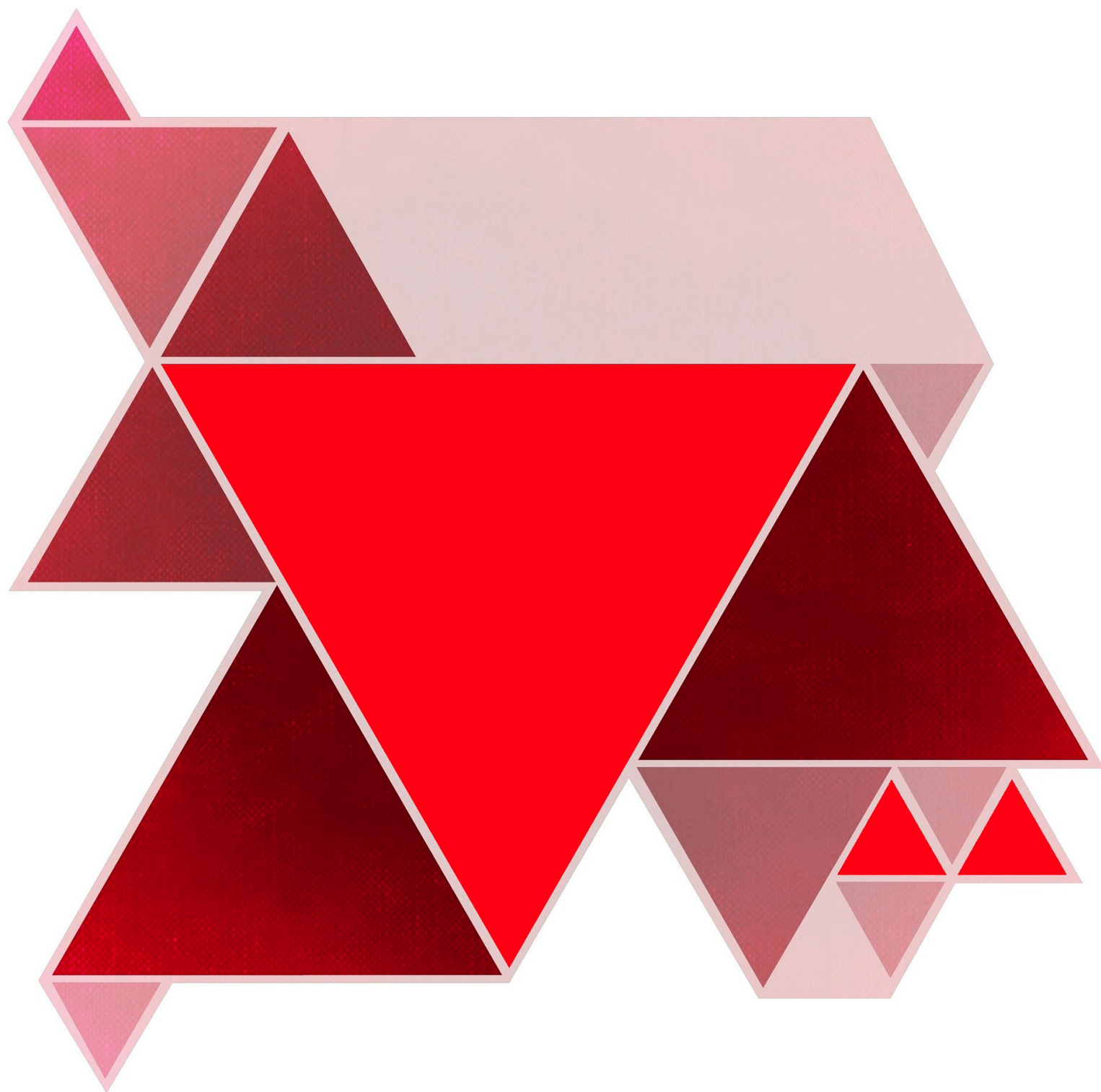


UDC 658.8

e-ISSN 2584-7236

# CroDiM

International Journal of Marketing Science  
Međunarodni znanstveno-stručni časopis



Vol. 1, No. 1, MARCH 2018

UDC 658.8

e-ISSN 2584-7236

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**Nakladnik / Publisher:**

CRODMA – Croatian Direct Marketing Association, 10000 Zagreb, Croatia

**Naklada / Circulation:**

Online – open access: <http://crodma.hr/crodim/>

**Godina izdavanja / Year of publication:**

2018

Časopis izlazi jednom godišnje / The journal is published once a year.

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## **EVALUATION OF THE POTENTIAL OF THE CROSS-BORDER REGION BULGARIA-SERBIA FOR THE DEVELOPMENT OF WELLNESS, MEDICAL SPA AND SPA TOURISM – POSSIBILITIES AND PERSPECTIVES**

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### **ABSTRACT**

*The aim of this study is to analyze the potential of the Bulgaria- Serbia cross-border region for the development of balanced Wellness and SPA tourism concerning the medico-biological and medico-social assessment of tourism resources and professional competencies of the employees.*

*More than 30 mineral springs and 21 tourist sites have been studied. There are good medico-biological conditions for the development of intensive medical SPA, Wellness and SPA Tourism. The combination of free spring flow and specific climate conditions is a big advantage for the development of highly specialized tourism as the medical SPA. On the other hand, the lack of a working model to control health risk, environmental and safe working conditions in SPAs is one of the obstacles for the development of this kind of tourism. The obtained results show the need to develop specific skills and professional competencies of the personnel.*

*A new model for management of Wellness and SPA Tourism, based on competency modeling is presented.*

*The core idea of this model is to find a good balance between indoor and outdoor environment, highly qualified personnel and quality services. The necessity of establishing a competency framework and certifying the medical SPA and SPA services, implementing the quality management system (QMS) and health risk assessment system (HSE) is outlined with the view of promoting the specialized tourism product on the international market.*

**KEYWORDS:** Wellness, Medical SPA Tourism, competency model, cross-border region Bulgaria- Serbia, HSE standards

## **1 INTRODUCTION**

The analysis of the international tourism market proves convincingly that for the last three years medical and recreational tourism exhibits high rates of development. The marketability of the offered specialized packages, including balneological destinations, shows that they are desired by more and more EU citizens. This may be explained with the possibilities afforded by the EU member-states to their citizens – free choice of medical and health services in all countries, members of the European family. The dynamics of this process reflects both on the quality of the offered tourism services in the individual states and on the creativity of managers in tourism. The quality of the proposed health and balneo- therapeutic services in the different countries is also positively affected.

The fast-growing expectations of the clients (Bulgaria has been declared “European SPA capital” in 2015) call for more concentrated and strategically oriented efforts to perfect constantly the staff qualification through modern methods and approaches. They include a permanent study of the market needs and adaptation of the offered knowledge, skills and competencies of the staff to the clients’ topical needs. Competence-based management and training of the personnel is widely used nowadays as one of the adequate approaches for staff qualification in the tourist industry. As an adequate answer to this challenge Bulgarian Chamber of Commerce has launched an Internet based information system for professional evaluation of the employees in 20 industries, among which the tourist one. This system can be used for elaboration of a model for professional competence, particular for the SPA tourism through modification of the already existing system.

## **2 DESIGN OF INVESTIGATION**

Purpose and tasks of the research

The objective of the study is to evaluate the potential of the cross border region (CBR) Bulgaria-Serbia for development of Medical SPA, SPA and Wellness Tourism.

The main tasks of the investigation were:

- Evaluation of medico-biological and medico-social prerequisites for developing of medical SPA and SPA Tourism in the CBR Bulgaria –Serbia ;
- Evaluation of professional competencies of the employees, working in these industries and the current needs of the tourism market for knowledge, skills and competences of the staff ;
- Creation of a new model for management of Wellness and SPA Tourism in CBR, based on competency modeling.

## 2.1. METHODS OF INVESTIGATION

A specifically developed methodology has been applied for implementing the set tasks and achieving the project objective, which has the following sequence:

- Analysis and assessment of the medico-biological effect of the studied mineral water on the basis of chemical composition and physical properties;
- Evaluation of the medico-social aspects and existing conditions for development of the medical SPA, SPA and Wellness sector in CBR using assessment of the current status of the deposits and their impact on the socio-economic outlook of the region;
- "Face to face" surveys, including one pilot study of the qualification of the personnel occupied in SPA hotels and another one of the market needs for knowledge, abilities and competencies of the employees in this industry (100 respondents /hotel staff);
- Blitz questionnaire survey for medico-social evaluation of mineral bath in Knjajevo, Sofia (30 tourists with different profile);
- Assessment of the prospective areas for investment purposes;
- Evaluation of the potential of the areas for development of Wellness , Medical SPA and SPA Tourism in CBR ;

## 2.2. THE INVESTIGATION AREA

The investigation plan includes following districts from Bulgaria: Montana, Sofia districts and Nish , Pirot from Serbia.

Figure 1. Map of the investigation area



Limiting factors in conducting the survey:

All experts' and prediction assessments are based solely on the chemical analyses submitted during the investigation work. The available archive materials are used to evaluate the sustainability of the hydro chemical characteristics of mineral waters, using for treatment.

### 3 OBTAINED RESULTS OF THE INVESTIGATION

The main research data, characterizing the objects of the study are presented in Table 1.

Table 1. Obtained results

Obtained results	Cross-border region sites
An evaluation of the hydrogeological potential	More than 30 mineral springs
Medico-biological assessment of mineral waters	More than 30 mineral springs
Medico-social assessment of tourism development in CBR	More than 30 mineral springs
Touristic infrastructure audit	21 SPA and medical SPA centers
Environmental assessment (indoor and outdoor audit)	6 plots
Assessment of SPA centers	21 SPA and medical SPA centers
Assessment of Certification status of SPA centers	21 SPA and medical SPA centers
Assessment of professional competency of employees	10 SPA and medical SPA centers
Assessment of HSE competency	10 SPA and medical SPA centers
Model for sustainability development of tourism in CBR	Applicable for all area

According to our investigation plan, we choose some of the achieved results and discuss them. The main preconditions for sustainability development of Wellness and Medical SPA tourism are the presence of mineral waters, good technical equipment of the wells, free flow rate of springs, staff experience in medical rehabilitation.

#### 3.1. HYDROGEOLOGICAL CHARACTERIZATION AND EVALUATION OF THE HYDROGEOLOGICAL POTENTIAL FOR THE DEVELOPMENT OF MEDICAL SPA AND SPA IN THE REGION

More than 30 mineral springs have been studied in the cross-border region, which are in several hydrogeological basins, belonging in geographical respect to the following administrative districts (Fig.1). All of them have their own chemical and physical characteristics, but the common origin of some of them gave us the possibility to combine the springs in some hydrogeological groups/basins.

##### List of examined mineral springs

- **Republic of Bulgaria (17 thermal springs)**
  - **Montana district: Varshets basin:** Varshets, Spanchevtsi, Barzia, Slatina, Opletnya, Gabrovnitsa-Elov Dol
  - **Sofia district :** (10 thermal springs with 18 wells)-Pancharevo, Ovcha Kupel, Bankya, Gorna Banya, Knyazhevo, Sofia Bani, Batalova Vodenitsa, Svoboda quarter, Nadezhda quarter, Lozenets .
- **Republic of Serbia (6 thermal springs, 25 wells )**

- **Vranska Banya** - 11 working wells with high geothermal potential
- **Topilo**- 18 wells
- **Nishka Banya**- Glavni izvor, Suva banja and Školska česma;
- **Zushanitsa-1**;
- **Gvozdena**- 1;
- **Soko Banya** – Soko area and Joshinska area.

All the investigated sites are well-known tourist centers, where there are good hydrogeological conditions for the development of intensive Medical SPA, Wellness and SPA Tourism in the three areas of investigation. The existing abundance of mineral waters affiliated to different genetic classes provides the possibility of using them for domestic purposes (drinking, hygiene needs), irrigation, bottling, heating and cure [1].

More of the wells are in a good hydrotechnical condition. The main standard hygienic requirements are satisfied. Especially valuable are the mineral water wells with a free flow rate. The last one is a big advantage for the development of highly specialized tourism as Medical SPA [2].

### **3.2. MEDICO-BIOLOGICAL AND MEDICO-SOCIAL ASSESSMENT OF MINERAL RESOURCE**

In order to estimate the medico-biological importance of mineral water, it is necessary to understand the conditions for water formation, the way of water recharge, which are directly related to the flow rate of water sources and the longevity of their use, the hydrotechnical state of the water sources with the aim of ensuring the necessary sanitary-hygiene and the environmental standards for their exploitation. In this context, the collected information about the locations of the hydrothermal deposits in CBR with data characterizing the resources, temperature and content of biologically important macro components in the water, as well as the description of the individual water sources was the base for medico-biological assessment of mineral resource for tourism.

The ecological state of the deposits and the utilization of the hydrothermal resources are evaluated at present on the basis of data from the respective basin directorates. Some recommendations are given for their more rational management, control and protection.

With regards to our results, we can outline the high potential areas for Medical SPA and SPA Tourism development: Sofia Mineral Bath, Knjajevo Mineral Bath and Nishava region in Serbia. There are prerequisites for development of complex tourist services as Eco-tourism, Medical SPA, City SPA, Geo Wellness, Geo-medical and Forestry tourism particularly in Sofia and Nish districts [3].

### Site Knjajevo Mineral Bath, Sofia

A special blitz questionnaire survey for medico-social evaluation was carried out in Sofia, district Knjajevo (July, 2015). 30 participants with different socio-demographic profile took part in the survey. All of them are tourists and visitors.

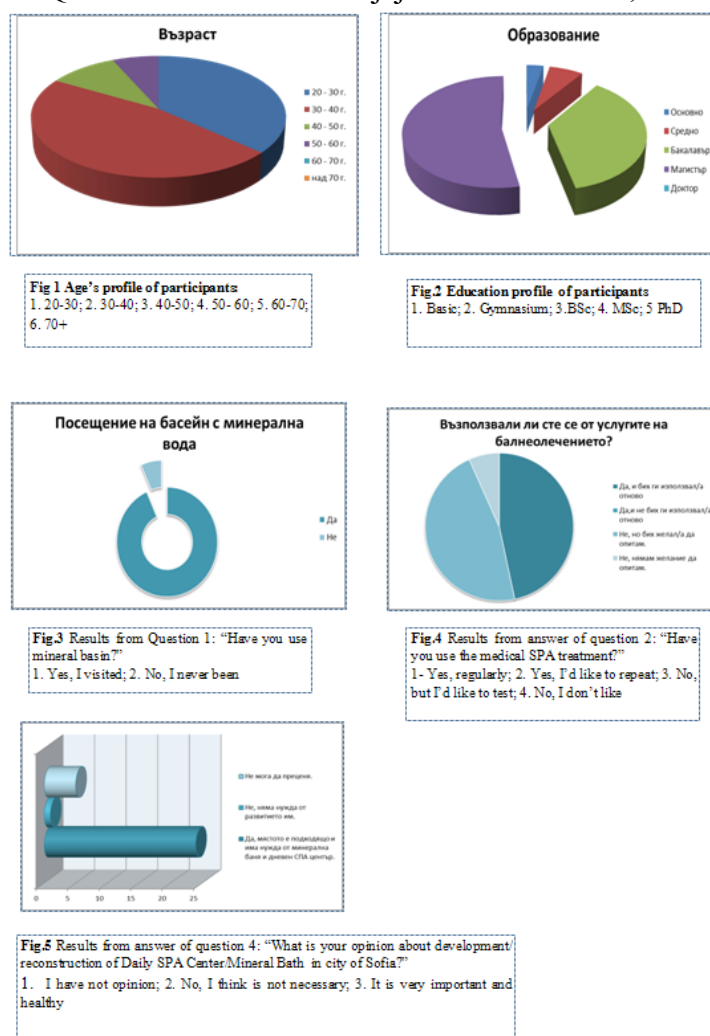
The age and education profiles are presented on fig.1-2.

