

M-Commerce and M-banking focused on Czech republic

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Abstract - This article deals with m-Commerce and M-Banking focused on firms in Czech republic. Nowadays using mobile applications and devices in commercial field is increasing, especially in bank domain. M-Commerce offers new and better ways in communication with customers or in searching for new chances and opportunities. Theories are motivated by findings of marketing researches, supported by the grant no. 402/08/1046 "Models of firms with mobile oriented architecture" of Czech Science. The dilemma of mobile communication has already been published in [1],[2],[3],[4],[5],[6],[7],[8], [9],[10], [11] a [12]. The outcomes are based on research results and on a questionnaire. In research, statistic software SPSS was used. The outcomes of this software are used in this article. In particular descriptive analysis and hierarchical Cluster Analysis are used.

Keywords—M-Commerce, M-Banking, Firms, Czech republic, mobile marketing, mobile devices.

I. INTRODUCTION

THIS document deals with basic information about M-Commerce a M-Banking, their development, primary use and both present and future trends.

The research project supported by the grant no. 402/08/1046 "Models of firms with mobile oriented architecture" of Czech Science Foundation, is focused most importantly on the issue of effective employment of the mobile technologies in the fields like e-business and e-commerce and carries on the tradition of research in the field of mobile device management at FIM UHK [2][1]. Our treatment of the project is framed by a quest for interaction and synergy in the area of management and the area of mobile information technologies. In This project was used Marketing research. Its purpose was to identify used mobile devices and the most used sources of mobile information.

In this project written-electronic questioning by own standardized questionnaire was applied. Electronic questioning connects written questionings benefits with fast and cheap data handling. Disadvantage of electronic questioning is questionnaire recoverability, which can even reach 30% in case of well prepared projects.

Manuscript received October 31, 2010. The research was supported by the grant no. 402/08/1046 "Models of firms with mobile oriented architecture" of Czech Science Foundation.

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Respondents (Company delegates) were contacted by e-mail. Acquired data was stored on relational database joined with respondent's database. Data collection was limited on 5 months. Base sample was defined as body corporate with establishment on Czech republic. Size of corporation was unlimited. Probability of subsumption units to assessment was the same for any units. Extension base sample was identified by "Blind estimate" technique, because of low costs. By learned experiences of resolvers of this project, adequate base sample was formulated from 90 to 100 respondents.

We have received 97 correctly filled questionnaires.

II. M-COMMERCE

A. Brief Information

Mobile Commerce, (M-Commerce or mCommerce), represents the possibility of using mobile devices for commercial purpose. In general view of E-Commerce we should study all mobile devices such as notebooks, netbooks, mobile phones etc. But in case of M-Commerce we will consider only mobile phones, PDA's, smart phones etc.

Mobile Commerce has been defined as follows: "Mobile Commerce is any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer-mediated networks with the help of an electronic device." [12]

B. Mobile Marketing

In November 2009, the Mobile Marketing Association updated its definition of Mobile Marketing: Mobile Marketing is a set of practices that enables organizations to communicate and engage with their audience in an interactive and relevant manner through any mobile device or network. [10]

C. Czech Mobile Marketing Association (CAMM)

Target of the project of Czech Mobile marketing association is to make definition of actual state and trends in mobile media area and technologies, to connect separated market subjects and to help with education and acquaint key market authorities. CAMM associates information and mobile marketing standards. CAMM supports new idea realization.[15]

D. Selected results of Research

In the first part, results of using mobile devices by firms in Czech republic are presented. In the following part there will be presented the outcomes of group similarity in using some of the services of the mobile device such as SMS service, m-banking and using device out there. All of these outcomes were generated by statistic software PASW SPSS.

Table 1 : Do you use mobile phone in your company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	7	7.2	7.4	7.4
	YES	87	89.7	92.6	100.0
	Total	94	96.9	100.0	
Missing	System	3	3.1		
Total		97	100.0		

In Table 1 you can see the popularity of using the mobile phone. As will be seen from next tables, no other device is used more often by firms in Czech republic.

Table 2: Do you use netbook in your company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	63	64.9	67.0	67.0
	YES	31	32.0	33.0	100.0
	Total	94	96.9	100.0	
Missing	System	3	3.1		
Total		97	100.0		

About one third of Czech companies uses netbook.

Table 3 : Do you use PDA with GSM service in your company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	53	54.6	56.4	56.4
	YES	41	42.3	43.6	100.0
	Total	94	96.9	100.0	
Missing	System	3	3.1		
Total		97	100.0		

In table 3 there is presented the result of using PDA with GSM service support. This device is the second most used in Czech firms.

Table 4 : Do you use smartphone in your company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	67	69.1	71.3	71.3
	YES	27	27.8	28.7	100.0
	Total	94	96.9	100.0	
Missing	System	3	3.1		
Total		97	100.0		

The popularity of smartphones in Czech republic grows. Nowadays the Czech market is getting flooded by many types of this device and the offer expands rapidly.

Table 5 : Do you use PDA without GSM service in your company?

