An Investigation of Marketing via Mobile Devices - Attitudes of Croatian Marketing Experts

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Abstract

Marketing activities supported by mobile devices offer great opportunities for direct communication with consumers without the barriers of time, place, location and other. This article explores opinions and expectations Croatian marketing experts have towards use of m-advertising and other available advertising media, where we take the perspective of marketing experts to predict the future of m-marketing and m-advertising in Croatia. The paper also discusses the relevance of m-advertising and investigates the future of m-marketing and m-advertising in Croatia.

This research focuses mainly on understanding the potential and effectiveness of the use of mobile phones as a promotional medium, but we also try to recognize the level of concern of marketing experts associated with spam, relating to privacy intrusion and ethics components in m-advertising. Privacy and ethics concerns could create resistance to the adoption of m-advertising.

Media selection becomes the most critical factor for the success of a promotional and advertising marketing campaign. Croatian experts still consider TV or newspapers the best way to reach a large number of potential consumers, but what are their expectations towards mobile advertising? To answer this question, we built a model that links attitudes towards advertising via classical media to the intention to use m-advertising.

Keywords: direct communications, media, m-marketing, m-advertising, acceptance

1. Introduction

Mobile devices have made a new technological step forward by enabling the complete mobility of their users. Mobility changes the way we conceive interaction with clients and can be considered a new stage in the market evolution of commerce, linking on to electronic commerce. Its goal is to be able to reach consumers, suppliers, and their employees wherever they are. Mobile commerce is a separate type of electronic commerce, based on the use of various mobile devices (mobile telephones, PDA, etc.) that use wireless telecommunications infrastructure. Mobile commerce has a potential that will change the global market [1] and, according to estimates, exceed the traditional Internet-based electronic commerce.

Figure 1, courtesy of Varshney and Ravikumar [2], features some of the typical services of mobile commerce.
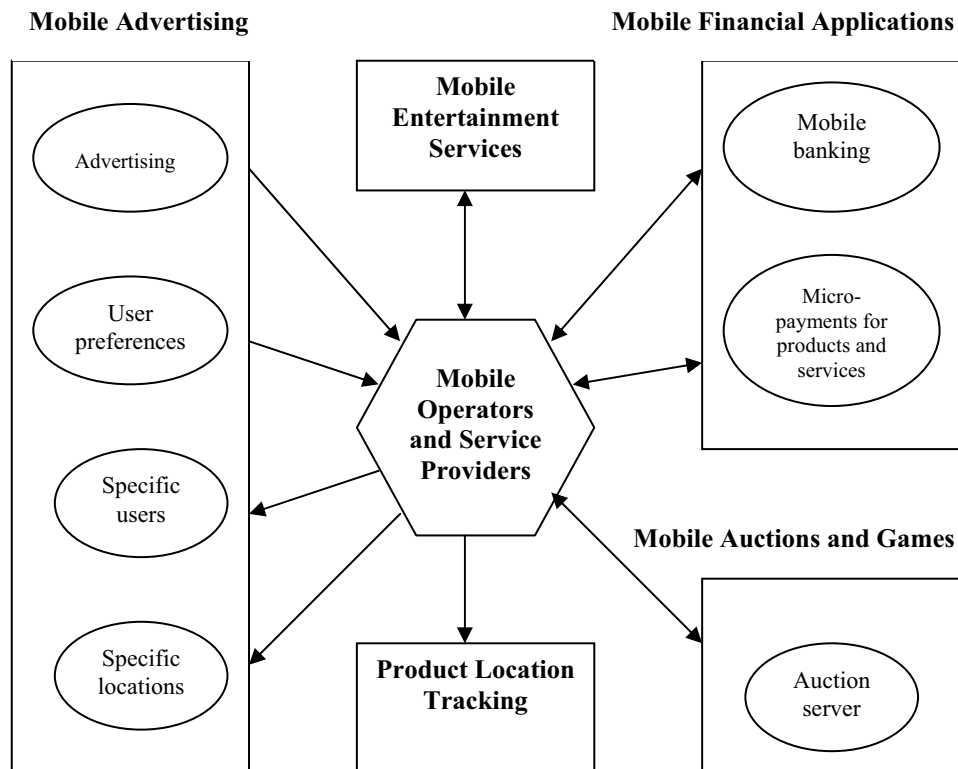
Mobile Advertising   **Mobile Financial Applications**

Figure 1. Several mobile commerce services[1]

M-commerce applications include mobile financial applications, mobile inventory management, product locating and shopping, wireless engineering, mobile auctions, wireless data centers, and mobile advertising [3]. This particular paper focuses solely on mobile advertising.