Some results about the level of Wellness and SPA culture of the participants are shown on fig. 3-4.

The core of our pool is associated with the participants' opinion about the need for Daily SPA with Mineral Bath in the city (Fig.5).

The results turned our attention to a very specific part of the public health culture-health prevention. All participants realized the power of the mineral waters as a factor of Wellbeing . The benefits of SPA and Wellness can improve their health and quality of life [4].

Figure 1-5. Tourists ' Questionnaire Results Knjajevo Mineral Bath, Sofia



### Some comments on the outcome

#### Study of staff qualification

The pilot survey aiming at characterizing the qualification of the staff in the observed SPA hotels is presented in Table 2. The main contents of the questions were to describe the staff's area of professional competency and their HSE and QMS certification culture [5] .

Table 2. Some characteristics of the personnel occupied in SPA hotels in Cross border region

Questions/ Answers	Q1	Q2	Q3	Q4	Q5	Q6
	<b>Profession al competenc y of staff</b>	<b>Education needed for SPA therapist</b>	<b>Education needed for SPA managers</b>	<b>Managers' opinion about HSE and QMS implementa tion</b>	<b>Respondent's qualification</b>	<b>Planning professional training in the area of Health Safety Environment System HSE and QMS</b>
A.Public Health	100					
B.Medical Rehabilitati on	0					
C..Economi cs	0					
D. Other	0					
A. SPA and aqua trainers (BSc)		0				
B. Sport Trainer		18				
C. Medical rehabilitatio n /or Kynesithera py		23				
D. Others		49				
A. Managemen t of tourism			21			
B. Managemen t of social services			0			
C. Managemen t of healt			9			
D. Others			70			

A. Master in ABM				78	0	
B. Medical specialist				2	12	
C. Economics				11	8	
D. Others				9	80	
A. No, we are not						10
B. It is not required by the Regulations						85
C. Yes, we are planning						2
D. Other						3

The results of this pilot survey of 100 individuals show the great variety of the respondents understandings about the needed qualification of SPA therapists (49 % - “others”) and SPA managers (70% - “others”)as well as the big differences in the qualification of the employed managers (80% - “others”). These outcomes are strong arguments in favor of the need to create common criteria and standards for the knowledge, skills and competencies of all professions in the industry, which can be used for both designing training programs and formulating adequate selection criteria.

Along with this survey another one was carried out to study the necessary knowledge, skills and competency of the staff occupied in the tourist industry (in all types of alternative tourism, including Wellness, Medical Spa and SPA). The respondents are 43 employers from the tourist industry (31 – from alternative tourism and 12 - from mass tourism). They have been asked to rank the importance of knowledge, skills and competencies necessary to satisfy the contemporary needs of the clients and to meet the standards of these industries.

The questions have been formulated using the competence model [5] elaborated in Bulgaria for the evaluation of the tourist staff industry.

The survey shows the following results [6]:

- among the most important skills are : analyzing the market needs and the wishes of the client (1,31)<sup>1</sup>, elaborating and offering new tourist products (1,31), acquiring new knowledge quickly (1,42), following criteria and standards (1,65) ;

---

<sup>1</sup> values of the overall scores

- among the most topical general competences are: effective time management (1,37), recognition of new opportunities (1,30), social engagement and ethical behavior (1,59) and control of the observation of the standards (1,67) ;
- the most important competencies needed to learn turned out to be : constant perfection of language culture (1,37), acquisition of new knowledge on the basis of new information and new technologies (1,37), upgrading the knowledge about the global processes, self-actualization of the competences according to the topical requirements (1,37);
- the fourth ranked two communicative and social competencies are communication with the clients (1,07) and team working (1,23).

The respondents have been asked to rank the most important deficits in their requirements listed above, shown by newly appointed graduates of Bulgarian universities. They pointed out team working (5,3) and customer care (5,3) as greatest deficits, respectively these should be the areas of most active training and education.

Existing competency models, elaborated for the tourist industry can be periodically modified in compliance with the results of the topical market needs. The organizations that have adopted competence-based management (CBM) apply it more often in the area of training and development, because of the following reasons, showing that it:

- Enables a common understanding and standard criteria to be applied across a wide range of employee functions
- Assists both managers and employees in identifying training and development needs
- Enables the organization to promote its values, goals and objectives
- Assists in the management of change
- Enables employees to know what exactly is expected of them
- Helps to clarify the career development milestones

The use of competence-based training for the tourist staff will enable the employers to manage the qualification of the personnel in compliance with the topical market requirements and thus to increase constantly the competitiveness of their hotels.

## **4 CONCLUSION**

1. The cross-border region is characterized by different types of mineral waters, applicable to medical treatment and cure. The combination of mineral water and specific climate conditions is a favorable prerequisite for the development of Medical SPA therapy and Tourism.

2. There is no distinct boundary between Medical SPA and SPA Tourism in CBR. This creates preconditions for incomplete utilization of the available natural resources, as well as for unprofessionally developed advertising products.
3. Finding a good balance between interior, unique environment, highly qualified personnel, quality of services and innovation products as Wellment and Geo-medical tourism will contribute to developing Wellness and SPA Tourism making it a successful business today.
4. The key role for the progress in the branch belongs to the reconsideration of the possibilities offered by the existing natural environment and the material facilities, the awareness that changes in the overall organization of the sector are necessary by introducing innovative tourism products and using good practices for development of the cross-border region implementation of QMS and HSE systems.
5. The hotels and SPA centers need an efficient competence-based management (CBM).

## REFERENCES

- [1] Станева, К., Е. Маринов, 2014. Концептуален модел за устойчиво развитие на Wellbeing и medical SPA в България, използвайки геомедицински индикатори, Тракийски университет, Мед. Колеж, 301-306.
- [2] Illing, K.-T, 2006. Mental Issues of Health Tourism Industry- Macro Economic Approach to Relaxation, Personal Growth and Consciousness Exploration. 165 p.
- [3] Цветкова, Е., Станева, К., 2014. Медикобиологични и медико-социални предпоставки за развитие на SPA и балнеотуризма в Софийска област. Тракийски университет, Мед. колеж, 281-286.
- [4] Станева, К. 2013. Мениджмънт на уелнес туризма и качество на живот. Науч. конф. с международно участие Знанието-традиции, иновации, перспективи, Бургас, т. III, 369-374. ISBN 978-954-9370-97-3, 369-374.
- [5] Staneva, K. 2016. The Implementation of HSE Management System Model in Wellness, Medical SPA and SPA Tourism in Bulgaria-requirement and
- [6] Advantages. Yale Journal of Science and Education. N1 (18), vol. X, 622-629. Yale Univ. Press
- [7] Vatchkova E. et all. Actualization of the Syllabuses of the Specialties in the Faculty of Business Administration in Accordance with the Market Needs. Intell Entrance, Sofia, 2015
- [8] [www.mycompetence.bg](http://www.mycompetence.bg)

## **CONSUMER PURCHASE FEATURES TOWARD NATURAL COSMETICS IN ONLINE ENVIRONMENT**

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### **ABSTRACT**

*The trend of natural cosmetics is increasing round the world as consumers are becoming more aware of the benefits of natural products. The aim of this study is to identify the consumer attitudes towards natural cosmetic products. Also, the paper determines the consumer purchase intention towards product of natural cosmetics and the features of pre purchase consumer behaviour in online environment. The data was collected online survey research conducted in March and April 2015 on a sample of 204 respondents in the Dubrovnik-Neretva County. The descriptive and inferential statistics were used. The results suggest that most consumers have positive attitude towards products of natural cosmetics. However, the survey also found that consumers are not inclined to purchasing products of natural cosmetics in online environment. Furthermore, the results of correlation analysis indicate statistically significant, moderately strong relation between attitude toward natural cosmetics and consumers' pre purchasing behaviour toward natural cosmetic products.*

**KEYWORDS:** consumer purchase intentions, consumer attitudes, pre purchase behavior, natural cosmetics, online environment

## 1 INTRODUCTION

The trend of natural cosmetic products is increasing year by year worldwide, as consumer awareness is growing at the same time. Global climate change on one side and the need for healthier way of living, youth appearance and following trends on the other side affect natural cosmetic market as its sales are growing rapidly and will reach 16 billion US dollars in 2020 [www.vivaness.de]. Studies have documented that consumers are getting more and more educated and aware of the harmful effects of synthetic cosmetics which influences growing demand for natural cosmetic products [Rajagopal, 2007, Davis-Bundrage and Kim, 2012]. Also, consumers are getting more sensible to the state of the environment which reflects in their preferences, attitudes and the need for buying natural products [Laroche et al., 2001, Sarigollu, 2009, Kaufmann et al., 2012].

Regardless of the growth of natural cosmetics industry, the natural cosmetic market is still neglected in academic research and little has been published regarding consumer behaviour towards natural cosmetics. Studies about natural and organic personal care products are fewer in number and inconclusive as the factors that influence purchase intention [Davis-Bundrage and Kim, 2012, 196].

On the other side, the revolutionary change brought by computers and information technology has an important impact on consumers' daily lives [Lim et al., 2010, 155]. The Internet has provided consumers with more control in accessing information on products and services and has reduced the time and effort that they spend on shopping [Ko et al, 2004], although web shopping behaviour does not necessarily follow traditional consumer behaviour [Ling et al., 2010].

The aim of this study is to identify consumer attitudes towards natural cosmetics products. Also, the paper determines the consumer purchase intention towards product of natural cosmetic and the features of pre purchase consumer behaviour in online environment.

Following the introduction, the second section provides a selected literature review on attitudes and purchasing behaviour towards natural cosmetics, with a special emphasis on consumers' online buying behaviour. Data and research methodology are discussed in the third section, while the fourth presents research results and the discussion of findings. The final section of the paper draws certain conclusions and directions for future research.

## 2 LITERATURE REVIEW

The market of natural products is growing around the world in variety of industries, from food industry, fashion, cosmetics and beyond [Cervellon, Rinaldi and Wernerfeld, 2011]. Most of researches dealing with natural products are made in food industry [Gil et al., 2000, Yiridoe et al., 2005, Hughner et al, 2007, Tsakiridou, E. et al, 2008, Martić, Kuran and Mihić, 2014, Wee et al, 2014.] Above mentioned studies refer to perception, attitudes, purchase intentions and purchase of organic food and have indicated that consumers' attitudes towards organic food are the best predictor on purchase intention. Although the research from Mintel [2013] has shown many similarities in purchase behaviour regarding purchase of organic food and natural cosmetics, the determination of the same purchase patterns in these two industries is not possible [Kim and Chung, 2011] which results in necessity of investigating behaviour patterns regarding natural cosmetics.

In a cosmetic market many researches have been conducted regarding conventional cosmetics [Weber and Capitant de Villebonne, 2002, Kumar, 2005, Souiden and Diagne, 2009, Kim et al., 2013, Lopaciuk and Łoboda 2013, Deshmukh, 2015, Kumari and Natarajan, 2015] but little has been written about attitudes and purchase behaviour towards natural cosmetics. Rising awareness about environmental degradation resulted in more ecological consciousness and desire to purchase natural products [Laroche et al, 2001, Kaufmann, 2012] which led to increasing number of researches regarding natural cosmetics [Johri and Sahasakmontri ,1998, Rajagopal ,2007, Kim and Seock ,2009, Dimitrova et al, 2009, Kim and Chung , 2011, Davis-Bundrage and Kim, 2012, Hansen et al., 2012, Rybowska, 2014, Jansri and Marimuthu, 2015].

Johri and Sahasakmontri [1998] found out that the main attributes of products in process of buying natural cosmetics are colour, packaging, image of brand, skin safety, fragrance and product composition as well as value for money. Rajagopal [2007] high lightened the importance of promotional activities on natural cosmetic market in order to change preferences on behalf of green brands. Kim and Seock [2009] emphasised that consumers with high health consciousness more often purchase natural cosmetics and that high health consciousness is related to the possibility of discernment of conventional and natural cosmetics. A cross cultural study made by Dimitrova et al. [2009] showed that the level of education is very important factor that influences purchase behaviour. This research also found out that natural flavours, together with high quality, skin protection, good promotion, hypoallergenic ingredients and hydration are the most important motivational factors regarding selection of natural cosmetics. The research of Kim and Chung [2011] resulted in demonstrating that attitudes are the most important determinant of natural cosmetics' purchase intentions. Hansen et al. [2012] in their research indicated that consumers' willingness to purchase free-of cosmetics is influences by attitude and subjective norm, with attitude having the largest predicting power. Davis – Bundrage and Kim [2012] using qualitative meta-analysis emphasised multidimensionality in perceiving natural cosmetics while the research of Rybowska [2014] showed that natural

cosmetic products are recognized as expensive and unreachable and high lightened the need for its popularisation and promotion. Jansri and Marimuthu [2015] results show that environmental and health consciousness have positive and significant impacts on consumers' repurchase intention of luxury natural products.

Electronic commerce has become one of the essential characteristics in the Internet era since online shopping has become the third most popular internet activity [Osman et al, 2010, 134]. Internet has changed the way in which consumers purchase goods and services [Forsythe and Shi, 2003] while marketers have identified many factors that influence consumers' purchase decisions and their online buying behaviour [Osman et al. 2010]. Lim et al. [2010] high lightened top ten e- commerce categories, with apparel and personal care products being one of them.

Consumer online purchase intention is one of the intensive research areas in the literature [Ling et al, 2010]. Most studies examining the relationship between intention to buy online and online purchase are based on the theory of planned behaviour by Ajzen [1991] which states that behaviour can be predicted by intention, and that intention is determined by three factors, namely attitudes toward the behaviour, subjective norm [social pressure to perform or not to perform the behaviour] and perceived behavioural control [perceived as ease or difficult of performing the behaviour].

Online purchase intention is a situation when a consumer is willing and intends to become involved in online transaction while online transactions can be described as an activity in which the process of information retrieval, information transfer and product purchase have taken place [Pavlou, 2003]. Some authors have proposed that searching for product/service information is the most important predictor of online buying behaviour so when consumers spend more time on Internet and have more online experience they tend to research and buy more [Bellman et al. 1999, Lim et al., 2010, 158]. This can also be supported by Lohse et al. [2000] "Not surprisingly, the degree of Internet usage to search for product information explained the most variation in whether someone would make an online purchase" [p.23]. The Internet users perceive Internet's role in consumer information search as one of the most important features Internet provides [Shim et al., 2001] which indicates that information search on internet will continue as a major vehicle for shopping comparison as technologies advance [Dickson, 2000].

### **3 METHODOLOGY**

The data was collected online survey research conducted in March and April 2015 on a sample of 204 respondents in the Dubrovnik-Neretva County. The survey instrument was a questionnaire and the questions were structured in accordance with the objectives of the research. The first part of the questionnaire consisted of the demographic characteristics of

respondents such as gender and age. The second part of the questionnaire included statements regarding consumer purchase behaviour in offline and online environment. The scale of measurement was ordinal with degrees from 1 to 5, where respondents expressed their degree of agreement or disagreement with the statement (1=completely disagree, 5=strongly agree). The Table 1 presents demographic characteristics of the sample.

