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# **CONSUMER PERCEPTION OF MOBILE COMMERCE IN POLAND**

## **Introduction**

Over the past several years, the world has made enormous progress in the development of digital technologies. This led, among other things, to the massive spread of mobile devices in society, in particular mobile phones. People use these devices for many reasons starting with communicating with each other, taking pictures, listening to music, playing games and many others. Thanks to mobile internet access using mobile phones in the decision making process of products is also becoming increasingly popular.

The high penetration rate of mobile phones gives companies an opportunity to affect consumers in a different way. Hence, more and more businesses choose to use this tool to carry out marketing functions. Mobile advertisement has been for many years the most popular type of marketing activities in this field. Along with growing abilities of mobile phones and increasing access to mobile internet the phenomenon of mobile commerce is gradually becoming of more and more importance.

The purpose of this paper is to analyze consumers' perception of mobile commerce in Poland. On the basis of available literature sources the determinants of mobile commerce adoption have been presented, which formed the ground for further empirical research. The second part presents the main findings of a survey conducted in 4Q 2012 on a sample of 118 Cracow University of Economics students. Due to the nature of the issues, a specific group of consumers was selected to the study. They were usually young people, more familiar with digital technologies and using them intensively.

## 1. The determinants of mobile commerce adoption

During the past decade mobile phones have become one of the most ubiquitous electronic devices in people's lives. In Poland, this type of device is currently used by the vast majority of the population (85.0%), generally regardless of age or area of living<sup>1</sup>. Mobile phones are used not only for voice communications, but also to send and receive short text messages and multimedia messages<sup>2</sup>. In recent years Poles more frequently use their mobile phones to connect to the Internet. This is the effect of reducing the telecommunications charges for the use of mobile Internet access, including in particular the introduction of special tariff plans allowing unlimited data transfer. It is of great importance also that current mobile phones are constantly evolving, becoming like small computers.

Mobile technologies allow companies to carry out various activities, usually aimed at communicating with current and potential customers. Customers can be reached using a wide variety of mobile communication channels<sup>3</sup>. Short text messages (SMS) campaigns has been for many years the most popular type of mobile advertisement. Nowadays, they are increasingly being replaced by multimedia messages (MMS) campaigns, that can contain graphics, audio or video. Advertising messages can also be included in the games or applications available for mobile users free of charge. In recent years, QR codes became gradually more and more popular. This technology is based on advanced barcode recognized with a special application installed on mobile phone with built-in camera<sup>4</sup>. Through them it is possible to provide mobile users with a variety of information that can be useful for identifying products and comparing their prices.

Growing ability of mobile devices greatly expands the range of the potential impact on customer behavior. Indeed, contemporary consumers increasingly use mobile phones in the decision making process of goods and services. With built-in web browser or a dedicated application mobile users can search for information about products or even make a purchase. According to a studies conducted in

<sup>1</sup> *Wykorzystanie technologii informacyjno-(tele)komunikacyjnych w przedsiębiorstwach i gospodarstwach domowych w 2012 r.* GUS, 2012. [http://www.stat.gov.pl/gus/5840\\_wykorzystanie\\_ict\\_PLK\\_HTML.htm](http://www.stat.gov.pl/gus/5840_wykorzystanie_ict_PLK_HTML.htm).

<sup>2</sup> *Rynek telekomunikacyjny w Polsce w 2011 roku. Klienci indywidualni.* UKE, 2011, [http://www.uke.gov.pl/files/?id\\_plik=9707](http://www.uke.gov.pl/files/?id_plik=9707), p. 61.

<sup>3</sup> R. Y. Huang: *Value, Interest and Power: a Three Dimensional Model for Mobile Marketing Stakeholder Analysis*. "International Journal of Mobile Marketing" Jun 2011, 6(1), pp. 109-119.

<sup>4</sup> S. Okazaki, H. Li, M. Hirose: *Benchmarking the Use of QR Code in Mobile Promotion: Three Studies in Japan*. "Journal of Advertising Research" Mar 2012, 52 (1), pp. 102-117

the U.S. more and more people use their mobile phones to make purchases<sup>5</sup>. It is a new trend that can lead to fundamental changes in contemporary business.

