

An Investigation and Conceptual Model of SMS Marketing

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Abstract

Mobile marketing, also known as wireless marketing, promises vast opportunities. Still in an experimental phase, businesses have little experience using this new marketing tool. Mobile services offer companies powerful marketing potential via direct communication with consumers, anytime and anywhere, but little research on this subject exists. This paper discusses Short Message Services (SMS), which belong to the first and most successful forms of mobile data transmission. Based on a literature review and exploratory qualitative research, this paper defines mobile marketing, describes its most popular application, text messaging, introduces a conceptual model of success factors for implementing mobile marketing, and proposes future research avenues.

1. Introduction

They live in the same house but their lives contrast. Like many of her 16-year old friends doted on by parents and grandparents, Ingrid Johnson has time to kill, money to burn, follows trends and loves to shop. Her dad, Bill Johnson, would kill for free time, pinches pennies, ignores trends and hates to shop. Yet they passionately agree on one thing; they could not survive without their cell phone. The quest for companies is leveraging cell phone technology in order to effectively market to both Ingrid and Bill. Mobile devices increase consumer communication and challenge companies as to appropriate marketing.

As with most new technologies, mobile usage differs geographically. Unlike the Internet, where the US led the adoption, Japan leads in mobile Internet technology, with a penetration of Internet enabled phones of 72% as of June 2002. Europe and North America lag at 45% and 25% respectively, according to an A. T. Kearney and University of Cambridge survey of 15 industrialized countries [2]. These differences in mobile technology adoption relate to differences in the global development and pricing of cell phones.

Japan introduced cell phones with constant Internet access in 1999. These devices let customers receive and display messages, figures and photographs. About 60 million Japanese, or 47%, actually use Internet enabled mobile services [38]. The Japanese market, which Europe and America may follow, leads the world in the development of mobile marketing, illustrated by the Japanese cell phone display in Figure 1.



Figure 1. Japanese cell phone display
(www.j-phone.com/japanese/products/display.html)

Development aside, an important question for companies in all countries is how to use this personalized marketing tool effectively.

Despite the growing demand and marketing potential, there is little research on mobile marketing. This paper helps fill that void by addressing four research questions. What is mobile marketing? What do leading European experts conclude about mobile marketing via its most successful application, Short Message Services (SMS)? What model helps explain effective mobile marketing? Finally, what fruitful marketing avenues and theoretical approaches merit exploration?

2. Defining Mobile Marketing

“Marketing management is the process of planning and executing the conception, pricing, promotion and distribution of goods, services, and ideas to create exchanges that satisfy individual and organizational goals” [5, 1]. This American Marketing Association definition implies sequential marketing stages as well as temporal and spatial separation of buyers and sellers. Mobile devices blur these boundaries and distinctions by extending traditional marketing’s time-space paradigm [62].

Cell phones, free from traditional land-based Internet connections, amplify main arguments of e-commerce, location independence and ubiquity [6; 8; 62]. Consumers who increasingly expect tailored and location based services, reinforce the importance of location, time and personalization in mobile marketing [61].

One-to-one Marketing, addressing customers individually, is well established in marketing and plays a central role in Customer Relationship Management [31; 39; 44]. Although it can be expensive and time-consuming to gather individual customer interests, customized information treats each individual uniquely [62]. As with other forms of digital marketing, mobile media incorporate interactivity and transcend traditional communication, allowing for one-to-one, many-to-many and mass communication models [11; 26; 27].

Text Messaging, in the UK, or Short Message Service (SMS) in other European countries, the US and Australia, lets users send and receive text messages via cell phones.

According to the GSM Association, users send more than 10 billion SMS messages each month [15]. This makes SMS the most popular mobile data application. In 2002, 580.2 million mobile messaging users sent 430.8 billion messages [59].

Current technology limits each message to a maximum of 160 characters. With SMS as a best effort service, all messages are delivered as long as there is enough free capacity in the network. If the mobile phone is off, the message arrives when the user turns the mobile on. Future ‘always on’ devices should overcome this real time transmission bottleneck.