Table 1. Demographic characteristics of the respondents<sup>2</sup>

<b>Variable</b>	<b>Categories</b>	<b>Percentage (%)</b>
<b>Gender</b>	Male	30
	Female	70
<b>Age</b>	18-24	30.9
	25-34	19.6
	35-44	20.6
	45-54	16.0
	55-	12.9

Source: Research findings (N= 204)

The results obtained from the survey were analysed using different analytical tools, including methods of analysis and synthesis, inductive and deductive methods, method of generalization and specialization, and different statistical methods such as descriptive and inferential statistics. Data collected were analysed using software statistical package SPSS 20.

## 4 RESEARCH FINDINGS

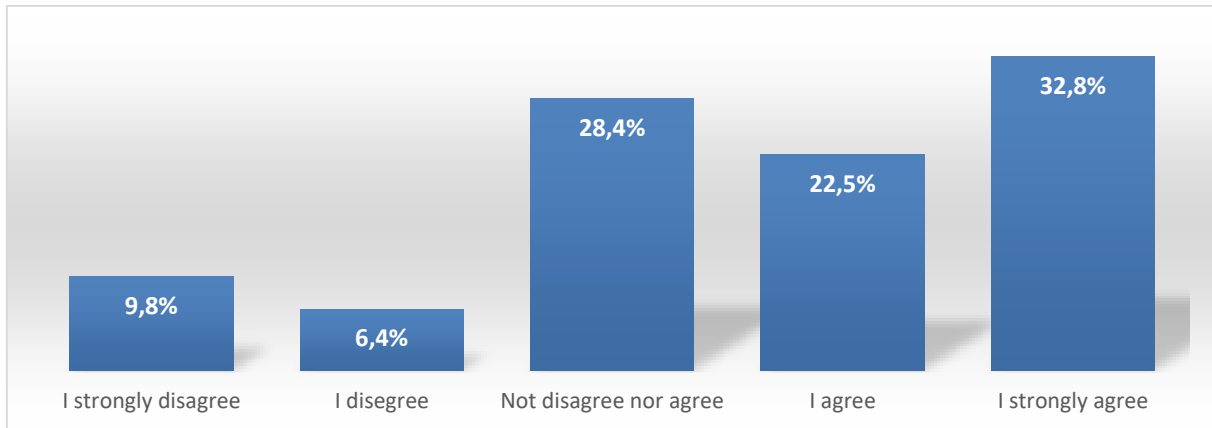
In order to examine the purchase behaviour of respondents in the online environment, the following research results are presented. The results of statements distribution „I like natural cosmetics “are presented in Table 2.

As it can be seen from the Table 2, the majority of respondents (55.3%) expressed positive attitude towards natural cosmetics products, 28.4% of respondents neither agreed nor disagreed with the statement, while 16.2% of respondents do not have a positive attitude towards products of natural cosmetics. The results indicate that respondents have a positive attitude toward products of natural cosmetics suggesting that they are aware the benefits provided by using natural products. Since the most of respondents are inclined toward natural cosmetics products, it would be preferable to examine whether they will also purchase such products in online

<sup>2</sup> In the context of demographic characteristics, a total of 10 respondents did not state the year of birth.

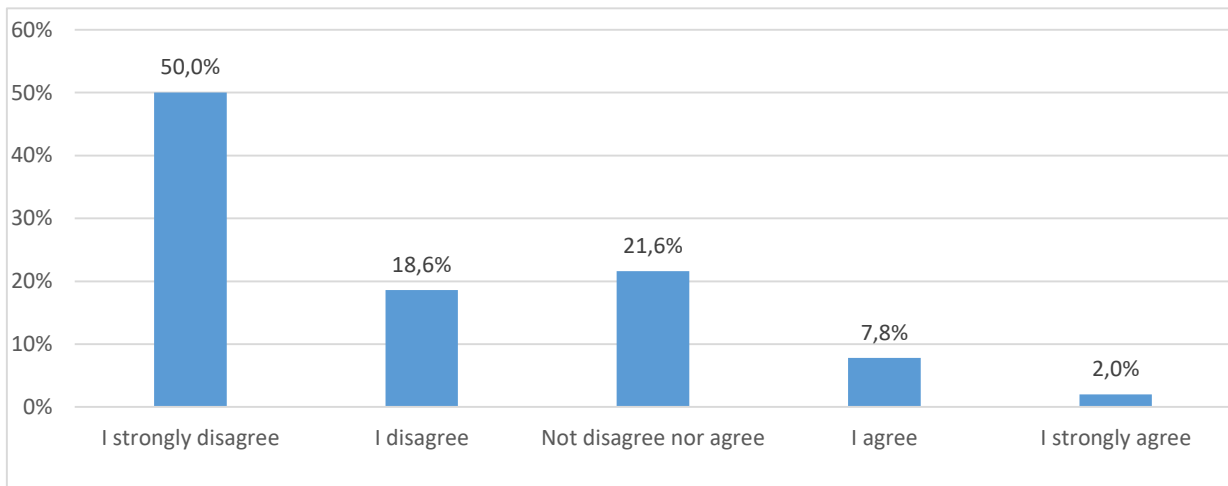
environment. Therefore, the next table shows the distribution of the statement "I purchase natural cosmetics through Internet".

Table 2. Distribution of the statement "I like products of natural cosmetics"



Source: Research findings (N= 204)

Table 3. Distribution of the statement "I purchase products of natural cosmetics through Internet"



Source: Research findings (N= 204)

Results presented in Table 3. show that most of the respondents (68.8%) do not purchase natural cosmetics through the Internet. 9.8% are purchasing natural cosmetics through Internet while 21.6% are indifferent to this form of purchase, ie. either agree or disagree with the statement. The majority of respondents in the survey sample do not buy natural cosmetics on the Internet which can be result of numerous negative elements online environment provides such as lack of trust or unsecure payments etc. The most of respondents do not buy natural cosmetics through the Internet although they have a positive attitude towards products of natural cosmetics. Although, when it comes to consumer online purchasing behaviour, most of the respondents expressed a certain level of distrust and uncertainty in the purchase of such specific products.

The further processing of data is approached by using the Spearman's correlation coefficient. Relation between attitude toward natural cosmetics and consumers' pre purchasing behaviour toward natural cosmetic products was examined. The results of correlation analysis between the attitude towards products of natural cosmetics and consumers' pre purchasing behaviour toward natural cosmetic products are presented in Table 4.

Table 4. Correlation matrix between attitude toward natural cosmetics and consumers' pre purchasing behaviour toward natural cosmetic products

I like natural cosmetics	Before purchasing natural cosmetics I compare products on the Internet	Before purchasing natural cosmetics I collect information via the Internet
	.305**	.366**
	.000	.000

Source: Research findings (N= 204)

Correlation analysis indicates statistically significant and moderately strong relation between attitude toward natural cosmetics and consumers' pre purchasing behaviour toward natural cosmetic products at a significance level of 1%. The correlation coefficients indicate the existing positive relation between observed variables i.e. growth of one variable will be accompanied by the growth of other variables. Also, regarding the relation strength, respondents who have stronger attitude toward natural cosmetics will use internet as a place to get necessary information and to compare different types of natural cosmetic products. Thus, the positive attitude towards products of natural cosmetics will influence on consumer pre purchasing behaviour in the context of searching and evaluating information on the Internet before making a purchasing decision in offline environment.

These respondents are not inclined to purchasing natural cosmetics products through Internet and they are not aware of the benefits such environment could provide. Although consumers do not buy products natural cosmetics through the Internet they use the Internet to collect and evaluate information about desire products. Also, for these respondents Internet provides a useful place for comparing different products and offers in order to get necessary information to make quality purchasing decisions in offline environment. Therefore, they will definitely use Internet for getting more information before they make a final decision to buy products of natural cosmetics.

Finally, it can be concluded that there is a statistically significant relationship between observed variables which indicates that consumers who have positive attitude toward products of natural cosmetics will use the Internet as a useful place to collect information in order to make the enhanced purchasing decisions in offline environment.

## 5 CONCLUSION

While most of previous researches have been focused on exploring purchase attitudes regarding organic food, little has been done in a field of natural cosmetics. From the results of this research it can be concluded that most consumers do not purchase natural cosmetics online. Consumers still feel that traditional surroundings is a safer place for purchasing especially for products of natural origin. So, lack of trust has resulted in non-purchasing behaviour which means that consumers unwillingly purchase online, especially when it comes to natural cosmetic products they are not familiar with or purchase them for the first time. The reasons for non-purchasing can be numerous. For example it is well known that natural cosmetic products have much shorter expiration date and that such products require special delivery conditions. So, lack of trust regarding conditions and way of delivery as well as impossibility of product testing are some of the possible reasons that result in online non purchasing behaviour of natural cosmetic products.

Research analysis shows that most of the respondents (55.3%) expressed a positive attitude towards the purchase of natural cosmetics. However, when it comes to the Internet as a potential place for purchasing their preference for buying tends to fall. Analysing the consumer purchase intentions towards products of natural cosmetics in online environment, it is evident that although consumers do not purchase natural cosmetics products through Internet they still use it as an information resource where they evaluate different products. The complexity of the process of purchasing decisions in the offline environment makes the purchase challenging for modern consumers, especially in information and evaluation stage. Today, modern consumers do not have time for searching and comparing the desirable products in order to make the best purchase decision. The product selection and comparison is much easier in the Internet environment and therefore consumers are more inclined toward this form of pre purchase behaviour.

This research contributes to the literature by identifying consumer attitudes toward natural cosmetic and their pre purchase behaviour toward these products. However, the findings should be considered in the light of their limitations. First of all, it refers to a sample selection. This limited sampling frame may affect the generalization of findings. Future research sample should be extended by including other region or counties. It would also be interesting to include demographic data, i.e. the socio-economic characteristics of consumers. For example, gender differences could be identified in terms of online purchase behaviour. Moreover, other factors should also be included in the future research, primarily age, education, and household income. However, factors such as product type, prior purchase or negative characteristics of online environment could be taken into consideration. The research findings may be useful to web-retailers, marketing managers and internet marketers to recognize and understand the motives affecting their online purchasing behaviour in order to target better their consumers.

## REFERENCES

- [1] Ajzen, I. (1991) The Theory of Planned Behaviour, *Organizational Behaviour and Human Decision Processes*, 50 (2) pp.179-211
- [2] Bellman, S. et al. (1999). Predictors of Online Buying Behaviour. *Communications of the ACM*, 42(12), pp. 32-38.
- [3] Cervellon, M. C. et al., (2011). How Green is Green? Consumers' Understanding of Green Cosmetics and their Certifications in *Proceedings of 10th International Marketing Trends Conference*, pp. 20-21.
- [4] Davis-Bundrage, M. R., Kim, S. (2012). Predicting Purchases of Eco-Beauty Products: a Qualitative Meta-Analysis, in *Proceedings of the Atlantic Marketing Association*, pp. 195-209,
- [5] Deshmukh, P. (2015). A Study of Male Consumption Pattern of Cosmetic Products in Aurangabad City, Maharashtra. *International Journal of Management (IJM)*, 6(5), pp. 37-45.
- [6] Dickson, P. R. (2000). Understanding the Trade Winds: The Global Evolution of Production, Consumption, and the Internet. *Journal of Consumer Research*, 27(1), pp. 115-122.
- [7] Dimitrova V., et al., (2009). Customer Knowledge Management in the Natural Cosmetics Industry, *Industrial Management & Data Systems*, 109(9), pp. 1155 – 1165.
- [8] Forsythe, S.M. and Shi, B. (2003). Consumer Patronage and Risk Perceptions in Internet Shopping, *Journal of Business research*, 56, pp. 867-875
- [9] Gil, J.M. et al., (2000). Market Segmentation and Willingness to Pay for Organic Products in Spain, *International Food and Agribusiness Management Review*, 3, pp.207-226.
- [10] Hansen, T., et al. (2012). Understanding Consumer Purchase of Free-of Cosmetics: A Value-Driven TRA Approach. *Journal of Consumer Behaviour*, 11(6), pp. 477-486.
- [11] Hughner, R. S., et al., (2007). Who are Organic Food Consumers? A Compilation and Review of Why People Purchase Organic Food, *Journal of Consumer Behaviour*, 6, pp. 94–110.
- [12] Jansri, W., and Marimuthu, M. (2015). Are consumers of luxury natural products concerned about environmental issues? *Advances in Environmental Biology*, pp. 82-86.
- [13] Johri; L.M. and Sahasakmontri, K., (1998). Green Marketing of Cosmetics and Toiletries in Thailand, *Journal of Consumer Marketing*, 15(3), pp. 265 – 281.

- [14] Kaufmann, H.R. et al., (2012). Factors Affecting Consumers' Green Purchase Behaviour: An Integrated Conceptual Behaviour, *Amfiteatru Economic*, 14(31), pp. 50-69
- [15] Kim, J., et al., (2013). Is beauty in the eye of the beholder? Gender and beauty in the Cosmetics Sector: A comparative study of Indonesia and Korea. *Marketing Intelligence and Planning*, 31(2), pp.127-140.
- [16] Kim, S., K., and Seock; Y., (2009). Impacts of Health and Environmental Consciousness on Young Female Consumers' Attitude towards and Purchase of Natural Beauty Products, *International Journal of Consumer Studies*. 33 (6), pp. 627–638.
- [17] Kim; H.Y., Cung; J., (2011). Consumer Purchase Intention for Organic Personal Care Products, *Journal of Consumer Marketing*, 28(1), str. 40-47.
- [18] Ko, H. et al. (2004). Cross- Cultural Differences in Perceived Risk of Online Shopping, *Journal of Interactive Advertising*, 4(2), pp.20-29
- [19] Kumar, S. (2005). Exploratory Analysis of Global Cosmetic Industry: Major Players, Technology and Market Trends. *Technovation*, 25(11), pp. 1263-1272.
- [20] Kumari, S. K., and Natarajan, M. L. (2015). A Study on Brand Loyalty and Purchase Behaviour of Women towards Cosmetic Products in Namakkal. *International Journal of Physical and Social Sciences*, 5(9), pp. 418-427.
- [21] Laroche, M. et al., (2001). Targeting Consumers who are willing to Pay More for Environmentally Friendly Products, *Journal of Consumer Marketing*, 18(6), pp.503-520.
- [22] Lim, Y. M., at al. (2010). Online Search and Buying Behaviour: Malaysian Experience/Recherche en ligne et Habitudes d'achat: Experience Malaisienne. *Canadian Social Science*, 6(4), pp. 154-166.
- [23] Ling, K. C. et al. (2010). The Effects of Shopping Orientations, Online Trust and Prior Online Purchase Experience toward Customers' Online Purchase Intention. *International Business Research*, 3(3), pp.63-76
- [24] Lohse, G., et al. (2000). Consumer Buying Behavior on the Internet: Findings from Panel Data, *Journal of Interactive Marketing*, 14(1), pp.15-29.
- [25] Łopaciuk, A., and Łoboda, M. (2013). Global beauty industry trends in the 21st century. In: *Management, Knowledge and Learning International Conference*, pp. 1079-1087, Zadar, Croatia
- [26] Martić Kuran, L. and Mihić, M., (2014). Primjena teorije planiranog ponašanja u kupovini ekološke hrane, *Tržište*, 26(2), pp.179-197.
- [27] Mintel (2013). Natural and Organic Toiletries – UK, <http://academic.mintel.com/display/640063/>, accessed [June, 4<sup>th</sup> 2015]

- [28] Osman, S. et al. (2010). Undergraduates and Online Purchase Behaviour, *Asian Social Science*, 6(19), pp.133-146
- [29] Pavlou, P. A. (2003). Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model. *International Journal of Electronic Commerce*, 7(3), pp.101-134.
- [30] Rajagopal, V. (2007). Buying Decisions towards Organic Products: An Analysis of Customer Value and Brand Drivers, *International Journal of Emerging Markets*, 2 (3), pp.236-251
- [31] Rybowska, A., (2014), Consumers Attitudes with Respect to Ecological Cosmetic Products, *Zeszyty naukowe Akademii Morskiej w Gdyni*, 84, pp. 158-164.
- [32] Sarigollu, E., (2009). A Cross-Country Exploration of Environmental Attitudes, *Environment and Behaviour*, 41(3), pp.365-386.
- [33] Shim, S.,et al. (2001). An Online Prepurchase Intentions Model: The Role of Intention to Search, *Journal of retailing*, 77(3), pp.397-416.
- [34] Souiden, N., and Diagne, M. (2009). Canadian and French Men's Consumption of Cosmetics: A Comparison of their Attitudes and Motivations. *Journal of Consumer Marketing*, 26(2), pp. 97-109.
- [35] Tsakiridou, E. et al., (2008). Attitudes and Behaviour towards Organic Products: An Exploratory Study, *International Journal of Retail and Distribution Management*, 36(2), pp.158-175.
- [36] Vivaness (2015) The place to be for a global natural cosmetics industry, [www.vivaness.de](http://www.vivaness.de), accessed [July, 20<sup>th</sup> 2015]
- [37] Weber, J. M., and Capitant de Villebonne, J. (2002). Differences in Purchase Behaviour between France and the USA: The Cosmetic Industry. *Journal of Fashion Marketing and Management: An International Journal*, 6(4), pp. 396-407.
- [38] Wee, C. S., et al. (2014). Consumers' Perception, Purchase Intention and Actual Purchase Behaviour of Organic Food Products. *Review of Integrative Business and Economics Research*, 3(2), pp.378-397.
- [39] Yiridoe, E.K. et al., (2005). Comparison of Consumers Perceptions and Preference towards Organic versus Conventionally Produced Foods: A Review and update of the literature, *Renewable Agriculture and Food Systems*, 20(4), pp.193-205.