Although marketing experts and researchers worldwide consider mobile devices an exquisite marketing tool that will change the current approach to advertising [4], [5] and are starting to employ them in future campaigns, neither mobile marketing nor mobile advertising have been considered in Croatia before, whether as a research subject or in terms of practical application.

2.   Characteristics of Mobile Marketing and Mobile Advertising

Mobile and locational advertising will turn wireless devices into a powerful marketing medium. User and location-specific messages will be sent to achieve highly effective and targeted advertising.

Wireless mobile devices have a range of unique features, which impact the nature and specifics of applications designed for them. Such features of mobile devices include: their ubiquity (they are affordable and portable); personalization (a typical PDA belongs to and can be identified with a single individual); and location-awareness (connection established by the wireless medium can be used to determine the physical location of the device).

Good marketing management is based on building longstanding interpersonal relations. When traditional media advertising and e-marketing are compared with m-marketing, several characteristics come up as limiting factors on the one hand, but a challenge on the other: ubiquity, convenience, localization, and personalization and interactivity above all.

Personalization – m-marketing shows potential for personalization since every mobile terminal device is usually trackable to a user identity. This creates immense possibilities for marketing experts, who will use every message response received from the user to collect new

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[1] Source: Adapted from Varshney and Ravikumar 2004

user-preference information in order to build a better relation with the user. In terms of m-marketing, the personalization aspect enables the development of applications based on demographic and social characteristics of users collected in prior campaigns on the one hand, and applications based on the exact locations of users on the other. According to [6], [7], there is an urgent need for the development of marketing techniques based on collected user profiles, history and needs. On the other hand, personalization based on user response enables the tracking of the exact location of the user, which is bound to affect the concerns of users.

Interactivity – the user ↔ advertiser relation is an interactive one where both sides try to achieve their goals and fulfill their needs. M-marketing enables unimaginable growth of such interactivity. Unlike other traditional mass media (such as TV or radio), mobile marketing strives not only for classical interaction, but also to establish dialogue with the other party. Before sending any sort of advertising messages to a mobile device, it is necessary to convince the potential buyer to opt in, that is, get their permission to send out mobile advertisements.

3. Conceptual development and previous research

This section describes some existing work in several areas that are closely related to our work interests: m-marketing and m-advertising. Research in models of SMS marketing by Dickinger et al. [8] has shown that mobile marketing campaigns achieve poorer marketing results than traditional marketing campaigns. A comparison study of users in Finland by Heinonen and Strandvik [9] notes that users respond far less to commercial mobile mail than to commercial traditional mail, indicating that mobile marketing and advertising have not yet reached a level which could at this point endanger electronic marketing and advertising, but that they are bound to become more serious competition.

Pousttchi and Wiedman [5] have produced a morphological table of interrelations between features and content in mobile marketing with regard to the two basic types of mobile marketing campaigns: the "*pull*" campaigns, where the promotional material is sent proactively to the customer by e-mail, SMS, or MMS; and "*push*" campaigns, where the advertiser broadcasts messages using traditional media, inviting customers to take part. While pull-campaigns try to get a response from the user, push-campaigns involve sending messages to the user without their specific request. Media options through which a potential future customer of a mobile campaign can be reached include: the press; billboards and outdoor advertisements; radio; television; Internet; packaging; mobile devices, etc.
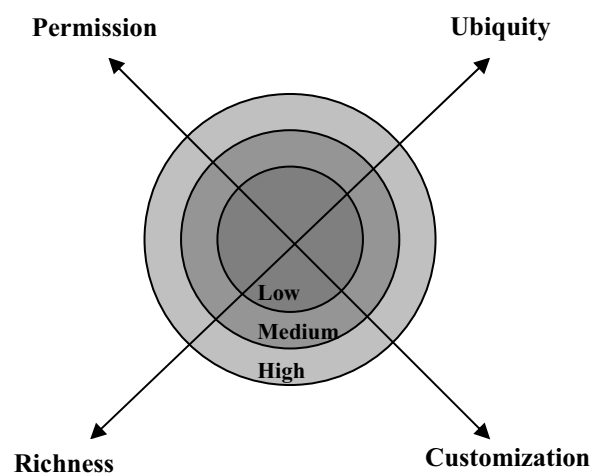