A two-way information flow, sending and receiving messages, enhances service and feedback between companies and consumers [28]. Text messages are also popular for interpersonal communication [17]. Cell phones let users of all ages easily maintain business and social contacts, although research found that entry barriers to using SMS were high for teachers and other adult authority figures [56].

A key mobile marketing use is advertising, in a push or pull model. Push advertising sends unsolicited messages, usually via an SMS alert. Pull advertising adds messages, usually promoting free information such as traffic reports or weather forecasts, to browsed content the customer requested [54]. Recipients often pay for wireless ads though, as they perceive the ads as content. This mixed content blurs the line between advertising and service [29].

Push, the predominant wireless delivery method, saves time and money compared to surfing the Internet via WAP, but the information should be relevant to the receiver [46]. Yunos et al. state that most users view wireless ads pushed to their mobile device as intrusive and unwelcome [65].

Summarizing the discussion above, the authors define mobile marketing as *“Using interactive wireless media to provide customers with time and location sensitive, personalized information that promotes goods, services and ideas, thereby generating value for all stakeholders.”*

3. Methodology

Given the little research on mobile media and marketing, the authors used exploratory qualitative research [7; 23] for identifying variables and relationships among them. Open-ended questions served as a flexible guideline for interviews [52] that investigated mobile marketing. Qualitative research is complex, involving fieldwork for prolonged periods of time, collecting word and pictures, analyzing the information inductively while focusing on participants' views and writing about the process [16].

While previous qualitative SMS research focused on interpersonal communication [17], these interviews focused on SMS marketing. The interviewees, 15 European mobile marketing experts from industry and academia provided a rich set of data.

- Mobile Marketing Companies (Head of Marketing, Team Manager, Business Analyst, Head of Development & Research, CEO),
- Advertising Agencies (Senior Manager, Art Director, New Media Expert),
- Mobile Telephone Companies (Head of Marketing, Head of SMS Advertising),
- Company using Mobile Marketing (Head of Research),
- Consulting Company (Consultant and Researcher),
- Location Based Service Provider (CEO),
- Universities (Professor and Lecturer with Research Focus on Mobile Commerce).

The seven interview topics stemmed from this study's four broad research questions and voids found in the literature review of consumer behavior, interactive technologies and technology adoption [3; 11; 26; 27; 30; 31; 45; 49; 50; 51; 58; 62; 63].

- Target groups for SMS advertisements,
- Success factors for SMS advertisement,
- Effective SMS message design,
- SMS advertising possibilities,
- Basics for SMS advertising success,
- Barriers to SMS advertising,
- Wireless advertising trends.

The taped interviews lasted between 40 and 70 minutes and took place in the interviewees' office or office building, as qualitative interviews should take place where the interviewee feels comfortable [7; 23]. Two interviewers participated, one leading the interview, the other taking notes and both transcribing the taped interviews that day. After transcription, the interviewers coded, categorized and summarized the data for interpretation and analysis. The analysis, combined with existing literature, led to the overview of text messaging and model in the next sections.

4. Text Messaging – A Mobile Marketing Medium

SMS marketing can be more cost effective than other media as its main cost is buying cell phone numbers. This is necessary if a company fails to convince customers to “opt-in”, or give their permission to receive wireless advertising. According to Forrester Research, the price for 1,000 numbers can be as high as 30\$ in comparison to 1\$ for 1,000 e-mail addresses [47]. According to experts, SMS' effectiveness in reaching target groups helps justify this higher price.

Furthermore, the response rate of consumers to mobile campaigns is higher compared to campaigns via other media [47] – a WindWire report, for example, showed a 31% response rate [64]. The European experts interviewed confirmed this observation, adding that customers often respond to messages instantly and even use the complete set of 160 characters.