## HADOOPING THE MARKETING GAME

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### ABSTRACT

*Big data allows marketers to define and describe their customers at a more detailed and precise level than it was even considered possible just a couple of years ago. With the speed this field is evolving, big data is becoming increasingly important in the marketing domain.*

*While it is not a problem to collect the data, the problem remains to leverage these vast amounts of data, coming from different sources, in an efficient manner. Most marketing departments use many marketing applications, causing data fragmentation problems. This paper describes a different, data-driven approach that refers to this problem by using the Data Lake concept allowing the marketers to leverage data as their biggest and most valuable resource in a more agile and flexible manner. The goal is to collect the data, across all applications and channels, consolidate it and analyze all at once, regardless of source and type, which will enable a more complete picture of customer behavior than ever before, answer questions that were previously unanswerable, give rise to many other possibilities, and by extension – lead to more profit.*

*We describe in detail the strategy and its benefits, give an overview of technologies in terms of functionalities inside the Data Lake architecture, and finally, we elaborate the advantages of this concept, in comparison to traditional marketing techniques, through some of the many use cases that show how this approach can respond to the challenges of marketing today and in the future.*

**KEYWORDS:** Data Lake, big data, data-driven marketing, customer interactions, big data analytics

## **1 INTRODUCTION**

The digital age has brought extensive changes to consumers' buying process. In this hyperconnected world we live in, customers have easier access to offers, and more options to interact with brands and each other, than ever before. Depending on the industry, their journeys with a brand or a company include physically visiting a shop, visiting their website, blogs and social media, email communication, credit card payments, etc. Massive Internet expansion and digitalization also brings many more features, like mobile apps, sensor data, GPS, cameras, call recordings, etc. All these channels of interactions generate data about customers, and that data contains information about their requirements, preferences, taste, and their lifestyle. Customers are, empowered by technological advances, becoming more demanding than ever, and the data they generate on the way to purchase, is marketers' best asset in trying to respond to their needs.

All that is driving marketing's aspiration to become more data-driven. It is all about understanding their customers better, and the way to do that is by using all the information about them they can get. Data is the greatest resource marketers have, but leveraging information hidden in it, i.e. turning vast amounts of data into valuable insights remains a challenge. Marketing now has to deal with data of various types – structured and unstructured, transactions and social media. This is where big data methods and tools come in. Traditional marketing technologies cannot provide the agility and flexibility they badly need.

Most marketing departments have multiple marketing applications like CRM, CMS, email, mobile apps, campaign management, etc. There is an overabundance of tools and platforms, and every time a new demand arises, marketers will first look for a solution in the form of a new tool. However, dramatical changes in customer behavior are driving changes in this composition. When asked about their priorities, 78% of marketers said that the 'ability to integrate' was their most important goal (Source: Forrester's Q2 2014 Global Enterprise Marketing Software Suite Customer Reference Online Survey). Therefore, traditional marketing systems are being replaced with comprehensive platforms based on a centralized repository, which will solve data fragmentation problems and address the critical need for fast insights. Basic marketing objectives are keeping their place, but more sophisticated big data methods will gain companies real competitive advantage.

## **2 DATA-DRIVEN MARKETING**

All the changes prompted mostly by Internet expansion, caused dramatical changes in the marketing domain too, pushing customers and their wishes to the first place. Marketing is falling behind, and cannot keep pace with their customers' individual activities. Big data tools and technologies have the power to transform marketing, and the right ingredients to build a better marketing machine, one that is able to address inbound demands. Therefore, marketers

should take advantage of that, and embrace the innovations. This chapter describes some of the biggest problems marketers are facing and how big data technologies can address them. [2] [4]

#### Problems:

- Dealing with customer interactions across channels. On their decision journeys, customers use websites, email, blogs and social platforms, mobile applications, etc. They produce large amounts of data while searching, exploring, buying and discussing products. All these touchpoints are capturing relevant data about an individual, but collecting and managing data coming from various sources is not a simple task. Having many different data sources also means various data types and formats – structured and unstructured. There is social networks data, emails, web logs, mobile data, M2M (machine-to-machine) data, etc. The ability to efficiently use external sources, along with traditional enterprise data such as product and historical customer data, is one of the requests the digital world imposes on marketing experts.
- Data fragmentation. The data fragmentation problem is often labelled as the biggest obstacle in conducting modern marketing. Marketing departments mostly use specialized systems and applications for different purposes. Each of those applications, and its data, lives in its own silo, unaware of other processes the same customer participates in. When it comes to the ability to integrate, marketers are falling short. After acquiring several technologies, they now need a way to seamlessly connect data across systems, to create a complete view of who the customer is. For example, integrating CRM, email marketing campaigns and clickstream analysis can provide extremely valuable insights. In addition, they often have redundant or conflicting data sitting in separate silos, which makes linking and integrating that data expensive, time consuming and bothersome.
- Speed and relevance. Marketers know how important timely and relevant reaction is in their field. As the speed and volume of customer interactions grows, as well as their desires and expectations, companies are struggling to respond adequately and in a timely manner. Businesses are failing to keep the pace, and realizing that traditional databases do not scale. The need to deliver faster decision making based on customer insights is becoming critically important.

#### How big data approach can address those problems:

- Centralized data repository inside a platform. Considering the problems of data fragmentation, and the rising number of various channels and touchpoints that participate in customers purchase journeys, a centralized data repository makes sense. Instead of using multiple applications, marketers are turning to more comprehensive solutions, hubs or platforms, which will give them the agility and performances they need. Big data technologies allow them to store all kinds of data, both structured and unstructured, and join them to get a better, exhaustive view of customer behavior across

all channels and applications. That simplifies data integration, reduces time, and provides possibilities that were before hard or impossible to accomplish.

- Improved analytics and real-time technologies. Big data technologies provide more than a distributed storage system. There are a lot of processing tools, including sophisticated analytics and visualization tools. The ability to develop more accurate predictions, powerful analytics and data mining are some of the keys to effective data-driven marketing. Moreover, big data technologies can respond to ever-growing demands for faster insights, which are proving to be so important in marketing. Managing real-time interactions at scale is something that really brings a shift to the process.

### **3 THE DATA LAKE CONCEPT**

#### **3.1. BIG DATA AND HADOOP**

There is no unique and precise definition of big data. Everybody is talking about the volume, velocity and variety, some add more 'V-s', but what it is really about is finding a way to use that data efficiently. Although there is a lot of talk around this topic, in most cases really mastering your data remains unfulfilled, at least partially.

In the marketing data domain, the first and most obvious 'V' - volume is definitely a factor, especially in larger companies. But more importantly, it is about the variety of data types and formats. That part is especially prominent in marketing, because it has the most diverse data sources, and new ones will most probably appear in the future. There is also the speed at which data comes in and has to be dealt with, e.g. sensor data. Big data technologies make it possible to gain real-time insights, which is especially important in marketing where timely and relevant response is essential.

Since marketers always want to know more about their customers, all the data they can gather, from all the sources they have, and can acquire, is a valuable resource to them. It is where customers offer information about themselves. But it takes certain knowledge and skills to get them. The holy grail of customer experience – the '360 degree customer view' is an illusion without mastering the data game. And big data technologies are a step in the right direction. The next chapter explains some basic big data terms and gives an overview of the Data Lake concept.

A word that most commonly goes hand in hand with the term 'big data' is Hadoop. Hadoop is not a synonym for big data software, but it has established itself as a great prospect in the field. It is not one tool; it is a platform of tools, which makes it suitable for a variety of use cases. The main purpose of Hadoop is storage and fast distributed processing of large amounts of data

across clusters of computers, but there are also a lot of functionalities and tools built on top of it.

Some of the advantages of Hadoop over traditional data warehouses (although it can be used with DWH, it is not necessarily a replacement) are:

- Agility. It is suitable for all kinds of data – structured and unstructured.
- It is built out of commodity hardware, so it is far more affordable.
- As the need arises, the system can be expanded through the addition of nodes in the cluster, i.e. scale-out.
- It enables advanced real-time data processing and analytics.

The reason Hadoop is convenient for storing most disparate data types, is the 'schema on read' concept. Basically, it means you do not have to pre-process data or structure it before saving. You can save anything and decide what to do with it later – when needed. That flexibility is the essential difference; it makes adding data from various sources easy, which is especially suitable for unpredictable marketing demands.

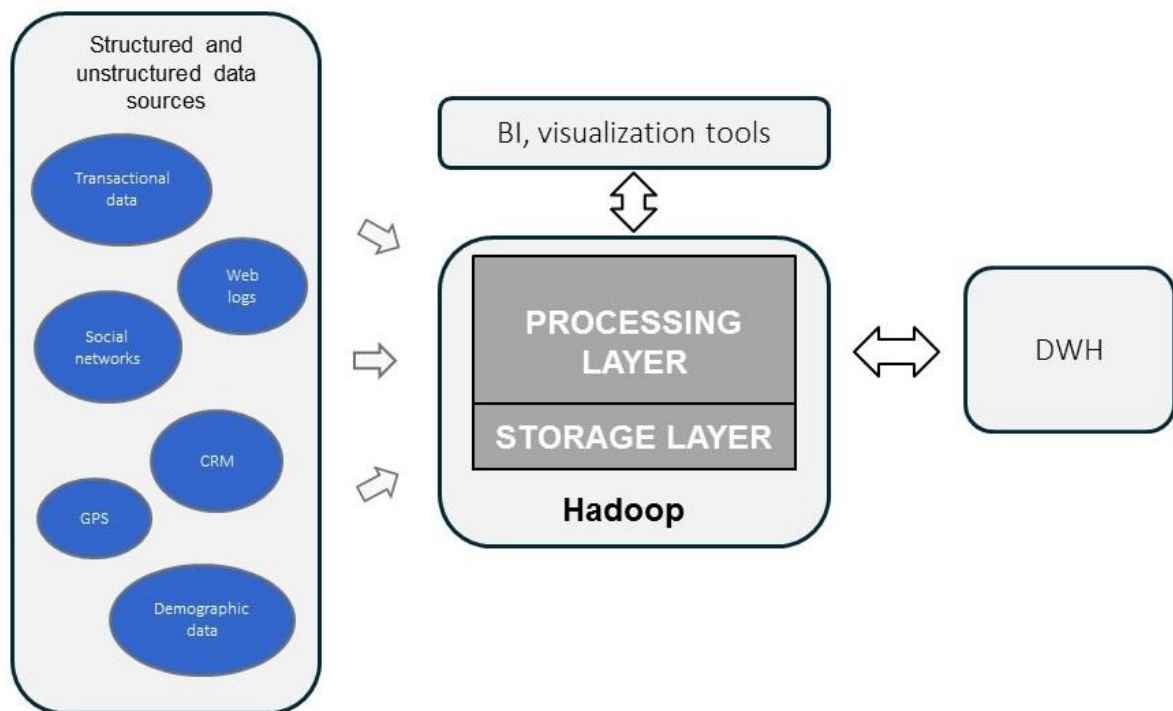
### **3.2. DATA LAKE**

In short, Data Lake is a platform for managing data in a more flexible manner. It allows marketers to bring all their data together in one place (Hadoop), covering all marketing channels. It brings the agility and accessibility marketing needs, and the main benefit is – no more data silos. That is where this concept scores big points.

The technology stack does not have explicitly defined components; they can vary depending on the environment and preferences [3]. Here is a schema:

- Marketing applications (CRM, web analytics, marketing automation)
- DWH
- Hadoop
- Data management tools
- Third party applications as additional data sources
- Predictive analytics tools
- Visualization tools

Figure 1. Technology stack



The concept assumes eliminating and/or integrating capabilities regarding marketing applications. Therefore, we suggested three core marketing applications – CRM, web analytics and marketing automation. Enterprise data warehouse, if you have it, can be used as a source for feeding the Data Lake. There is of course Hadoop – the Data Lake itself, data management tools – to automate the process of combining data from different sources and ensure data quality. Third party applications can be a great resource for enriching the data and bring new insights. Predictive analytics tools can be used to e.g. score leads, and visualization tools to communicate all the great findings with broader audience.

As customers use more and more channels and devices, the number of different data sources is continuing to rise. A customer may interact with a business by email, catalogues, visiting their website, linking to social network accounts, visiting physical e.g. retail locations or speaking to an agent at the call center. Also, each marketing application or program generates new customer data – from transactional data, social media, to GPS data. A centralized data repository turned out to be a logical and good choice. With this solution, adding new sources and new functionalities is not a problem. Marketers can continue to use traditional DWH, but also make the most of the digital world information. It is a comprehensive solution – a platform that gives marketers the flexibility they need.

Key benefits of the concept are:

- Ability to seamlessly transmit content between systems
- Reduce complexity in data management
- Agility
- Speed and relevance

The Data Lake concept can address exactly the problems identified by marketers as their most common challenges. The biggest gain this approach brings is the view across channels, silos and platforms. It enables marketers to run through their data to match specific marketing activities to specific customers. They can drill down to individual transaction-level data. This complete visibility is what makes a difference. The biggest challenge of the concept is how to properly link data from all systems, clean it and validate, but there are APIs that make it work, and the final result is worth the initial trouble.