Mobile commerce (or simply m-commerce) refers to conducting any transaction through a mobile device using mobile technologies. Transactions can be initiated or completed by using different portable devices, such as mobile phone or tablet. Mobile commerce is usually regarded as a form of e-commerce, having its own specific features<sup>6</sup>. Among its advantages it is the ability to make transactions anytime and anywhere, regardless of the type of device<sup>7</sup>. Worth mentioning is also its ability to personalize products and services, adjusted on the basis of in-depth information about users<sup>8</sup>. However, at the same time, the adoption of mobile commerce faces very significant barriers. The most important obstacles are lack of awareness and knowledge of consumers on the benefits arising from the use of this form of shopping, along with the perceived risk of using it. Although currently, mobile commerce constitutes a relatively small percentage of the overall e-commerce market, it is expected to account for 24.4% of overall e-commerce revenues by the end of 2017<sup>9</sup>.

## 2. Consumers' opinions on mobile commerce

Mobile commerce in Poland is a relatively new phenomenon and still requires in-depth studies. Although in recent years a large number of mobile market reports has been published, they mostly contain basic information about the number of mobile devices, mobile phone models in use or the Internet usage on mobile devices. Only several studies have explored the use of mobile devices in the consumer purchasing decision making process<sup>10</sup>. So far there are no studies

<sup>5</sup> *The Mobile Movement. Understanding Smartphone Users*, Google/IPSOS OTX MediaCT, 2011, [http://www.gstatic.com/ads/research/en/2011\\_TheMobileMovement.pdf](http://www.gstatic.com/ads/research/en/2011_TheMobileMovement.pdf); *Mobile Trends: Consumer Views of Mobile Shopping and Mobile Service Providers*, Oracle, 2011, <http://www.oracle.com/us/industries/communications/oracle-atg-mobile-wp-345770.pdf>

<sup>6</sup> K. Siau, E. P. Lim, Z. Shen: *Mobile Commerce: Promises, Challenges, and Research Agenda*. "Journal of Database Management" Jul-Sep 2001, 12(3), pp. 4-13.

<sup>7</sup> I. Clarke: *Emerging Value Propositions for M-commerce*. "Journal of Business Strategies" Fall 2008, 25(2), pp. 41-57.

<sup>8</sup> T.P. Liang, C.P. Wei: *Introduction to the Special Issue: Mobile Commerce Applications*. "International Journal of Electronic Commerce" Spring 2004, 8(3), pp. 7-17.

<sup>9</sup> *M-Commerce Growing to 24% of Total E-Commerce Market Value on Back of Smartphone Adoption*. ABI Research, 2012, <http://www.abiresearch.com/press/m-commerce-growing-to-24-of-total-e-commerce-marke>.

<sup>10</sup> See, e.g. R. Mącik: *Korzystanie przez konsumentów z urządzeń mobilnych w procesach zakupu (eksploracja zjawiska)*. „Handel Wewnętrzny” wrzesień-październik 2011, pp. 78-87.

showing the attitudes of consumers toward mobile commerce in Poland. In order to address this deficiency, this paper presents the young polish consumers' perception of mobile commerce. The results are based on a survey conducted on a convenience sample of 118 Cracow University of Economics (CUE) students. The main group of respondents were people aged between 21 and 24 years (89.7%), more often female (84.7%) than men (15.3%). Surveyed consumers generally reported their marital status as "single" (86.4%), at the same time indicating own work (62.7%) and parents (33.9%) as the main sources of income. In terms of the size of the place of residence, the sample was dominated by people living in rural areas (36.8%) and metropolitan areas (21.4%). The study focused only on one type of mobile devices such as mobile phones, because other types of mobile devices such as tablets, are not yet adequately disseminated among consumers. Due to the size limitation of this publication only the most important findings from the survey are presenting in Table 1.