5. Text Messaging Applications

Text message advertising integrates easily into the media mix. Seven experts agreed that SMS campaigns should complement other media. The 160-character limitation hinders the design of cell phone messages, and SMS should not serve as the main media in a campaign [34]. Several companies (e.g., Flytxt's FXTrinity, Mindmatic's Wireless

Interactive Box, UCP's Mobile Media Platform, and the Chordiant Marketing Director Suite [13] illustrated in Figure 2) already integrate SMS with other media.

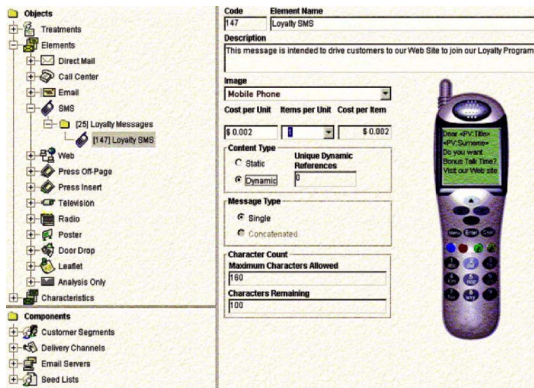


Figure 2. User interface of the Chordiant Five Mobile Marketing Director

5.1. Mobile Couponing

Companies can send coupons to cell phones via SMS. Mobile couponing offers at least three advantages: targeting based on customer cell phone numbers; time sensitivity, e.g. receiving a 20% discount on purchases immediately after entering a shop; and efficient handling by scanning the coupon's bar-code at the cash desk.

Raskino predicts that consumers will use mobile coupons 300 times more often than ordinary paper coupons [48]. Customers keep their cell phone with them and therefore the coupon too.

5.2. Information Services

Advertising funded information services include news, weather, traffic, market rates, horoscopes, or songs just played on the radio. The receiver of the services would pay little or nothing for this relevant and personalized information. Three advertising agency experts noted that a prerequisite for increasing this advertising method's success is a strong relation between the required information and the advertisement. Accordingly, companies should only send advertisements that complement customer interests.

5.3. Mobile CRM

Text messaging supports Customer Relationship activities such as receiving free newsletters, pictures, ring tones, bonus points and coupons after joining a customer program. Mobile telephone companies plan to use SMS for customer relationship management, sending their clients information on where to get cheap pre-paid phone cards when their credits are running low.

One expert said that his cell phone company plans to use mobile marketing for customer relationship management by "sending SMS based reminders if clients do not pay their bills on time. This kind of reminder is more effective and less expensive for us as operators. Of course the legal consequences need to be checked first."

5.4. Branding

Mobile marketing is a branding tool. For over a century, branding efforts have attempted to link images and emotions with a brand in order to gain a competitive edge beyond utilitarian differences [4; 12; 60]. Brands, usually a company's most stable asset [14] and a fundamental tenet of business success [53], simplify consumers choice with a brand name that links closely to a product category [53]. For example, when most people think of fast food, *McDonald's* comes to mind. Barwise et al. [10] posit that trusted brands are more important in the virtual world where they influence online purchases, generate customer loyalty [14], and attract customers to their Web sites [24]. This 'virtual branding' effect may apply to SMS as well.

Wella, a leading seller of hair cosmetics and fragrances in over 150 countries, conducted a campaign that sent a message with a kiss to all their clients that gave permission to receive SMS messages from Wella. The customers liked the Wella kiss so much that they forwarded it to their friends. This viral impact created a high effect for a low cost [20]. Wella paid for text messages sent to the opt-in clients but paid nothing for the messages passed on to friends [1].

5.5. Entertainment

Entertainment services can increase customer loyalty and add value for the customer. As most people have a natural playfulness, providing games and prizes via text messaging yields high participation, noted a mobile marketing expert. Sending games and prizes to the customer's cell phone is a fun way to attract and keep customers.

Warner Brothers Movie World in Germany, for example, invited customers to send a certain message to three friends as quickly as possible, asking them to forward the message to Warner Brothers. The first five teams to complete the cycle received free tickets to Warner Brothers' Movie World entertainment park [37].