## **4 USE CASES**

The Data Lake concept can have a positive impact on marketing strategies in different industries and it is suitable for many different use cases, particularly where data fragmentation is a common problem. For the purpose of this article, we describe two use cases for two big industries – telco and retail.

### **4.1. CASE 1 – TELCO**

In comparison with other industries telecoms generate larger amounts of data. They are also more prone to accepting new technologies and innovations. That is why they are a logical beneficiary for the presented concept.

We are assuming a telecom operator wishes to improve customer experience, make more personalized offers to their clients, which will lead to higher revenue per customer, and better customer retention rates. The main problem in creating personalized offers is, as analyzed before, that all the data relevant for a single customer is split across systems. That complicates the process of collecting all necessary data, linking it by a common ID and analyzing it, let alone doing it fast enough to make relevant real-time offers.

For example, customer data in telecommunications can include his past purchases and used tariffs, usage patterns and billing data, customer support requests, clickstream analysis, social networks activity, location and demographic data, etc. Using the Data Lake concept we described, all data regardless of the source or type, is in one place – Hadoop storage, ready to be analyzed. Marketers can use visualization tools to create dashboards that contain detailed customer data arranged in a way that neatly comprehends his preferences. There are some great

visualization tools that support connections to Hadoop in the market. The dashboard captures customer's taste and preferences, and allows marketers or sales agent to drill down by specific attributes for different perspectives and insights. They are also pretty and easy to use, suitable for nontechnical staff members.

To demonstrate one of the use cases, consider a customer who contacts the call center. The agent who takes the call can automatically get detailed information about the customer on the line at the moment of interaction. Assume the agent gets a recommendation dashboard, which will generate the best offers considering the data he has, in real-time. There is a wide range of data that needs to be utilized to create this view, for example behavioral data, calls to customer support, contract details, previous campaigns responses, sentiment analysis applied to social media data, customer interest rating derived from his website and other activities, scores expressing how valuable or how prone to converting the customer in question is. The key is to bring different sources together, so that predictive models under the hood can create recommendations based on all relevant data. The dashboard can be updated in real-time, and the agent is presented with all potential products and tariffs to offer to the customer on the line. That approach is expected to bring many benefits such as upsell opportunities, higher retention rates, improved customer satisfaction and ultimately, turning consumers in loyal customers.

#### **4.2. CASE 2 – RETAIL**

Retailers can use Data Lake to combine historical purchase data with real-time streams, in order to personalize their promotions and boost sales. Previous buying habits and patterns can be used in predictive analytics to create recommendations. Together with real-time data such as geolocation, marketers can achieve the ultimate goal – target the right customer with the right offer, at the right time and in the right place. Again the Data Lake serves as a central repository for data from different sources, and big data technologies enable real-time processing and powerful analytics capabilities.

Retailers are turning to mobile apps for new possibilities to improve customer experience, and that is a great resource for data-driven marketing. By using GPS data from their mobile subscribers, detailed profile and product data, marketers have the ability to develop customized offers, suited to the customer but also to the company's demands. For example, a retail company can notify their customers about special offers and sales that match their preferences and are happening in their vicinity at that exact moment.

### **5 CONCLUSION**

Technological advances brought by the digital age, especially massive Internet expansion, brought changes to the marketing domain too. Customers today have more options than ever,

they use more and more devices and channels, have easier access to information, and that makes them more demanding. As their expectations grow, their interactions with companies and each other multiply, as a side effect they generate a lot of data. It is a challenge for marketers to use that data efficiently and respond to their growing demands. Since traditional marketing technologies and methods have proven to be inadequate for the task, they are being replaced with big data technologies.

In a field that is so unpredictable and ever-changing, as marketing is, the main goal is to provide flexibility and speed. The Data Lake solution is suited for marketing problems because it allows all data from various sources to be collected together and analyzed at once, thus providing the agility. It also brings advanced analytics and real-time technologies, thus providing performances. Therefore, big data technologies bring the tools and methods marketers need to develop an effective data-driven marketing strategy.

## REFERENCES

- [1] Forbes Insights, 2015, *Data Driven and Digitally savvy: The Rise of the New Marketing Organization*.
- [2] Forrester Research, Inc., January 2014, *Marketing's Big Leap Forward*.
- [3] Franz Aman, Anish Jariwala (2016), *The Marketing Data Lake*, USA, ISBN 978-0-9976012-0-6.
- [4] Rusty Warner, Forrester Research, Inc., October 19, 2015, *Combine Systems Of Insight And Engagement For Contextual Marketing*.
- [5] Stephan Kudyba (2014), *Big Data, Mining, and Analytics: Components of Strategic Decision Making*, CRC Press.



## DIGITAL MARKETING AND BEHAVIORAL ECONOMICS

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### ABSTRACT

*The use of modern technologies affects all spheres of modern life. Social and economic life becomes impossible without fast, relevant, high-quality and timely information. More recent scientific discovers, as well, talk about new insights in the behavior of homo economicus, as individual who, it is revealed, in his decisions in economic behavior actually is not primarily motivated by utility, but the decision-making process including other mechanisms, except cognitive. However, even these cognitive processes occur in a specific way, such as using heuristics (shortcuts) in decision-making.*

*Furthermore, "familiarity" of the product, emotions, risk assessment, etc., are relevant factors of the decision-making process in consumer behavior when deciding on a purchase.*

*What new processes, new aspects and new challenges, these facts set on marketing? Is marketing, in these new circumstances, increasingly important in modern life? In which way marketing processes must innovate to keep up with new marketing age? And, finally, are we now days facing the era of the „new marketing esthetics” and the new marketing paradigm or is a modern digital marketing just a tool used on the platform of the classical marketing paradigm? These are issues that the authors, using a multidisciplinary approach, examine in their paper, with the aim of better understanding of (not only digital) marketing, but also of the new post-industrial era where marketing place a significant role in the lives of individuals, business organizations and other organized entities.*

**KEYWORDS:** behavioral economics, consumer behavior, "aesthetics of marketing", marketing paradigm, post-industrial era.

## 1 INTRODUCTION

The paper has been based on the thesis how digital marketing and contemporary technology in its application in the marketing management, necessarily change the concept of modern marketing and even its paradigm. In the period of information over load it is crucial to choose carefully information which are going to be transmitted to potential customers for which digital marketing presents key platform. It is about *information economy* which strives to reduce number of information and enhance their effectiveness. Contemporary literature also leads to the conclusion how *homo economicus* has been primarily driven by emotions and less with rationality during his purchasing process what has circumstances not only on the theoretical understanding of the marketing but also on contemporary marketing practice and managing the marketing process. Actually, that is the subject of this paper.

It has been generally accepted trend of focusing on marketing efforts and intensification of the communication process with the emphasize on online marketing and contemporary technology in the last few decades. As a result, it is the necessary to introduce systematic and planned CRM processes in all organizations which needs to be more focused on the customer in a manner to transmit even sharper information to the potential consumer. In the recent past, marketing and marketing experts have made conclusions about consumer preferences from their ordinary behavior and characteristics (age, sex, place of residence, etc.). Today, new technology provides us further step. Conclusions about consumer behavior and their decisions about purchase provides us digital consumer behavior, actually digital consumer activities which contemporary technology and digital marketing have ability to constantly track. Digital marketing affects the formation of a customer needs on a more efficient way but also implies certain ethical implications.

Storytelling as a relevant part of the successful purchasing process has been enabled through digital marketing as far as possible. The aim is to tell the story first, and after the potential customer embrace the story, the desire for the product has been generated as well as purchasing decision.

## 2 ERA OF BEHAVIORAL ECONOMICS AND THE DIGITAL ECONOMY - PLATFORM OF DIGITAL MARKETING

Marketing is an applied science that tries to explain and influence how firms and consumers behave in markets. Marketing models are usually applications of standard economic theories, which rely on strong assumptions of rationality of consumers and firms. Behavioral economics explores the implications of the limits of rationality, with the goal of making economic theories more plausible by explaining and predicting behavior more accurately while maintaining formal power [Teck et al., 2006].

Behavioral economics is a relatively new scientific discipline and is increasingly attracting the attention of many authors. We can find its primary source in psychology, but is mostly applied for better understanding of the consumers particularly in the area of decision-making, while its basic feature connects these two sciences by explaining how different terms and knowledge of scientific disciplines influence the behavior of consumers and their decision on the choice.

Behavioral economics connects theoretical frameworks of rationality of classical and neoclassical economics and the way on which consumers make decisions, including personal feelings and limitations in a realistic way. At the same time, its contribution to the modern understanding presents departure from rationality and recognition of the existence of "mistakes" of human behavior in the decision making process.

In fact, these errors are not random, but are generated by applying heuristics or intuitive psychological mechanisms that produce bias. Understanding the model of homo economicus provides insight about contradiction in previous interpretation how decisions are made rationally, not emotionally [Jovanović, 2016].

The neoclassical theory in its simple terms describes the behavior of consumers, given that the model has been perceived in such a way that man behaves like a robot, which will be in decision making process followed by self-interest and rely only on the costs and benefits [Henrich et al., 2001]. Introduction of behavioral economics in the study of human behavior, emphasizes the importance of emotions and their interaction with society [Bakucs et al., 2010].

The digital economy is based on electronic transactions via the Internet or another electronic channel. Its main characteristics are flexibility, cooperation and high speed interaction between individual subject chain value (eg. the interaction of certain corporate with suppliers and consumers). Digital Economy leads to the ability to quickly re-organization of resources companies and creating new value and business models, which meet the needs of more demanding consumers. According to many predictions of the end of the last century The Internet is viewed as a means to introduce a "revolution" in modern business, so that then for the first time appeared the terms "new economy", "digital economy" and "Internet economy". This pointed to the fact that a large part of business operations switched to electronic platform, that is that more companies switch to electronic communication with its partners and customers. With the advent of the first virtual companies (dot.com) and their rapid collapse, many analysts have gone to the extreme and watched it only as a promotional channel. The Internet represents the largest promotional channel, but it can be much more than that - very important for companies whose business is based on knowledge and information. Many well-known companies in the world today perform more than 80% its business activities through the Internet and thus deliver two key advantages: first, reduce costs, and secondly, your customers offer benefits that without this channel would not be possible (eg. Dell allows its customers configure their own computer). Perhaps the most important feature of business in the 21st century will be

moving negotiation power in the value chain from producers to consumers, whose needs and requirements dictate the success or failure of individual companies and their products and services. According to some opinions, the 21st century is more properly called age of the consumer, before century of technology. Modern companies have to understand that their consumers power generating most of the current and future operating revenues and that they create value for the company, not the contemporary technological solutions. The new technology in business is just a tool for the connection of the technological possibilities with what consumers want. Best business technology solutions adjusted technological capabilities with the wishes and needs of the people as consumers, instead of changing consumer behavior in line with new technological solutions (possible but very hard work). Realizing that consumers are a major resource companies, consumers are located in the center of all business activities of the company in order to create superior value for consumers [Đorđević, 2007: 139].

Most empirical models of choice in economics and consumer research assume that the decision maker assesses all alternatives and information in a perfect information-processing sense. The complexity of the choice environment, the ability of the individual to make complex decisions, and the effect of choice context on the decision strategy are generally not considered in statistical model development. One of the reasons for this omission is that theoretical literature on choice complexity and imperfect ability to choose that has developed in psychology and behavioral decision theory (BDT) literatures has not been translated into empirical econometric analysis. Second, the data used in economics and consumer research studies tend to be somewhat different from the data structures used in psychology and BDT literatures [Joffre and Adamowicz, 2001].

### **3 FROM CONTENT MARKETING TO CONTENT DIGITAL MARKETING**

Rolf Jensen stated “In the information society in the last century the best product was winning, this century the best story is winning.” It is well known how previously mentioned paradigm find its sense in designing marketing mix (4P). All of these elements should be communicated to the market through the message in a manner to adopt features of the story. This concept developed content marketing, which is the product / service turned into value for customers and value for customers should have been communicated to the customer in the form of stories about the product / service, or something that has value to the customers and is associated with the product / service. Only with the appearance of digital marketing that process has been fully enabled, especially by the emergence of the Internet, but also the possibility of interactions with customers. This provides dynamic and more flexible process of creating web content in an optimal way.

The web provides an ever-changing, morphing platform for content, which is an ongoing conversation between the company and her customers. We need to keep up, not only with the technology but also the audience — who are they, what do they want, and how can we get their attention and keep it? The answers to all of those questions start with one thing — content strategy. We need to learn about our audience, figure out how to reach them, and enter into a conversation with them so that there is trust and comfort. To do that, we need a solid system that keeps us on track throughout this process. Content marketing is the tactic that will help the companies establish a brand audience who engages consistently with their marketing content and recommends the company brand to others via social networks [Leibtag, 2014].

The importance of digital content to business and society grows it is important seek a holistic perspective on the definition and nature of digital content marketing (DCM). Along the journey it becomes evident that a recurrent theme in DCM is customer value, while is important an exploration of customer value in digital content marketplaces. Digital content is defined as: 'bit-based objects distributed through electronic channels'. The conclusion sums up the unique characteristics of digital content, and associated consequences for digital content marketing [Rowley, 2008].

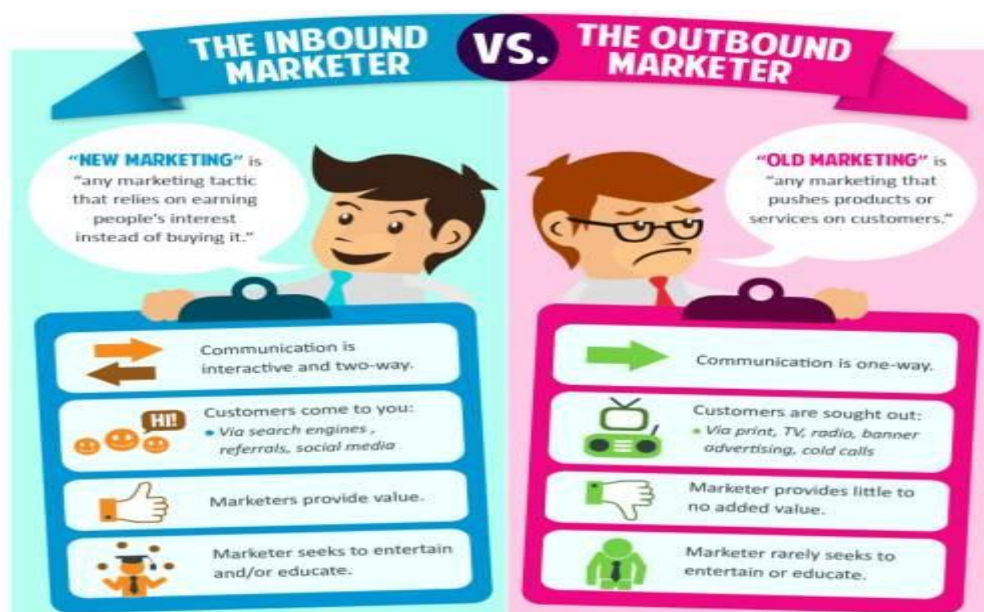
## **4 INBOUND MARKETING VS. OUTBOUND MARKETING**

Classic but also contemporary marketing continued "tradition" of "pushing" a certain aggressiveness to the customer, which is reflected through their own names of strategies and tactics that have dominated in the marketing by the end of the 20th century: „push“ marketing, „offensive marketing tactics“ etc. For that reason, effectiveness of promotional activities systematically began to decline. This is supported also by contribution of the new technology which provided through modern software tools blocking displays of advertising messages on cell phones and computers. Therefore, marketing needed to find out new solutions due to the fact that the old approach to the customer does not work anymore. New marketing stopped to push product/service to the customer and created new tactics which aim is to deserve customer attention.