Figure 2. Four dimensions of effective mobile marketing[2]

2 Source: Adapted from McManus and Scornavacca 2005

Since getting permission from the customer is one of the most important issues in mobile marketing campaigns, all these media serve primarily to get the customer's permission to include them among the message recipients of a particular mobile campaign.

According to McManus and Scornavacca [10], there are many factors that affect the success of a mobile marketing campaign. They can be grouped in four basic dimensions, based on their convergence: permission; ubiquity; richness; and customization, as shown on Figure 2.

Sinisalo et al. [11] provide a list of the key problems they identified in the process of mCRM-creation, illustrated by a concrete case of implementing the mCRM system in one of the largest companies in Finland in 2004 and 2005. The key problems are divided into two major groups: technology-related and marketing-related.

Research by Chen et al. [12] on the effects of mCRM on customer loyalty has shown that CRM practice and mobile services have a positive influence on customer loyalty.

4.   Research model and hypotheses

Are Croatian companies ready to manage their own m-marketing campaigns? To identify objectives in m-advertising, we interviewed 30 experts whose companies are among 100 biggest advertisers in Croatia, using WEB interface to collect data. To identify the significance of variables (consumer permission, personalization, place and time of delivery and etc.) for the effectiveness of m-marketing campaigns, we asked experts to rate its importance on a five-point Lickert scale.

The questionnaire was used to examine the attitudes of marketing experts towards mobile marketing, and how they ranked mobile marketing against other advertising methods.

The independent variables included: reported attitude towards advertising via classical media; perceptions of privacy and ethics in m-advertising; and factors influencing advertising effectiveness. The dependent variable was the perception of usefulness of m-advertising.

4.1. Subjects

The target group of this research were marketing and advertising experts in Croatian companies, who received an e-mail containing an access code to a 67-question WEB questionnaire. The response scale was the Lickert scale, ranging from one (1) – "I completely disagree," to five (5) – "I completely agree."

4.2. Research framework

The aim of the research was to assess the current level of mobile marketing in Croatia and its future potential.

The components of the model are presented beginning with the dependent variable "usefulness of m-advertising" (see Figure 4).

We therefore stated the following hypotheses:

H1. Croatian marketing experts are ready to adopt mobile advertising in future campaigns.

H2. Perceptions of usefulness of m-advertising correspond with existing attitudes towards advertising via classical media.

H3. Croatian marketing experts recognize privacy and ethics as factors that may contribute to mobile marketing effectiveness.
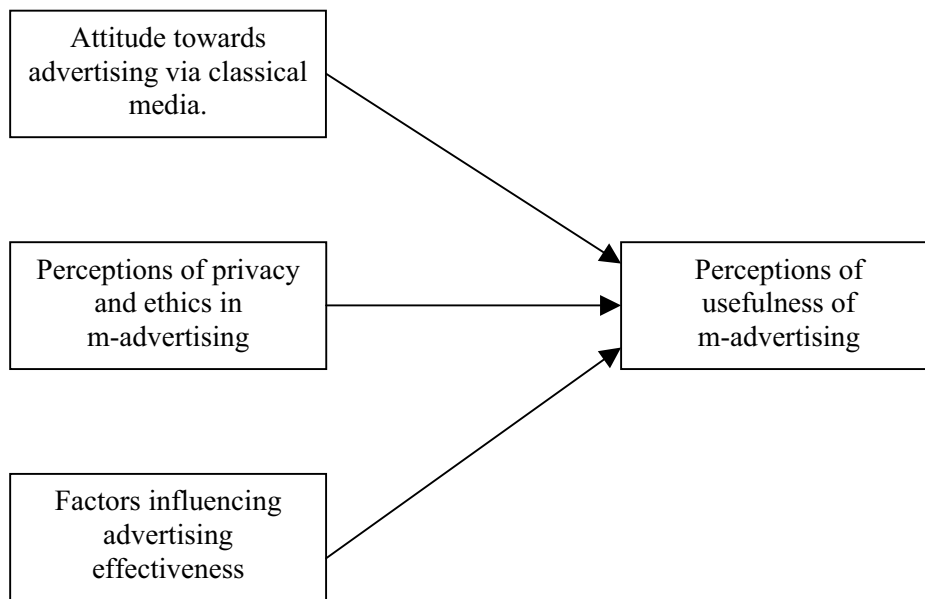
Figure 3: A Research Framework for M-Advertising