A Siemens Survey and Gartner Research found that entertainment applications especially appeal to the "generation @" segment – young World Wide Web users between 12 and 16 years old [25]. Young people are heavy users of SMS services but often fail to realize how much text messaging and voicemail cost. The Communications Law Center in Australia found that a quarter of young people have difficulties paying their mobile phone bills and frequently end up in debt [35]. Organizations must consider this ethical issue when targeting teenagers with mobile marketing.

5.6. Product Launches

Mobile marketing also supports product launches, especially services. Twelve of the fifteen experts believe that mobile marketing activities are more beneficial when introducing services than introducing consumer or industrial goods. As mentioned earlier, all experts agreed that wireless advertising succeeds only if embedded appropriately in the marketing mix.

There was no agreement, however, among experts about using text messaging for an image campaign. Three experts from advertising agencies thought that image campaigns were impossible via SMS. Four other experts, those with more experience conducting mobile marketing campaigns than

the advertising agency experts, were sure that creating emotions was possible through this medium. Broadband access and advanced mobile devices will enable multimedia content and thus increase image campaign possibilities.

5.7. Location Based Services

Location based services that connect to a distinct location are highly relevant for local advertising – i.e., a person might receive a text message including directions to the nearest Italian restaurant or train station. Companies can send advertisements to a registered client when this client passes the point of purchase, illustrating the time sensitivity of this approach. Two experts using location based services pointed out that as this service is time sensitive, clients should receive the message when in front of the shop and not half an hour later.

6. A Conceptual Model of Effective SMS Marketing

A conceptual model summarizes the results of this exploratory study and previous research. Figure 3 groups the independent variables of mobile marketing success into two categories, message characteristics and media characteristics. Descriptions of these success factors (independent variables) and the success measures (dependent variables) follow.

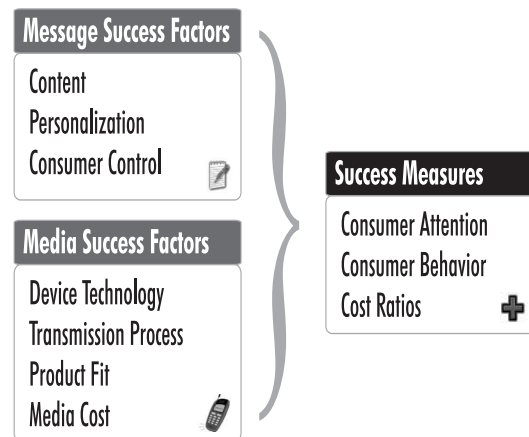


Figure 3. Effective SMS Marketing

6.1. Message Success Factors

6.1.1. Content. The copy of an SMS advertisement is important. A UK survey of one thousand Greater London cell phone owners identified six advertisement types: brand building, special offers, timely media teasers, requests, competitions, and polls [11]. Across these categories, the authors found that good advertisements were short/straight to the point (28%), funny/entertaining (26%), relevant to the target group (20%), eye catching (13%), and informative about prizes and promotions (12%). A message should contain an attractive underlying idea, be concise, use language understood by the target group and use the available 160 characters effectively [11].

Another important aspect is information on how the customer can stop receiving future company messages. Finally, when addressing young people, messages should be entertaining and show familiarity with the abbreviations and the spitfire conversational style typical of SMS and instant Internet messaging [33].

6.1.2. Time of Transmission. SMS messages are less intrusive than phone calls as recipients can read the message at their leisure and choose whether to respond [18]. Nevertheless, organizations must consider the time and frequency to send messages, based on both the target group and the topic. One interviewee, the CEO of the biggest mobile marketing company in the German speaking part of Europe, stressed that “messages should only be sent between 09.00 and 19.30 on weekdays. Addressing students, messages should not be sent before noon, because at this time students can either not be reached efficiently or might get into trouble receiving messages during their classes.”