That kind of new marketing has been often called inbound marketing and tradition marketing as outbound marketing. The most obvious differences between inbound and outbound marketing brings us figure 1.

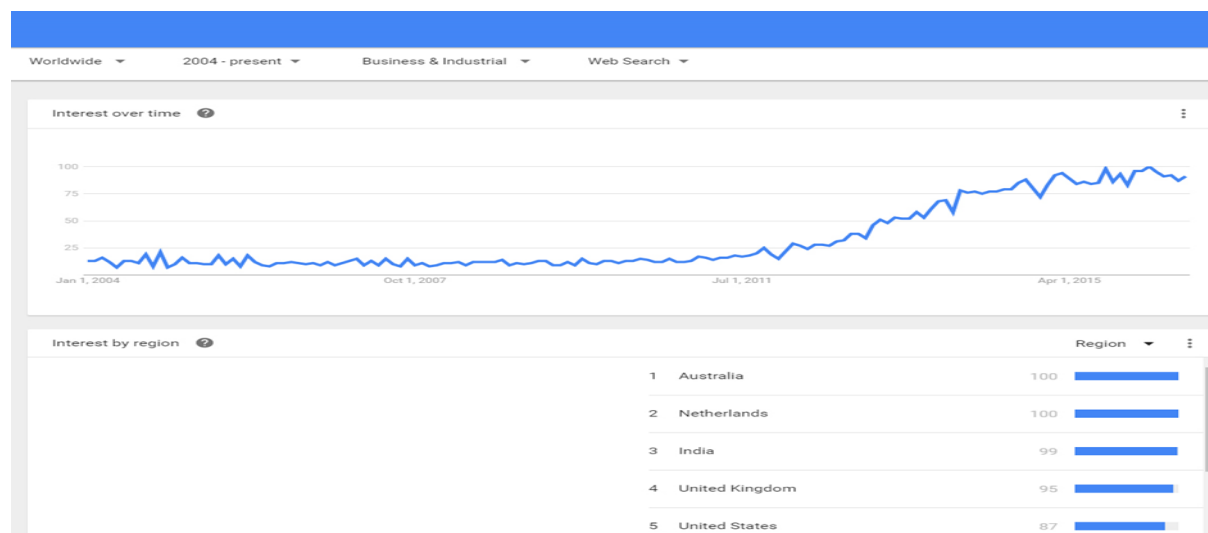
The main tool of the new marketing is content. "Content Marketing" or marketing where "Content is king" shows explosive growth in the last five years. It is just enough to look for the term in "Google Trends" Web application to see how until 2011-12 years the term "content marketing" was relatively uninteresting, until after that happens ascent in recent years. It is also indicative to see the top five countries from which users have searched this concept (Figure 2).

Figure 1. Differences between inbound and outbound marketing



Source: Drell [2011]

Figure 2. Trend of the searching the term "content marketing" from 2004. to 2016.



Source: made by authors

Digital content marketing is actually a solution how to apply inbound rules of the new marketing in contemporary communication with the customers. High-quality and optimized content provides two-way communication with the company and the customers while content allows companies to educate the customers, to entertain them, to bring them message of the value, and finally to transfer the story of the message through content on the way which customer wants. It seems that the bound between marketing and real life constantly fades while

digital marketing becomes integrative part of customers digital lives. That certainly evokes ethical implications and further multidisciplinary research on this subject, which exceeds the bounds of this paper. Digital marketing goes in line with contemporary trends which are reality of the contemporary society.

## **5 ZERO MOMENT OF TRUTH – ZMOT**

Due to the shift from outbound to inbound marketing, marketing experts started to generate more content which spread like a virus across the Internet and social networks. The goal became to earn attention and credibility that results in a large number of followers, better positioning on the search engines and ultimately capitalizing relations with followers in the form of profits. Key question is: When is the precise moment when buyer makes his choice about purchase? That moment actually represents key outcome – goal of the content marketing.

Marketing expert Gary Vaynerhuk depicts content marketing by catchword "Jab Jab Jab, Right hook" in which jabs represent content which prepare customers for the "right hook" – actually, decision and the final purchase. This preparation consists in the aforementioned education, entertainment and value provision to the consumers. Marketing experts should be also aware how the impact on purchase decision depends even on the content generated from the other "stakeholders" – especially medias and previous customers.

Google Company in 2011. presented "Zero Moment of truth" concept which describes a revolution in the way how consumers search for information online and make decisions about brands. Classical concept "moment of truth" has been applied for decades in marketing, but now has been transmitted from the moment of purchase to the moment of making a decision to purchase.

Moments of Truth (MOT) in marketing, is the moment when a customer/user interacts with a brand, product or service to form or change an impression about that particular brand, product or service. In 2005 A.G. Lafley - President and CEO of Procter & Gamble, coined two Moments of Truth i.e. first and second [Lafley, 200]. Third was gradually introduced later [Cohen, 2013].

Types of MOT are following: First moment of truth (FMOT): When a customer is confronted with the product in-store or in real life [Nelson and Allison, 2005]. When a customer purchases a product and experiences its quality as per the promise of the brand refers to the second moment of truth (SMOT). Third moment of truth (TMOT): Consumers feedback or reaction towards a brand, product or service i.e. consumer becomes brand advocate and gives back via word of mouth or social media publishing [Ashby and Miles, 2002].

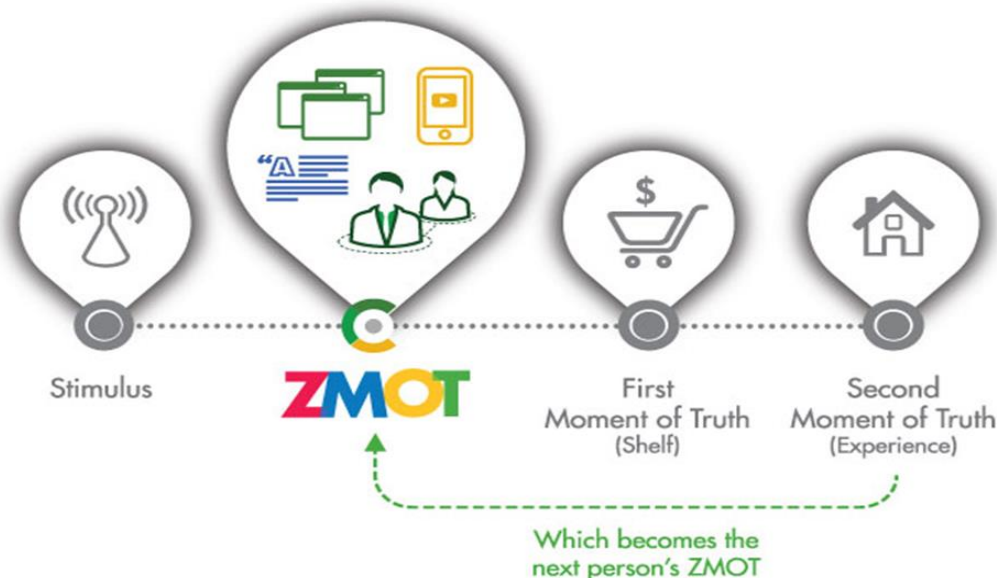
Zero Moment of truth (ZMOT) is a term coined by Google in 2011 which actually refers to the research which is conducted by a user online about a product or service before taking any action i.e. searching for mobile reviews before making a purchase. The internet has changed altogether the way consumers are interacting with brands, products or services this online decision-making moment is termed as ZMOT. According to research conducted by Google in 2011, 88% of US customers are researching online before actually buying the product.

The less than Zero Moment of truth (<ZMOT) is a term started by Eventricity Ltd in 2014 referring to the time between an Event in a Customer's life happening and the point at which they decide to research a purchase (ZMOT).

In the context of digital marketing, the most interesting and crucial is to comprehensively describe Zero Moment of Truth.

"We saw that people are increasingly making these decisions at the Zero Moment - the precise moment when they have a need, intent or question they want answered online. These questions can be anything from "Which brand of diapers will help my baby sleep through the night?" to "What toothpaste is going to make my smile brighter?" or "What will remove crayon marks from my wood dining table?" A brand that answers these questions at just the right time scores a double win: It helps improve a consumer's life and stands to gain a competitive advantage over brands that do not" [Google Research, 2011].

Figure 3. Zero Moment of Truth model



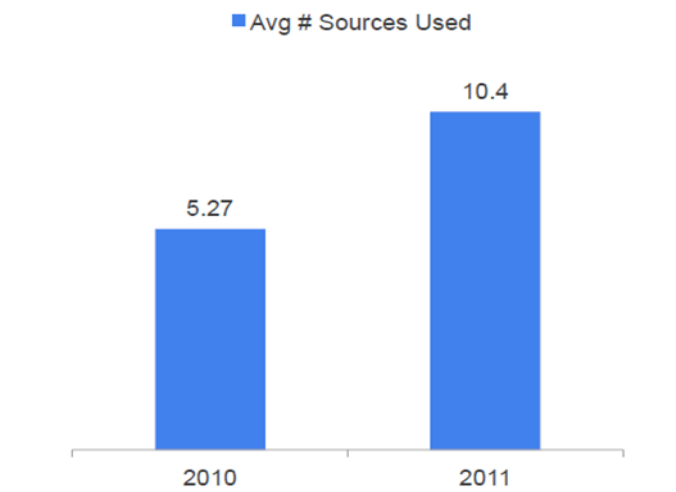
Source: Google Research (2011)

Traditional 3 step Mental Model of Marketing did not involve ZMOT but only Stimulus, First moment of truth (at shelf in store) and Second moment of truth (experience).

In the phase of Zero Moment of truth, consumers are informed about the product, its alternatives, read the reviews, the experience of other users, look for coupons and discounts, and this is all before the first moment of truth or departure in the real or virtual stores.

Research on 5000 customers in 12 different product categories showed that consumers use more than 10.4 different sources before buying in 2011 while the number of sources in 2010. was 5.3. It is also important to note that the second moment of truth, and the experience of our users become ZMOT - zero moment of truth for another user.

Figure 4. Number of information sources before the purchase

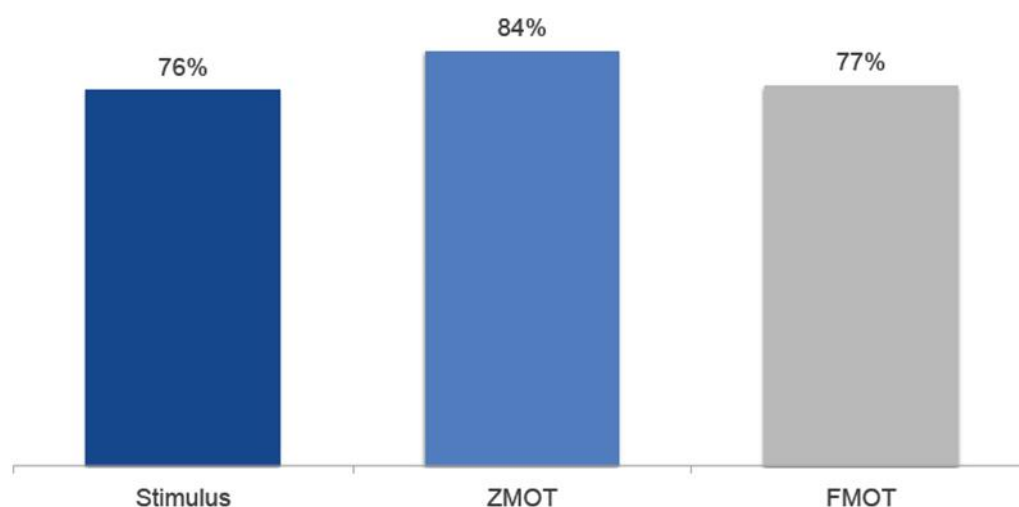


Source: Google Research, 2011.

The same research showed how ZMOT is the most important phase during the process of making decision to purchase product/service.

Due to the fact how the decision to purchase is a key moment in marketing, it is extremely important to master the skills necessary for success in this new - "zero moment of truth". For success in this moment of truth, it is necessary to adapt the training and skills of the personnel that will equally include understanding of technology and marketing.

Figure 5. The impact of individual phases on the decision to purchase product/service



Source: Google Research, 2011.

## **6 INTIMATE AUTOMATION FOR THE ONGOING RELATIONSHIP WITH (POTENTIAL) CUSTOMERS**

Second moment of the truth for one user in ZMOT model (Figure 3) becomes ZMOT for the other user. That goes in favor for the need of establishing ongoing relationship with customers, not only before buying (in stages to stimulate the purchase and MOT stage) but also later. Today, it has been provided by process of marketing automation which literally connects multiple touch points and marketing channels including social media, email marketing, content marketing, and they automate and measure in order to achieve long-term relationships with customers. Due to the fact how technology is increasingly becoming a part of man, the process is easier to achieve. Also, it is crucial to synchronize all data from the current communication channels in a manner to provide each user personalized multi-channel experience without delay.

Today is no longer a problem to have information about the customer, but is to synchronize this information from his cell phone and computer. The ultimate goal is to achieve "an intimate automation" with individual follower (one to one) which is similar to the original concept focused on attempts to adapt the marketing mix (then the only possible) to the small focus groups.

Figure 6 shows us the example of automation in which first step is to provoke potential customer by various previously mentioned channels and tools of marketing content (blog, youtube videos, facebook posts, forum, chat, podcast, etc.) in a manner to turn this interest into the purchase.

Figure 6. The example of marketing automation



Source: AWD, 2014.

## 7 DIGITAL MARKETING, NEW “MARKETING AESTHETICS” AND “UNBEARABLE LIGHTNESS OF PURCHASE”

CRM and digital marketing as its main tool can be put in the context of quality and understood as "something good, something beautiful". That kind of hedonistic view of quality [Avelini, 2007] gets its meaning in the age of digital marketing, so the authors of this paper argue for questioning the concept of aesthetics in marketing, trying to figure out how marketing as a link between company and customer, facilitates and enhances the life of the customers, and thus improves quality of life. Marketing encourages the purchase and consumption that becomes not only an individual but also a social act, which needs to be shared in real and virtual world.

Generally, authors are off opinion that the issue of aesthetics has been moved forward due to transition from the aesthetics of product design to the aesthetics and design of marketing. Therefore, aesthetics become crucial in the brand – customer relationship while purchase in the era of digital marketing is no longer the most important act. Drucker catchword “make sales superfluous” in digital marketing takes on its full meaning. Moreover, an essential is long-term relationship with customers, which in essence means repeated purchase.

Many companies have been sold for huge amounts of money due to the established customer relationships, power of brand and potentially usable database of customers. One of the newest example is Facebook’s acquisition of the Whatsapp - free messaging app which does not have any revenues, for incredible 19 billion dollars. Facebook actually paid more than 1 billion currently active Whatsapp users.

Although the sale is no longer necessary, it is also incredibly simplified, leading to a reflection on the concept of “The Unbearable Lightness of purchase”. The emphasize is therefore on continuous relationship, the moment of truth is no longer moment - it becomes a long-lasting experience while the purchase itself is simply the end of a thought process which represents a multi-channel experience. Therefore, the final goal of the CRM system is not purchase but customer, which was the unfulfilled dream of every classical marketing expert. This dream has been realized due to the new technology.