According to Drossos and Giaglis [13], and McManus and Scornavacca [10], whose studies identified the factors affecting mobile advertisement, the most important factors are:

- Place of delivery;
- Personal characteristics of the recipient;
- Personalization;
- Time of delivery;
- Previous consent (permission) by the recipient;
- Frequency of advertisement;
- Features of the product advertised;
- Interactive qualities of the advertisement;
- Features of the recipient's device;
- Length of the message;

The research will assess the attitudes and rank the importance of particular factors for the success of mobile advertising.

All of these hypotheses are important in predicting the future of m-marketing and m-advertising in Croatia.

5. Results and Discussion

5.1. Statistical analysis

Descriptive statistics, scale reliability analyses and correlation analysis were carried out in SPSS.

The structure of research participants was as follows:

Table 1. shows the statistical indicators of the structure of research participants, based on the participants' position in the company.

Table 2. shows the statistical indicators of the structure of research participants, based on the participants' education level.

As Tables 1 and 2 show, the participants are highly-positioned and highly educated marketing experts in charge of the budget of major Croatian advertisers. The participants'

positions in their respective companies (accounting for about 30 percent of total budgets in Croatian advertising, according to the Marketing UP magazine, February 2007) add weight and relevance to the otherwise comparably small sample.

Structure of research participants	Number of research participants	Percentage (%)
Director/Head of marketing	7	23.33
Marketing expert/Specialist	14	46.67
Marketing associate	7	23.33
Other	2	6.67
Total	30	100

Table 1. Statistical indicators of the structure of research participants

Participants' education level	Number of research participants	Percentage (%)
High-school diploma	1	3.33
Associate degree	5	16.67
University degree	19	63.33
Masters degree or PhD	5	16.67
Total	30	100

Table 2. Statistical indicators of the participants' education level

5.2. Results

We chose the bivariate correlation analysis to test the hypotheses.

The "Perceptions of usefulness of m-advertising" scale was formed to test H1, consisting of four prediction claims:

P1. "My company finds mobile advertising interesting."

The average response was 3.30.

P2. "If the service price were acceptable, my company would probably use mobile advertising in its commercial campaigns."

The average response was 3.17. The largest number of participants (33.33 percent) chose estimate no. 4 to express their attitude on the future employment of mobile marketing in their companies' campaigns. Also, 67 percent of the participants (estimates no. 3, 4, and 5) reckon that their company would use mobile advertising if the service price were acceptable.

P3. "I reckon that my company will use mobile marketing and advertising services in the near future."

The average response was 3.23, with a 76.67-percent probability of use (estimates no. 3, 4, and 5).

P4. "Mobile marketing and mobile advertising will occupy an important position in the marketing efforts of my company."

The average response was 3.30, with a 74-percent probability of use.

The availability, or internal consistency, of the scale was tested using the Cronbach alpha-coefficient, $\alpha = 0.83$, which is excellent for analyses.

The average grade of the total scale was 3.25, while the percentage of positive estimates (3, 4, and 5) totaled 75 percent, which means that we can consider H1 proven.