Table 1

Respondent characteristics		
Specification	Options	(%)
Sex (n = 118)	female	84,7
	male	15,3
Age (n = 117)	from 21 to 24 years	89,7
	over 24 years	10,3
Population size of the place of residence (n = 117)	village	36,8
	town up to 50,000	14,5
	town from 50,000 to 100,000	11,1
	town from 100,000 to 500,000	16,2
Marital status (n = 118)	single	86,4
	married	13,6
Main sources of income (n = 118)	scholarship	12,7
	own work	62,7
	parents	33,9

As the results show surveyed consumers use a wide range of handsets (Table 2). The most popular features of their mobile phones are: photo camera (95.8%), video camera (87.3%) and MP3 player (84.7%). The GPS module that allows to determine the geographical location of a user, is installed on nearly half of devices (49.2%). Considering the ways of interacting with mobile phones, respondents more often indicate touch screen (60.2%) than QWERTY keyboard (33.1%). The majority of respondents also declare that their mobile phone has the ability to connect to the Internet (89.7%) and to install additional applications (71.2%).

Table 2

## Mobile phone characteristics (% in column)

Specification	Options	(%)*
Mobile phone features (n = 118)	photo camera	95,8
	video camera	87,3
	MP3 player	84,7
	touch screen	60,2
	GPS navigation	49,2
	QWERTY keyboard	33,1
The ability to install additional applications (n = 118)	yes	71,2
	no	13,6
	don't know	15,3
The ability to connect to the Internet (n = 117)	yes	89,7
	no	10,3

\* Percentages may not add up to 100 percent due to multiple responses allowed

Among the respondents with the access to the Internet via mobile phone, one in five (21.0%) don't use such services at all. Thus, in the total sample, 70.9% of respondents use mobile phone to connect to the Internet. This percentage comparing to the whole population can be regarded as relatively high. The results also show that 54.7% of all respondents use their mobile phones to connect to the Internet at least once a week, and 63.2% at least once a month. Surveyed consumers use their mobile phones to connect to the Internet in different places. However, by far the most it takes place at work / at school and on the go. These options are indicated by accordingly 73.5% and 62.7% of respondents, who use mobile phone to connect to the Internet. Less than half of those surveyed in this group (41.0%) use mobile phone to connect to the Internet at home, and only one in five (21.7%) in a store. The results also show that mobile access to the Internet is primarily used by consumers to search for information using search engines (60.2% of those using mobile phone to connect to the Internet), to visit social networking sites (59.0%) and to browse online news services (50.6%). More than half of those surveyed in this group (56.6%) usually receive or send e-mail via mobile phone. Respondents, to a lesser extent, use mobile access to the Internet for communicating with instant messaging (32.5%) and visiting price comparison sites (6.0%) – Table 3.

Table 3

## Internet usage pattern

Specification	Options	(%)*
The frequency of using mobile phone to connect to the Internet (n = 105)	daily or almost daily	40,0
	few times a week	12,4
	at least once a week	8,6
	few times a month	4,8
	at least one a month	4,8
	less than once a month	8,6
	don't use	21,0
The place of using mobile phone to connect to the Internet (n = 83)	at work / at school	73,5
	on the go	62,7
	at home	41,0
	in a store	21,7
The purpose of using mobile phone to connect to the Internet (n = 83)	searching for information (search engines)	60,2
	visiting social networking sites	59,0
	receiving / sending e-mail	56,6
	browsing online news services	50,6
	communicating with instant messaging	32,5
	mobile banking	24,1
	using price comparison sites	6,0
	other purpose	14,5

\* Percentages may not add up to 100 percent due to multiple responses allowed

The results show that using a mobile phone to assist the purchasing process is still not a common phenomenon among Polish consumers (Table 4). Although almost half of the respondents (49.6%) indicated that they had sought information about goods or services on the Internet using a mobile phone, only one in seven (14.7%) had made a purchase of goods or services using mobile phone. Considering the characteristics of the surveyed population such percentages are low, especially in comparison to more developed countries.