## 8 CONCLUDING REMARKS

The purpose of this paper was to examine on which way digital marketing, through interactive communication with the customers on the global level, brings new insights and opens new questions, not only for the science and marketing practice, but also the issues of the economy in general, including the role and way of functioning individuals (*homo economicus*) in contemporary information and technological oversaturated society.

Authors find key starting point in the thesis of behavioral economics, which is that the modern customer actually purchases guided by emotions and less according to its utility what reveals numerous options and challenges to digital marketing. There is a possibility of two-way communication, storytelling, creating and optimizing marketing content which has been spread through the channels of the digital world. In that sense, paper deals with the issue of digital marketing content, especially considering the concept “zero moment of truth” (ZMOT).

That fact is certainly a challenge for experts from the field of digital marketing. Information, technique and technology should be carefully screened and focus - do not overdo with content, information channels, but the same dose. Content should be intelligent, informative, funny, useful, in accordance with ethical values and based on ethical principles.

Ethical considerations that have been generally extended through the issue of the use of modern technology have been emphasized also in the sphere of digital marketing. Research in that field may be connected with the empirical researches of luck perception, which is known to be partially related to the level of an individual income, and has been achieved at a certain point of household income.

People literally enjoy new technology which has enabled marketing to become specific life video game while line between marketing and the "rest of life" becomes thinner. Marketing is more than ever become a multidisciplinary and transdisciplinary phenomenon, which raises questions not only for informatics, but also for psychology, sociology, anthropology, communication, philosophy, and especially ethics.

An interesting area for further research could be, according to Stephen (2016) consumer digital culture, responses to digital advertising, effects of digital environments on consumer behavior, mobile environments, and online word of mouth (WOM). Much is still to be understood, and existing knowledge tends to be disproportionately focused on WOM, which is only part of the digital consumer experience [Stephen, 2016].

From the point of digital marketing application and looking at marketing as a management process, it has been examined digital marketing content optimization, as well as associated consequences for digital marketing content. Central issue is the impact of developing a notion of 'value' in the context of digital content, and its consequences for value chain structures, pricing strategies, marketing communications and branding, and licensing and digital rights management. In addition, the customer's experience of digital content is influenced by all stakeholders in the value chain as well as requiring the customer to participate in learning and co-creation of the experience. The potential of the 'value-in-use' notion of customer value as a basis for ensuring that consumers are fully engaged as stakeholders in the content economy has to be discussed [Rowley, 2008].

Marketing, at least one of his key part definitely moved into the virtual space. It seems that we should all get used to spend an increasing part of life in virtual world, where the companies, products, brands and we our self are different. Definitely, difference between real person and its virtual identity constantly decreases. Marketing becomes successful if one of its key segments include digital marketing what does not change classical view on marketing. Marketing mix and value chain under the pressure of new technology have been expanded and complemented.

## REFERENCES

- [1] Affordable Web Design (AWD) (2014). <https://www.affordablewebdesign.com/wp-content/uploads/2014/11/marketing-automation-cycle.gif> downloaded: [August, 12th 2016]
- [2] Ashby, M.; S., Miles (2002). *Leaders Talk Leadership: Top Executives Speak Their Minds 1st Edition*, Oxford University Press.
- [3] Bakucs, Z., L; Ferto, I.; Szabo, G. (2010). Institutions in Transition – Challenges for New Modes of Governance, IAMO Forum, Germany, pp 3-5.
- [4] Cohen, H. (2013) Marketing: The 4 Moments of Truth, <http://heidicohen.com/marketing-the-4-moments-of-truth-chart/> downloaded: [July, 27th 2016]
- [5] Đorđević, B. (2007). Odnosi s potrošačima u digitalnoj ekonomiji, *Communications*, pp 133-157.

- [6] Drell, L. (2011). Outbound and Outbound Marketing, <http://mashable.com/2011/10/30/inbound-outbound-marketing/#iDTazO20lPqw> downloaded: [August, 22th 2016]
- [7] Eventricity Ltd (2014). 10 Feb the Less than Zero Moment of Truth, <http://www.eventricity.biz/the-less-than-zero-moment-of-truth/> downloaded: [August, 21th 2016]
- [8] Google research (2011). The Zero Moment of Truth, <https://www.thinkwithgoogle.com/research-studies/the-zero-moment-of-truth-macro-study.html> downloaded: [August, 21th 2016]
- [9] Henrich, J.; Boyd, R.; Bowles, S.; Camerer, C.; Fehr, E.; Gintis, H.; McElreath, R. (2001). In Search of Homo Economicus: Behavioral Experiments in 15 Small-Scale Societies, *The American Economic Review*, 91(2), pp 73-78.
- [10] Joffre S.; Adamowicz, W. (2001). Choice Environment, Market Complexity, and Consumer Behavior: A Theoretical and Empirical Approach for Incorporating Decision Complexity into Models of Consumer Choice, *Organizational Behavior and Human Decision Processes*, 86(2), pp 141-167.
- [11] Jovanović, N. (2016). Bihevioralna ekonomija i ponašanje potrošča, Diplomski rad, Sveučilište u Zadru, Odjel za ekonomiju.
- [12] Lafley, A., G. (2008) *The Game-Changer: How You Can Drive Revenue and Profit Growth with Innovation Hardcover*. Crown business.
- [13] Leibtag, A. (2014). *The Digital Crown - Winning at Content on the Web*. Elsevier, Waltham, USA.
- [14] Libert, K. (2015). The Inbound Marketing Economy, <https://moz.com/blog/the-inbound-marketing-economy> downloaded: [August, 11th 2016]
- [15] Nelson, E.; Ellison, S. (2005). In a Shift, Marketers Beef Up Ad Spending Inside Stores, Funky Displays and Lighting, TV Spots in Wal-Mart; Unsettling Madison Avenue. <http://www.wsj.com/articles/SB112725891535046751> downloaded: [August, 21th 2016]
- [16] Rowley, J. (2008). Understanding digital content marketing, *Journal of Marketing Management*. 24(5-6), pp 517-540.
- [17] Rowley, J. (2008). Understanding digital content marketing. *Journal of Marketing Management*, 24 (5-6) pp 517-540.
- [18] Stephen, T., A. (2016). The role of digital and social media marketing in consumer behavior. *Current Opinion in Psychology*, 10, pp 17-21.
- [19] Teck H.; Lim, N; Camerer, F. (2006). Modeling the Psychology of Consumer and Firm Behavior with Behavioral Economics. *Journal of Marketing Research*, 43(3), pp 307-331.

## **GENDER DIFFERENCES IN ADVERTISING - MISUSE OF WOMEN**

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### **ABSTRACT**

*Advertisements are absolutely everywhere. They do exist in a huge quantity everywhere around us and many people do not notice them at all. But, It is very important to research them because they are very indicative and they represent, in a way, system in which we live. They have an influence on the construction of our identities but also on the notion of social roles and on the difference between women and men. In this context, it is interesting to watch advertisements in terms of gender stereotypes as well as the use of women's bodies in the advertising industry. The aim of the analysis of advertising content is to determine the extent to which a woman's body is used in advertising but also the violation of a law on gender equality in advertising content.*

**KEYWORDS:** advertising, advertisement, stereotype, sexism, women.

### **1 INTRODUCTION**

We live in a time of advertising. It is now a very powerful industry that not only sells products, but also the value, status, and at the end – ideals. Marketing ad is the simplest way to reach the customer, and the ad certainly has to leave a striking impression. So, there are many videos those are packed into a joke, pun, caricature but unfortunately the provocation, stereotypes and sexist messages. Advertising, posing as questionable and timeless, sale notions of how the world should look like and how it should behave people and often played the wrong ideas about society, its values, but also on its individual segments and members. The difference in the presentation of women and men in advertising is undeniable. It is well known that the advertising industry through advertisements wants to attract attention and sell a product and because of these reasons, the physicality of a woman and the woman's body is only function of images very often. The fact is that many brands in the region significantly playing with the woman and her place in society, whether it is present as a sex object or housekeeper. Such

advertisements do negative effect on the position of women in society. Advertisements which show only physical attractiveness of women or sex create but also fix stereotype picture of woman. This can lead to the fact that the society begins to experience women in consistent with that notion. But also, which is maybe more important, this can lead to the fact that women begin to experience themselves with that notion. Advertisers have task creating of perfect world in which marketing agencies use women very often. These women, in this complete process, become „products and objects“. All this is a result of stereotyping and prejudices that exist in most societies and the role of women is most often found only on physical attraction or stereotype about joining feature successful women and motherhood.

## **2 STEREOTYPES IN ADVERTISING**

### **2.1. WOMAN'S PLACE IN A COMMERCIAL**

The issue of gender in advertising is the subject of scientific research for several decades. Although this issue is not sufficiently treated in our region, in the world has published numerous articles in magazines that deal with marketing, sociology and psychology. So, this subject can be polemicized through all of these aspects. There are several important reasons why this topic is interesting. First of all, knowledge of the cultural and social features related to gender, imposed by society, is an important factor in the creation of assuring commercials and effective marketing strategies (Alvesson, Billing, 1997). Also, it is important to mention that the sex of one of the basic criteria for market segmentation. Market segment based on this criterion is very easy to identify (Kotler, Keller, 2005). Women and men on different ways identify information which are sent by commercials. In the process of information processing women have significantly better access for their analysis, they use intuition and connect from multiple perspectives, and they take into account the interconnected elements. Men usually watch more elements without their permeation. They treat information independently one from others. Men are usually focused on the signals those are easily available over the information processing (Kim, Xinran, Morison, 2007). Perhaps, the previously mentioned matrix that we accept as the norm and as acceptable forms division even when the identifying information is questionable, a key problem arises when these matrices are associated with stereotypes and discrimination.

### **2.2.FROM STEREOTYPES TO DISCRIMINATION**

The existence of stereotypes in advertising in the region confirmed to us the following phenomena:

1. Presence of sexism is huge. Sex in advertising actually existed since the late nineteenth century, while the mass "undressing" of women in advertising was used by the end of the First World War. The use of sex for propaganda purposes has made progress at an

incredible speed at the end of the last century, so in these days the woman is „one step to plastic dolls whose sole physical characteristics excessively exploited for marketing of different products“ (Pavlović, 2004;221). The fact is that the amount of sexism varies from country to country and this can be explained by cultural context and political culture of authoritarianism (Ibroscheva, 2007). The higher level of authoritarianism, lower the level of sexism, or vice versa.

2. In the advertising industry in the region, women are mostly naked, and such a phenomenon usually causes erotic allusions. Women, throughout this process, gets only a decorative function. This phenomenon will be linked with globalization and the phenomenon of copying the concept of US print and TV advertising (Wolin, 2003).
3. One of the big problems is the prejudice that there are so-called *primary customers*. In the case of most products (mainly those much financially cost) men are the primary buyers. The starting point for this view is the belief that men have a higher authority, expertise and competence, particularly in the field of cars and techniques. There are several reasons that can cause these attitudes:
  - Imbedded traditional view that women are dependent on men,
  - General progress for women starts to grow only in the last few years (it is a very complex and slow process),
  - Advertisements are indicators of the dominant social values and represent a kind of reflection of the distribution of of power in society.

Today, the advertisements in the modern media generally can be characterized according to their content and focus on those that address to the female population and on those which are turn to the male population.

### **2.3. CLASSIFICATION OF ADVERTISING IN RESPECT OF SEX**

There are two types of advertising in which women appear: the first type of advertising is intended for women and it has many subtypes. In this category are advertisements with the woman who is shown in a socially imposed role: she is worth a housewife and caring wife and mother who chooses the best for her children and her family. Analyzing ads that promoting food products (in countries in the region), it is obvious allusion according to which is the fundamental task of women caring for family. Mothers are the ones who care for food, protecting their families, while men are portrayed in advertising but only as passive observers. In the "domestic" commercials, experts say that there are three kinds of women: "woman-child", "woman-woman" and "woman-mother". The first type of commercials are those where a little girl immensely enjoys the smell of fabric softener, or daughter who competes in the purchase of better laundry detergent, and mothers support their choice. In this group there are commercials for women concerning cosmetic products which will help her to seduce and conquer any man (Shauma, Garnier). The local media are full of commercials of cosmetic products. In these commercials are usually displayed world-famous singers, models, actresses,

which with their appearance confirm the effectiveness of a particular product. The messages that are sent by celebrities is that women can and deserve to look nice, groomed and desirable, just like them. Advertisements almost always show some innovation (all products operate from the first day). The industry of cosmetic products in its advertising emphasis put on beauty, stereotypes or the imperatives. The products through commercials, get symbolic, "the exchange" value on a human scale, if it is possible to create (and enforce) the connection between the product and the customer.

Another type of commercials is addressed to men, and in them women usually have a decorative function, they are shown through erotic allusions or as part of promotional goods. These are the various commercials for cars (an example of fashion model with her legs spread, advertises car Golf V, with the message "indecent proposal"). In those kind of commercials could be seen women with perfect proportions which send messages to men, "between the lines", that they will be more desirable after buying these products.

### **3 PRESENTATION OF WOMEN IN CROATIAN WAY**

This article was created from a desire to show how female gender represented in advertisements in women's magazines in Croatia. Perhaps even more importantly, we wanted to show the ways in which women are presented. Because of these reasons, it was made one, albeit brief survey, but sufficient to notice potential problems when considering showing the woman's role in society. The research which was done, actually presents an analysis of the advertising content of two women's magazines in Croatia (*Glorija* and *Story*). These newspapers are considered as representative for this type of research and analysis. We analyzed samples of these newspapers in the period from July 27th to August 19th, 2016. A total of eight publications (publications are weekly newspapers) and the sample included the entire newspaper content. The methodology of this study included the techniques that can be classified into two categories:

1. The representation of female characters (how many women are represented in commercials in comparison with men);
2. The status of women (their identity, what they show, do the commercials confirm the stereotypes).

#### **3.1. ANALYSIS OF STORY**

Analysis of the Croatian women's magazine shows that women have an absolute advantage over men in the advertising presentation. Graph 1 shows a representation of female and male characters in the analyzed sample of newspapers, and points to the fact that women mainly participate in the advertising industry (there is a significant number of commercials in the category "Others" what indicates commercials in which neither women nor men have leading

roles). The presence of women and men in advertisements can be illustrated as follows (Graph 1.).

Graph 1. Advertisements in the magazine Story

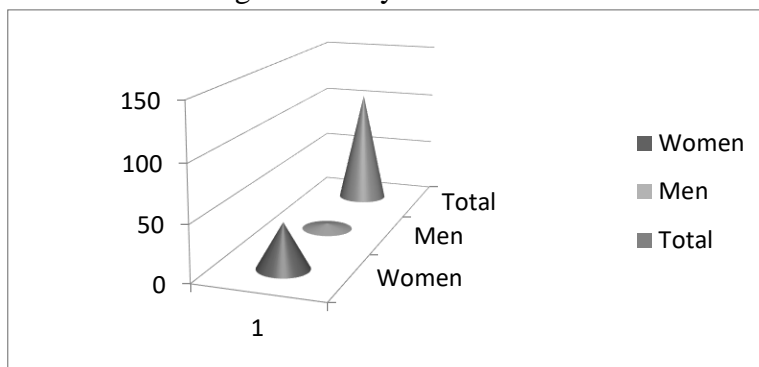


Table 1. The total representation of female and male characters in advertisements in the magazine Story

STORY	<i>The total number of advertisements (1)</i>	<i>The number of impressions of women in advertisements (2)</i>	<i>The number of impressions of men in advertisements (3)</i>	<i>Percentage (Index 2/1)</i>
27.07.2016.	<b>31</b>	<b>15</b>	<b>1</b>	<b>48,38%</b>
03.08.2016.	<b>32</b>	<b>11</b>	<b>2</b>	<b>34,37%</b>
10.08.2016.	<b>27</b>	<b>10</b>	<b>1</b>	<b>37,03%</b>
17.08.2016.	<b>16</b>	<b>5</b>	<b>1</b>	<b>31,25%</b>
TOTAL	<b>106</b>	<b>41</b>	<b>5</b>	<b>38,67%</b>

Table 1 provides data on the overall representation of female and male characters in the advertising space of Croatian women's publications. It is interesting that women appear more than 8 times than men. Male characters in the commercials are indeed a rarity (in some editions appear even one time). Analyzing the the entire media content, it is evident that there are more recognizable identity-male characters are for serious, authoritative and credible role. On the other hand, women mainly creates a good visual scene, and in this context, commercials are ideal place for female characters.