H2 was tested using correlation analysis, carried out for this particular paper by calculating the Pearson correlation coefficient (product moment coefficient correlation). The value of the Pearson correlation coefficient ranges from +1 (perfect positive correlation) to –1 (perfect negative correlation). The algebraic sign indicates the direction of the correlation,

whether positive or negative, but does not indicate the absolute value of the correlation, ranging from 0 (the lowest) to 1 (the highest).

We researched attitudes towards using traditional advertising media (daily newspapers, magazines (weeklies), national radio, local radio, national TV, local TV, billboards, web advertising, and direct e-mail) through the perceptions of usefulness of m-advertising. In traditional media, we researched:

- The length of use of a particular advertising medium
- The frequency of use of a particular advertising medium
- The estimate of usefulness of a medium with respect to the money invested

The following correlations were established:

A negative correlation, $r = -0.19$, $p = 0.3$, was established between the education level of the participants and the perceptions of usefulness of m-advertising, however an even higher negative correlation, $r = -0.27$, $p = 0.15$, was at work between the participants' positions in the company and their attitudes. This means that a person with a higher education level and at a higher position within the company is more reserved concerning the use and future of mobile advertising.

A single most prominent correlation was established between the length of advertising in a particular medium and attitudes towards m-advertising: the $r = -0.29$, $p = 0.12$ found between the length of advertising on national TV and attitudes towards m-advertising. This means that companies with a shorter TV-advertising presence have a negative attitude towards m-advertising, which could be interpreted as unwillingness to explore and test the usefulness and effect of other advertising methods because the company has only recently started advertising on TV. Therefore, the length of use of a particular medium in advertising campaigns has no significant bearing on the perceptions of usefulness of m-advertising.

The criteria for advertising frequency and attitudes to m-advertising point to several correlations.

Companies that advertise more frequently in dailies ($r = 0.40$), as well as weeklies and magazines ($r = 0.28$), correlate positively with m-advertising. There are also correlations between other media and the perceptions of usefulness of m-advertising, between $0.15 < r < 0.2$, except for advertising in local radio and local TV. Therefore, experts in companies that advertise more frequently and to a greater extent have a positive correlation with the perceptions of usefulness of m-advertising.

Since no significant correlations were found between attitudes on the usefulness of a particular type of advertising and attitudes to m-advertising, correlations between particular points of the m-advertising and usefulness scale were carried out, and the following was found: P1 correlates with the $r = 0.22$ attitude on usefulness of newspaper advertising, but has a negative correlation with the usefulness of direct e-mail advertising, $r = -0.25$. With respect to the compatibility of technologies and advertising media (WEB, mobile), it is very interesting that experts who consider direct e-mail an efficient advertising tool have a negative attitude towards the claim that their company might find mobile advertising interesting. Interesting correlation directions are notable between attitudes on the usefulness of a particular advertising type and m-advertising: there are negative correlations towards m-advertising between WEB-advertising and direct e-mail advertising, while positive correlations, $0.1 < r < 0.2$, can be found between other advertising media and m-advertising (which is not too significant, but still enough to indicate a tendency). This leads us to the question why experts who consider the Internet and WEB a useful advertising medium have a negative attitude towards m-advertising, or why there is a positive correlation between m-advertising and the usefulness of advertising in other media. This question will be addressed further in future papers.

According to these correlation calculations, H2 has been partially proven, since certain correlations were established between the perceptions of usefulness of m-advertising and attitudes towards advertising via classical media, but not strong enough to indicate clearly prominent trends and correlations.

5.2.1. Attitudes on advertising and the usefulness of a particular type of advertising and proving H3

Research participants were asked to compare the usefulness and potential effect of mobile advertising with other types of advertising, using estimates ranging from 1 ("I completely disagree") to 5 ("I completely agree"). The results are featured in Table 3.

Claim	Estimate
With the same expenses, a mobile advertising campaign can achieve better results than a TV campaign	2.07
With the same expenses, a mobile advertising campaign can achieve better results than a radio campaign	2.93
With the same expenses, a mobile advertising campaign can achieve better results than a printed media campaign	3.00
With the same expenses, a mobile advertising campaign can achieve better results than a billboard campaign	3.05
With the same expenses, a mobile advertising campaign can achieve better results than an Internet campaign	3.20

Table 3. The comparison of usefulness of mobile advertising with other types of advertising

The comparison of attitudes on the usefulness of particular types of advertising versus the potential of mobile advertising indicates that TV is by far considered the best advertising medium and, according to advertising experts, achieves the best results.