Real time transmission, whereby the message appears on the potential consumer’s screen within seconds, will further increase mobile marketing success. These instantaneous broadcasts offer opportunities, such as ordering songs played on the radio instantly after hearing them.

6.1.3. Personalization. Targeted advertising based on client profiles enhances the experience for mobile owners and brands. Personalizing the message increases its impact. A structured and well-maintained database is crucial for targeting customers effectively. To build such a database for SMS campaigns, clients must disclose information about their habits, interests and preferences. Common attributes include leisure activities, number of holidays taken within a particular interval, music interests, favorite newspapers, favorite radio, Internet access, occupation, marital status, car ownership and income [11].

Obtaining explicit data from consumers, rather than leveraging existing databases, increases the message’s relevance [11]. Many clients, however, resist sharing personal details. This illustrates an inevitable trade-off between personalization and control granted to the consumer. Gathering data for tailored messages raises privacy concerns, which the following section discusses. Corporate policies must consider general guidelines for sending SMS messages as well as the validity of electronic signatures and electronic contracts. Seven experts who experienced customer resistance welcomed European initiatives to restrict unsolicited SMS. They argued that a company sending unsolicited messages negatively affects the wireless advertising industry.

6.1.4. Consumer Control, Permission and Privacy. Even though SMS offers myriad marketing possibilities, there are practical limitations. Sending high loads of data via text messaging is time consuming. Content restrictions – i.e., messages may not exceed 160 characters – might inhibit consumers from signing up for SMS. Web-based information systems, by contrast, offer easier registration. Their display devices’ bigger screens and higher resolutions offer more convenient access to privacy policies and legal frameworks such as MindMatics’ *RedAlertz* (<http://www.redalertz.co.uk/>).

A simple registration process also helps gain permission. Without consent, clients will refuse to accept messages [22]. Permis-

sion, a relatively new marketing term but actually an old concept, has come of age thanks to e-mail [21]. Both the customer and the company benefit from permission marketing. While marketers get an audience interested in their message, customers receive fewer and more relevant messages [45].

Research on permission marketing via email is emerging. A study that investigated permission campaigns across media found that a print campaign yielded opt-in e-mail addresses, especially with hand-addressed envelopes [57]. Against expectations, a luxury hotel's permission e-mail campaign showed that personalized messages had poorer results than standardized messages [36]. This may have stemmed from using e-mail addresses collected at check-in and failing to establish an e-mail relationship.

The advertiser must have permission before sending advertisements to consumers. Unwanted messages, commonly known as spam, annoy the consumer and no matter which medium (e.g., telephone, fax, electronic mail, mobile communication, etc.) are illegal in some countries. Frequent spams stifle user acceptance; this argument may be even stronger with mobile marketing.

All 15 experts cited fear of spam as the strongest negative influence on customer attitudes towards SMS advertising. Dread of unwanted messages and privacy fears may prevent consumers from registering for SMS ads. Unlike changing one's email address hosted by free Web-based services such as *Yahoo!* or *Hotmail*, changing one's cell phone number is far more difficult.

6.2. Media Success Factors

6.2.1. Device Technology. A major problem of European mobile marketers has been SMS' graphical limitations. Designing attractive text messages with only 160 characters is difficult. This limitation challenges marketers and limits possibilities to convey the messages. All experts agreed that text messaging is only an additional element in their marketing media mix.

Emerging technologies such as the Multimedia Messaging Service (MMS) help over-

come this limitation [41]. Phones with higher resolutions and multicolor-displays, already common in Japan (see Figure 1 earlier), can include visual elements for innovative marketing strategies. The different devices however, are incompatible with little agreement on common standards.

6.2.2. Transmission Process. Seven experts identified technical barriers in sending text messages. First, a text message may never arrive. The technology for text messages is a "best effort" service; there is no guarantee that the data arrive within the next minute. Two interviewees working for grid operators and four more experts estimated probability of arrival of a text message on the user's active mobile phone as high as 99%.

