used, the more likely the message will impact on consumers (Bayus, 1985; Hogan et al., 2004). As a result, multiple routes for retrieval information are formed in memory increasing the accessibility of the product, which, in turn, enhances its recall (Sjödin and Törn, 2006). As long as information is consistent with prior schema, consumer will integrate the new incoming message on memory and a positive effect on attitudes is more likely to show.

As the combination of communication tools is more effective, the firm should use as least another information source during the second stage of the adoption process. However, earlier information is more diagnostic than later information and, therefore has a greater impact on final judgments. In fact, people often overestimate the validity of prior impressions and interpret subsequent information in light of earlier evaluations (Herr et al., 1991; Smith and Vogt, 1995). Therefore, it will be better for firms to start the new product launch with e-WOM. Such strategy will help the firm to create a strong prior impression about the new product, as it generates more impact than advertising. E-WOM should be then followed by firm-generated communication in order to strengthen its impact. This discussion leads us to propose the following:

**H4: The communication strategy composed of e-WOM campaign at awareness stage and advertising at adoption stage is more effective in the product adoption process than the communication strategy composed of advertising at awareness stage and e-WOM at adoption stage.**

### **3. Methodology**

A between subjects experimental study has been developed using real internet users in which communication strategy for launching a new product has been manipulated. In one of the conditions subjects are first exposed to e-WOM and then to an online advert, while in the other condition the order is altered. The subjects are 172 university students randomly assigned to one of the two conditions. Questionnaires have been collected in April 2010.

A new technological product was recommendable for the experiment because this type of product is characterized by short life cycle (Beard and Easingwood, 1996; Goldman, 1982), so firms involved in these categories launch new products very frequently. A real wrist watch mobile phone from LG has been chosen for the study. This product has been selected because mobiles are very appealing to our target.

The experiment has been developed in two sessions separated by two days. By following this procedure we can distinguish which strategy is more efficient at each stage of the diffusion

process: new product awareness and new product adoption. 80 participants have been exposed to the advert in the first session and 92 have been exposed to e-WOM first.

We created two stimuli for the experiment: the first stimulus consisted of a webpage including an advert in which the new product was shown. The second was also a webpage for a mobile-related forum in which e-WOM about the new wrist-watch phone was introduced. We replicated the web design from a real technological site as recommended by Koering (2003).

In the first stimulus there was information about five real new mobile phones. It also included an advert with the target product. Information about the other products served as a distraction task. In the second stimulus there were five comments from consumers about the same new mobile phones. One of those comments was about the target product. The purpose of the distraction task was simulating a real Internet browsing, in order to ensure that measurement about product awareness was developed in a more realistic setting. Before starting the first session, participants were told that they should suppose they were searching information about new mobiles on the Internet when they found that website. An image of the new product was displayed in each stimulus. Thus, regardless of the experimental condition, all individuals saw the product at the awareness stage. In the second session individuals were exposed to the next stimulus (advert or e-WOM depending on the experimental condition). At the end of the second session students were thanked for participating and were given a gift.

Product awareness has been assessed after the first session and product adoption after the second. Awareness has been measured by asking participants the name of mobile phones that appeared on the webpage (spontaneous awareness). They had then to select the mobile phones that appeared from a list of 12 mobile-phones (suggested awareness). During the second session subjects filled in a questionnaire which includes the variables for assessing the adoption stage. Subjects have been asked if they looked for information about the new product, if they told other people about it and about their interest in adopting the new product. Following previous studies (such as Jamieson and Bass, 1989), a traditional purchase intention scale has been used for the latter purpose. In order to control for potential confounding effects, other variables have been measured using previously established scales: perceived novelty (Michaut et al., 2002), product knowledge (Smith and Park, 1992), and product and brand attitude (Bruner, 1998). As some individual differences could affect the results, subjects have also indicated their level of innate innovativeness (Im et al., 2003), their attitude towards e-WOM (Park et al., 2007), their Internet experience (Novak et al., 2000), their previous participation in e-WOM, and how often they usually write reviews about products on the Internet. At the end of the questionnaire individuals have provided some demographic information (sex and age).

#### **4. Preliminary results**

The Z-test and chi-squared test have been used to test which strategy is more effective at awareness stage. These tests are used to compare proportions between independent samples. As shown in Table 1, there are more individuals that remember the product ( $Z=9.873$ ,  $p<0.01$ ;  $\chi^2=111.958$ ,  $p<0.01$ ) when the communication strategy starts with e-WOM than when it starts with advertising. The result for suggested awareness is similar, there are more individuals who remember the product when exposed to e-WOM in the first session than when exposed to the advert at this stage ( $Z=11.853$ ,  $p<0.01$ ;  $\chi^2=81.196$ ,  $p<0.01$ ).

**Table 1: Results at awareness stage**

Spontaneous awareness						
Communication strategy	N	Percentage	Z-value	p-value	$\chi^2$	p-value
e-WOM+Ad	92	0.587	9.873	0.000	111.958	0.000
Ad+e-WOM	80	0.038				
Suggested awareness						
Communication strategy	N	Percentage	Z-value	p-value	$\chi^2$	p-value
e-WOM+Ad	92	0.957	11.853	0.000	81.196	0.000
Ad+e-WOM	80	0.300				

At this moment, we are testing which strategy is better for the adoption stage. Further analyzes are being developed with the rest of variables (level of innate innovativeness, Internet experience, attitude towards e-WOM, and previous participation in e-WOM), in order to check whether individual differences affect the results obtained. We are also exploring which strategy generates quicker diffusion (H2) and less innovation resistance (H3).

## 5. Conclusions

The study will contribute to new product literature by showing to what extent diffusion is enhanced when e-WOM starts before than commercial communication. This study will also determine which strategy is more appropriate at each stage of the diffusion process: awareness and product adoption. Theoretically very interesting is this awareness and product adoption distinction because, to the best of our knowledge, the impact of differential strategies on product launch success has not been established yet.

Preliminary results indicate that firms should start new product communication using e-WOM. This strategy generates higher consumer awareness than starting with advertising. The main contribution of this study relies on the importance of e-WOM at early stages of new products launch. This result is in line with Droge et al. (2010) who suggest that connecting with people who participate on e-WOM, such a bloggers can be an important part of the overall launch communication strategy. Therefore, firms should promote e-WOM communication before the product is available in the market. This strategy will generate awareness before launching, which, in turn, could speed up the adoption process. This study is consistent with the notion of involving consumers in the development of the new product, what may help firms to develop products in accordance with customer desires and generate hype around the product (Droge et al., 2010; Katona et al., 2009). It also contributes in the methodology proposed because it is very difficult to conduct controlled experiments on processes of innovation diffusion (Delre et al., 2007b). It has also allowed us measuring awareness on time, which is usually hard as it is not an overt behaviour (Van den Bulte and Lilien, 2001)

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## How e-WOM contributes to new product adoption. A test for comparative...

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