When compared with the mobile medium, all other media received an average rating between 2.93 and 3.20, which means that they are considered approximately equally useful.

Interestingly, over 67 percent of marketing experts consider mobile advertising better than Internet campaigns (estimates no. 4 and 5).

5.2.2. Factors influencing advertising effectiveness

Croatian marketing experts were given a list of the ten factors that influence the success of mobile advertising diagnosed by the research of Drossos and Giaglis [13] and McManus and Scornavacca [10] and were asked to rank them from 1 to 5 in terms of importance.

Factor of mobile advertising	Estimate
Time of delivery of advertising message to mobile device user	4.50
Previous consent by recipient of advertising message	4.37
Features of advertised product	4.33
Length of message sent to mobile device user	4.17
Personalization of message	4.10
Personal qualities of mobile device user	3.97
Technical features of user's mobile device	3.93
Interactive qualities of advertisement	3.90
Frequency of advertising to mobile device user	3.53
Place of delivery of advertising message to mobile user	3.47

Table 4. The ranking of importance of a particular factor of mobile advertising and its average grade

The results shown in Table 4 indicate that Croatian marketing experts:
a) have taken very seriously each of the ten proposed factors, indicated by the fact that the lowest average estimate of a single factor is 3.47, and the total average estimate of all proposed factors 4.03.
b) unlike the research by Drossos and Giaglis [13] and McManus and Scornavacca [10], where the most important factors were:

1. previous consent (which was rated second most important in this research, but with a higher average estimate than in previous research)
2. personalization (rated only fifth most important in this research)
3. location of delivery (rated last in this research),

Croatian marketing experts singled out the time when the advertising message would be delivered to the user as the most important factor.

Evidently, the factors that express the perceptions of privacy and ethics in m-advertising, such as previous consent and time of delivery of message to user, ranked first and second in terms of the value of the estimate. Ethics and privacy attitudes can be extracted from responses to several claims and questions proposed to the marketing experts that participated in the research.

Claim: "Unwanted messages (spam) will become a big problem in mobile advertising."
The average estimate was 4.53.
93.3 percent of participants agreed (estimates no. 4 and 5).

Claim: "My company would never send out e-mail or mobile messages to a user without their previous consent."
The average estimate was 4.63.
90 percent of participants agreed (estimates no. 4 and 5).

Claim: "Mobile advertising intrudes on the privacy of mobile users."
The average estimate was 4.07.
90 percent of participants agreed (estimates no. 4 and 5).

Claim: "To what extent do you find the described services ethically acceptable?"
The average estimate was 3.40.
50 percent of participants considered the services ethically acceptable (estimates no. 4 and 5).

Marketing experts understand the problem of unwanted messages: the fact that almost all participants claimed that their companies would never send messages to users without their previous consent is very important for the users.

Certain correlations were found, $r = 0.20$, between the attitude "My company would never send out e-mail or mobile messages to a user without their previous consent" and the perceptions of usefulness of m-advertising. A negative correlation, $r = -0.19$, was also established between the attitude "Mobile advertising intrudes on the privacy of mobile users" and the perceptions of usefulness of m-advertising, which proves H3.

6. Conclusion

M-advertising should bring a series of benefits to consumers and companies both. In the near future, the management of companies will need to continuously monitor market demands or risk losing market share. Technology providers and marketing regulators alike must enable marketing experts to reach users in a simple way, protecting their privacy at the same time. The findings of our research show that Croatian marketing experts still prefer marketing campaigns via classical media, but are aware that without the employment of new media, such as the WEB or mobile, they will soon be unable to reach all user strata. Based on the research results and literature review this paper suggests influence factors on consumers' perceived advertising value of m-advertising. The paper outlines the important issues of m-advertising such as personalization and ethical approach to the customer. Future research challenges remain, such as improving the model (very interesting could be comparing fix and mobile access of the telephone service) and hypotheses testing on the higher number of responses.

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