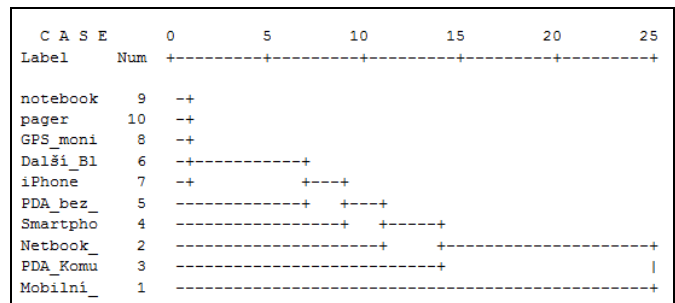
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	75	77.3	79.8	79.8
	YES	19	19.6	20.2	100.0
	Total	94	96.9	100.0	
Missing	System	3	3.1		
Total		97	100.0		

The popularity of PDA without GSM service support has very degressive tendency.

Table 6 : Do you use BlackBerry in your company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	92	94.8	97.9	97.9
	YES	2	2.1	2.1	100.0
	Total	94	96.9	100.0	
Missing	System	3	3.1		
Total		97	100.0		

Other devices such as BlackBerry or iPhone are used by 2% of the firms, Pager, GPS monitoring devices and others represent only the share of 1%.



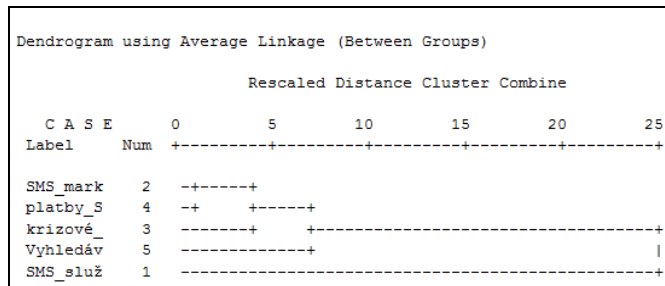
Graph 1: Dendrogram using Average Linkage

In graph 1 we can see the similarity of groups using notebook, Pager, GPS and iPhone. On the other hand it is

obvious that using mobile phone is different from any other group because this group is attached as the last one.

In the next table there are shortcuts used by the program. SPSS:

Další Bl	BlackBerry
GPS moni	GPS with GSM
Mobilní	Mobile phone
Netbook	Netbook
notebook	notebook with 3G card
PDA bez	PDA without GSM
PDA Komu	PDA with GSM
Smartpho	Smartphone

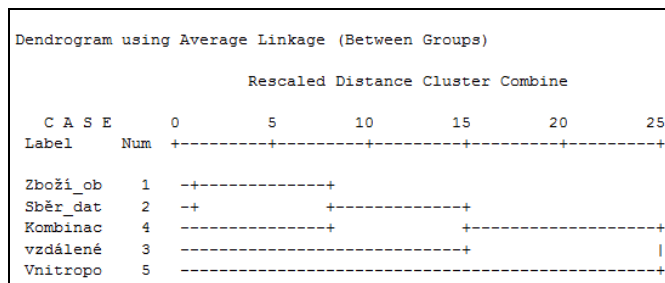


Graph 2: Dendrogram using Average Linkage

In graph 1 the dendrogram represents the relations between SMS marketing. The closest groups of using SMS services are SMS for marketing purpose and payments by SMS.

Used shortcuts are described below:

krizové	SMS warnings
platby S	SMS payments
SMS mark	SMS marketing
SMS služ	SMS services
Vyhledáv	SMS positioning



Graph 3: Dendrogram using Average Linkage

In graph 3 there is similarity of using mobile device out there for ordering goods and gathering data.

E. Today and Future

The present and persisting trend is growth of the popularity of m-Commerce. Investments are believed to be the most promising tendency in m-Commerce.

Mobile couponing - A recent Exposure2 report found that mobile coupon redemption rates can often exceed 50 percent, while paper coupons typically have a redemption rate of only 0.2 percent to 2 percent.[18]

Location-based marketing is going to be really big during the holiday season and is already playing a big role in the mobile commerce-related marketing tactics of leading retailers.

Social mobile networks- social networks are the present trend and that's the reason why the Mobile social networks represent next step.

In mobile, analytics play an important role when trying to figure out what works and what does not, especially in a platform-specific setting.

III. M-BANKING

A. Brief Information

Mobile banking is a term used for performing balance checks, account transactions, payments, credit applications etc. via a mobile device such as a mobile phone or Personal Digital Assistant (PDA). The earliest mobile banking services were offered via SMS. With the introduction of the first primitive smart phones with WAP support enabling the use of the mobile web in 1999, the first European banks started to offer mobile banking on this platform to their customers[13]

B. Mobile banking business models

These models differ primarily on the question that who will establish the relationship (account opening, deposit taking, lending etc.) to the end customer, the Bank or the Non-Bank/Telecommunication Company (Telco). Another difference lies in the nature of agency agreement between bank and the Non-Bank. Models of branchless banking can be classified into three broad categories - Bank Focused, Bank-Led and Nonbank-Led.

Bank-focused model

The bank-focused model emerges when a traditional bank uses non-traditional low-cost delivery channels to provide banking services to its existing customers. Examples range from use of automatic teller machines (ATMs) to internet banking or mobile phone banking to provide certain limited banking services to banks' customers. This model is additive in nature and may be seen as a modest extension of conventional branch-based banking.

Bank-led model

The bank-led model offers a distinct alternative to conventional branch-based banking in that customer conducts financial transactions at a whole range of retail agents (or through mobile phone) instead of at bank branches or through bank employees. This model promises the potential to