A second technical barrier is arrival delays. The text message should arrive a few minutes after sending, but delays of a couple of hours are possible according to the experts. This is a major problem for time sensitive content such as customer account changes, last-minute tickets, product availability notifications and weather reports. Online booking services and airlines, for example, already use SMS to notify travelers of flight status [40]. New technologies may help solve this issue.

6.2.3. Product Fit. Their distinctive characteristics position SMS advertising as better for frequently purchased low-ticket items rather than infrequently purchased high-value products [11]. Nine experts agreed that SMS is particularly useful for promoting technical goods and services, or those that appeal to a young target group such as event or party announcements.

6.2.4. Direct and Indirect Impact. SMS usually urge the recipient to "Act on the spot". As all experts claimed that almost all recipients would read the message, it is imperative to induce the customer to act, such as attending the party that night. The message's impact vanishes quickly.

Another important impact is the viral effect of appealing text messages. Recipients may forward messages to their friends, thus

increasing the overall impact. This effect though, is difficult to plan, as it depends on consumer trends. Viral effects [20] amplify the success of an SMS marketing campaign.

6.3. Success Measures of SMS Marketing

6.3.1. Consumer Attention. Rodgers and Thorson [49] provide an extensive summary of online advertising, building on Wells' measures of effectiveness in traditional media [63]. A key aspect is attention. The user may forget a mobile ad, ignore it, or skip it. Gaining attention helps initiate consumer behaviors.

6.3.2. Consumer Behavior. Consumer reactions to mobile marketing messages include clicking a link, e-mailing the advertiser, phoning and purchasing [9]. Call-throughs redirect the user to the advertiser's phone number in a single click. Similarly, the consumer may send an e-mail or text message to the company. Compared to click-through rates of less than 1% for online advertising [24; 64], wireless click-through rates and call-through rates are 19% and 12%, respectively [64].

Based on another interactive medium, the World Wide Web, Koufaris shows that the shopping experience and perceived usefulness of Web sites are important measures related to the consumer's intention to return to the site [32]. Recent research on media metrics should also be applied to measure the success of mobile marketing [42; 58].

6.3.3. Cost Ratios. Cost per thousand or cost per click, traditional measures for mass media advertising such as Web sites, TV, newspapers and radio [30], can gauge wireless advertising's effectiveness. Comprehensive and current databases are a prerequisite for targeted campaigns (see section on "Personalization" above), and five interviewees highlighted the importance of calculating a campaign's potential gains against the costs of data maintenance.

7. Conclusion

Based on a literature review and qualitative research of European experts, this paper suggests an exploratory SMS marketing model of two independent variables, message and media success factors, which influence three dependent measures of success: consumer attention, consumer behaviors and advertising cost ratios. The paper also proposes a definition of mobile marketing, its instruments and marketing applications. The analysis sheds light on the perceptions of managers working with nascent forms of mobile marketing. Future research challenges remain, such as improving the model and hypotheses testing of the success factors and their influence on the attitude towards SMS marketing.

Text messaging represents the first and most basic form of addressing consumers via mobile devices. In Asia and Europe, where picture SMS is already a reality, more complex challenges await mobile marketing companies. The development of i-mode in Japan showed that a strong brand, an active company image, high acceptance of value adding services and a critical mass of devices are important success factors. Further conceptual work in this field is imperative, such as the diffusion of innovations [51; 55].

The approach by Pedersen and Ling suggests developing a comprehensive model of mobile service adoption. They propose extending traditional adoption models based on diffusion, uses and gratifications, and domestication research [43]. Gilbert and Kendall found that value is a central issue in wireless services adoption. They argue that due to the nature of the wireless medium, few marketing lessons from mass media or electronic commerce apply to mobile marketing [19]. Future research should explore the acceptance of and attitude towards mobile services. Possible approaches include Aijzen's and Fishbein's Theory of Planned Behavior [3] and Rogers' model of innovation adoption [51].

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