Table 4

## The use of mobile phones in the purchasing process

Specification	Options	(%)
Have ever sought information about goods or services on the Internet using a mobile phone (n = 117)	yes	49,6
	no	51,4
Have ever made a purchase of goods or services using a mobile phone (n = 117)	yes	14,7
	no	85,3

Respondents were additionally asked to express their opinions on the selected statements related to mobile commerce, especially purchases made by mobile phones (Table 5). The analysis of the responses reveals ignorance of such a pur-

chasing method among surveyed consumers. This indicates a very high percentage of “it’s hard to say” answers in relation to particular statements, which even reached the level of 60.3%. The picture emerging from other responses also can be regarded as rather pessimistic. First of all purchases made by mobile phone are perceived by the respondents as complex as well as carrying a risk for the buyer. Almost half of the respondents (42.4%) don’t agree with the statement, that this type of purchases are safe and additionally every third (32.2%) considered it as complicated. The respondents don’t see the tangible benefits from making purchases by mobile phones. Only 18.1% of the respondents agree with such an opinion, while as much as 60.3% has not been able to respond to this statement at all. However, surveyed consumers rather don’t recognize this type of purchases as time consuming. Almost half of respondents (40.5%) don’t agree with the statement that purchases made by mobile phones are time consuming.

The results show that Polish consumers still seldom use their mobile phones to scan QR codes (Table 6). The responses obtained indicate that only 17.2% of respondents have ever used their mobile phone to perform such an operation.

Table 5

## Opinions on purchases made by mobile phones (in %)

Specification	Strongly agree	Rather agree	Rather disagree	Strongly disagree	It is hard to tell
Purchases made by mobile phones are complicated (n = 118)	7,6	24,6	22,0	3,4	42,4
Purchases made by mobile phones are safe (n = 118)	3,4	16,1	35,6	6,8	38,1
Purchases made by mobile phones bring buyers the tangible benefits (n = 116)	2,6	15,5	18,1	3,4	60,3
Purchases made by mobile phones are time consuming (n = 116)	6,0	25,9	35,3	5,2	27,6

The main barriers to the adoption of QR code technology among consumers are: no need to use this technology (45.8% of those who have never used it), lack the appropriate application (37.5%), lack of awareness of the existence of this technology (25.0%) and lack of ability to use this technology (20.8%).

Table 6

## The use of QR codes

Specification	Options	(%)*
Have ever used mobile phone to scan QR codes (n = 116)	yes	17,2
	no	82,8
Reasons not using QR code technology (n = 96)	lack of awareness of the existence of this technology	25,0
	no need to use this technology	45,8
	lack appropriate application	37,5
	lack of ability to use this technology	20,8
	other reasons	3,1

\* Percentages may not add up to 100 percent due to multiple responses allowed

## Conclusion

A survey conducted on Cracow University of Economics students confirmed that the Polish mobile commerce market is still at an early stage of development. Although surveyed students seek information about goods or services on the Internet using their mobile phones, so far only a few of them have ever made a purchase this way. It seems the main barrier to the development of mobile commerce in this group of consumers is lack of awareness and knowledge about this form of shopping. Another important factor is also the negative attitude of surveyed consumers, who regard purchases made by mobile phones as complicated and not very safe for buyers. Therefore, further development of mobile commerce in Poland, will depend to a large extent on the intensity of awareness-raising activities, aimed at showing the benefits of using mobile devices to support purchases.

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## CONSUMER PERCEPTION OF MOBILE COMMERCE IN POLAND

### Summary

The purpose of this paper is to analyze consumers' perception of mobile commerce in Poland. The publication is based mainly on the results of a survey conducted in 4Q 2012 on a sample of 118 Cracow University of Economics students. The study confirmed that the Polish mobile commerce market is still at an early stage of development. Currently, only a relatively small percentage of consumers use mobile phones to make purchases of goods or services. The main reasons for this state of affairs include lack of awareness and knowledge among consumers about this form of shopping and their negative attitude.

Keywords: mobile commerce, consumers opinion