### 3.2. ANALYSIS OF GLORIJA

The above-mentioned views are similar in the second magazine which is analyzed. Female characters are absolutely dominant in relation to the male characters.

Graph 2. Advertisements in the magazine Glorija

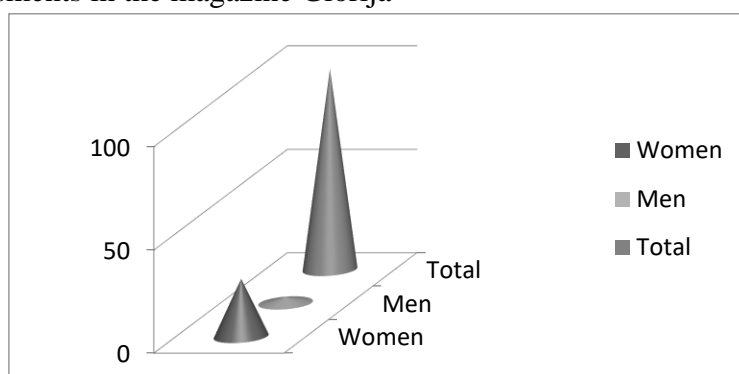
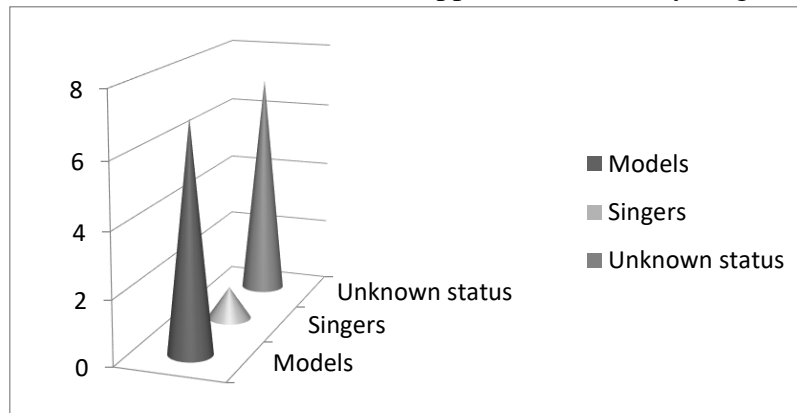


Table 2. The representation of female and male characters in Gloria

GLORIJA	<i>The total number of advertisements (1)</i>	<i>The number of impressions of women in advertisements (2)</i>	<i>The number of impressions of men in advertisements (3)</i>	<i>Percentage (Index 2/1)</i>
28.07.2016.	<b>26</b>	<b>8</b>	<b>3</b>	<b>30,76%</b>
04.08.2016.	<b>31</b>	<b>8</b>	-	<b>25,80%</b>
11.08.2016.	<b>24</b>	<b>6</b>	-	<b>25%</b>
18.08.2016.	<b>16</b>	<b>6</b>	-	<b>37,5%</b>
TOTAL	<b>97</b>	<b>28</b>	<b>3</b>	<b>28,86%</b>

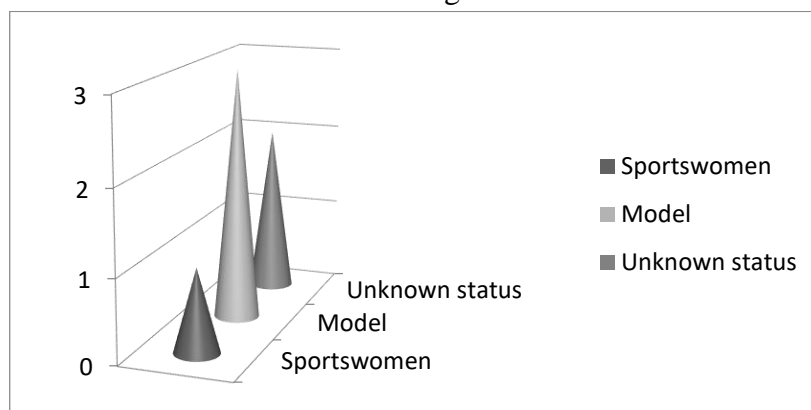
Very interesting data were appeared in this analysis. For example, women were appeared 28 times in a total of four time editions, and it is 28.86% of entire advertising content. The men in the commercials were present only 3% (there were no men in commercials in three editions in August). These data show that women in relation to men, in quantitative terms, scored significantly better role. However, in the distribution of social power and prestige, they are absolutely subordinate. In this context, it was very interesting to observe the categorization of the main protagonist in commercials by occupation and / or the position they occupy in society. The status of women and men in the advertising can be an indicator for the assessment of status of these characters, their identities and roles, as well as an indicator for the assessment of their importance and also of positioning in society. To realize what the professional status of women is in advertising, it will be displayed graph that shows what actually are the main occupations of women that advertise certain products.

Graph 3. The professional status of women that appear in the weekly magazines\*



\* Graphic indicates the professional status of women in a single edition of the weekly magazine Story, number 30, July 27th 2016.

Graph 4. The professional status of women in magazine Gloria\*\*



\*\* The graph indicates the professional status of women in the edition of magazine Gloria (August, 11th, 2016).

Analyzing data from the graph 3, it is evident that women, generally, have a role whose references are reduced to beauty, physicality and entertainment. Thus, 46% of women were in the role of the model, 6% of them were in the role of the singer, and the other 46% of women had anonymous status (women with no known professional status). Women in Gloria are sportswomen (16%), models (50%) and women of unknown status (33%).

### 3.3. INEVITABLY MOTHERHOOD

Advertisements in Croatia (in women's newspapers) are very interesting. At first sight, it seems that the commercials that show and link women with beauty, cosmetics and fashion are very interesting. However, more detailed analysis reveals that of "inevitable" nature of motherhood as part of the life of a woman which is not only essential, but also a natural expectation of the role of women in society. In this sense, in advertisements, motherhood is inevitable, and very

often implies that a woman is not and can not be happy unless she is part of the traditional family and if she does not take care of her family.

Figure 1. An example of advertisements published in Gloria



Figure 2. Precedent advertising that alludes that motherhood is the most important for woman (a commercial of Podravka)



Author Rebranović (Kultura komuniciranja, 2013.) states that the first role of women in advertising is motherhood, and then, the deceitfulness, perfection, manipulation and dependence on men. Unfortunately, all these facts are present in the Croatian advertising industry.

### 3.4. BRIEF ANALYSIS OF RESEARCH

In Croatia, there is the Law on Advertising in the framework of the Media Act in which, in Article 20, it is clearly stated that it is not permissible advertising in which women and men in an insulting manner. Indeed, there were not found advertisements which woman shows in an insulting and degrading manner (in terms of sexuality), and also in women's newspapers was not found sexist advertising (it does not mean they do not exist: it mustn't be forgotten advertisements such as those of the Croatian Tourist Board which is prohibited in order to sexist message, advertisements for beer's industry and many others that have occurred and which are broadcasted on Croatian territory), but of course there are those commercials that promote

stereotypes and promote wrongly acquired the role of women in which she is reduced mainly to physical attraction and visual sensation. This study found that ads in Croatian women's magazines still more promote stereotypical roles of men and women, but they are also harmful and they are not at all, harmless social problem. Sexism, prejudices and gender discrimination in the media and in the advertising industry, are mostly related to negative objectification and presentation of women, and as such they have very harmful effects. Presentation of women in advertising and the media in general, shows clearly the position of women in contemporary society: it is still strongly patriarchal and it is under the influence of stereotypes.

## 4 CONCLUSION

It is necessary to make extensive research and analysis of media content to more accurately could analyze the manner of representation of women in the advertising industry. This work suggests that media companies in the region (mainly commercial) prefer male gender, assigning them all the roles that determine the fate of a large number of people, and even the whole society. A woman comes to the fore when it should be showed attributes of physicality and attractiveness - she becomes a natural attraction and visual sensations. In general, the systematic exploration of advertisements throughout the region are missing, and the study of these issues could lead to the identification of key relationships in the society and serve as an indicator for the assessment of elements of the overall cultural matrix.

The media have great influence in promoting social values so it is important that media is showing both sex. It must be changed attitudes and awareness of the roles and functions of women and men. It must be stoped showing woman through stereotypes, and thus, equality, which is guaranteed by the law, will not be just a phrase. The correct presentation of women and their roles in the society is one of the key factors in strengthening the social awareness about equality between men and women and eliminating discrimination based on sex.

## REFERENCES

- [1] Alvesson M., Billing Y.(1997): *Understanding Gender and Organizations*, Sage, London.
- [2] Bal Frensis (1996):*Moć medija*, Clio, Beograd.
- [3] Bamburać, Jusić, Isanović (2007): *Stereotipizacija: Predstavljanje žena u štampanim medijima u jugoistočnoj Evropi*, Mediacentar, Sarajevo.
- [4] Beetles A., Harris L. C. (2005): *Consumer attitudes towards female nudity in advertising: An empirical study*, *Marketing Theory*, Vol. 5.
- [5] Ibroscheva E. (2007): *Caught Between East and West? Portrayals of Gender in Bulgarian Television Advertisements*, *Sex Roles*, Vol.57.

- [6] Jurčić, D.(2014): *Predstavljanje žena u tiskanim medijima u BiH, od stereotipa do diskriminacije*, doktorska disertacija, Mostar.
- [7] Kotler P, Keller K. L. (2005): *Marketing Management*, 12. edition, PrenticeHall, New Jersey.
- [8] Kim D. Y, Xinran Y. L, Morrison A. M. (2007): *Genderdifferences in onlinetravelinformationsearch: Implications for marketing communications on the internet*, *TourismManagement*, Vol 28.
- [9] *Kultura komuniciranja*, znanstveno stručni godišnjak, Fram Ziral, Mostar, 2013.
- [10] Pavlović, M. (2004): *Odnosi s javnošću*, Megatrend univerzitet primenjenih nauka, Beograd.
- [11] Vidmar, K., H.(2002): *Nasa zena and the image of the mother: contradictions and oppositions, 1991-2000*, Boznar&Partner, Ljubljana.
- [12] Wolin D. (2003): *Gender Issues in Advertising – An Oversight Synthesis of Research: 1970-2002*, Journal of Advertising Research.

## **MICRO-MOMENTS OF USER EXPERIENCE: AN APPROACH TO UNDERSTANDING ONLINE USER INTENTIONS AND BEHAVIOR**

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### **ABSTRACT**

*In recent years, in the advent of global internet availability and almost equally omnipresent mobile device usage, online user behavior together with the resulting experience has been changing and evolving at a significant pace. Users do not only spend more time online, they consult online resources and seek information for various goals and are motivated by a variety of needs: those intent-driven actions are dispersed throughout the day (or night) and integrated within their daily activities. The user behavior is determined by specific micro-moments which are truly the moments of consumer needs and therefore the moments the marketers need to be a part of. Furthermore, mobile devices and smartphones in particular, possess the ability to promptly meet the immediate needs of their users thus shaping new opportunities for marketers to capture and utilize. In order to have a better understanding of online user intention and behavioral patterns, the paper provides an insight of recent studies of user micro-moments within the digital environment. The main goal of this paper is to provide an overview of recent academic and professional papers on the changes in online user experience and behavior and suggest the theoretical background for further research. Mobile devices can directly influence user behavior and emotional states by addressing a wide variety of information needs. The implications of these findings are important as they empower the possibilities of direct marketing in the digital era.*

**KEYWORDS:** micro-moments, mobile devices, online user experience, user behavior

## 1 INTRODUCTION

In recent years, there have been significant changes in patterns of information search and information consumption paired with highly accelerated information flows through different mediums and associated channels [Nicholas et al., 2013]. Information access and transmission has been heavily influenced by the use of mobile devices such as portable computers (laptops), mobile phones, tablets, wearables and similar devices. Mobile devices are highly individualized communication tools [Bacile et al., 2014] that have enabled consumers' global access to digital information while empowering them to initiate engagement with desired content at the time and place of their preference [Fulgoni, 2016].

An overwhelming majority of consumers in developed and emerging economies alike are mobile phone users [Nielsen Research, 2013]. For 2016, the number of mobile phone users worldwide is forecast to reach 4.61 billion while the same source project over 5 billion mobile phone users in 2019 [Statista, 2016a]. Within that majority, the percentage of smartphone ownership is on the rise. Smartphones are usually described as advanced mobile phones with data access capabilities and a multitude of software applications [Mang et al., 2016]. In 2016, the number of smartphone users is expected to reach 2.08 billion worldwide and by 2019, the number of smartphone users should surpass 2.66 billion [Statista, 2016b].

Mobile devices have been rapidly altering user behavior: the change is evident in the way users search, interact, socialize and make purchases [Ghose et al., 2013]. This type of change is affecting the entire user experience across various screens, devices and channels [Adams et al., 2015]. Mobile devices represent "the most important dislocation in the historical communication flow from brands to consumers" [Fulgoni, 2016]. Furthermore, in many countries more searches take place on mobile devices than on (desktop) computers. Adams et al. [2015] suggest that mobile search behavior is a good reflection of growing user reliance on mobile devices worldwide. Avci [2013] proposes that a simultaneous usage of several media formats and devices is a behavior leading to a 'glance culture' where users split their attention between varieties of condensed media forms. Within this behavioral change, consumer attitudes, expectations and values are transformed and shaped towards new conventions.

The global internet and mobile device presence equally enabled the potential reach of their respective users: it allowed marketers to reach their target audience constantly and more directly [Grewal et al., 2016]. Considering the decreasing user attention span and lower patience levels, it is relatively easier to provide all the relevant information through mobile device [Sarvepalli et al., 2016], acknowledging the user-specific needs and preferences. The ability to support location-based applications is an extremely important feature that is very specific to mobile

devices [Grewal et al., 2016]. Those interconnected devices allow access to a range of context-based and location-based services that were previously unavailable.

## **2 MICRO-MOMENTS OF USER EXPERIENCE**

The availability of mobile devices resulted in changing the user experience in the digital environment. The traditional user journey is fractured into hundreds of real-time intent-driven moments which occur billions of times per day (Solis, 2015). In 2011, Google specialists introduced the term Zero Moment Of Truth (ZMOT) as an online “decision-making moment of user experience” (Lecinski, 2014). However, the term ‘micro-moment’ started to appear more frequently in digital information environment around 2012 but was made extremely popular by Google, among others, during 2015 (Google Trends, 2016). Llewellyn (2015) suggests that the micro-moment concept is a successor to ZMOT concept and is influenced by the increasingly evolving state of mobile device usage among users. Besides many available professional articles, the usage of the term micro-moments is still rather limited in the scientific domain.

Ramaswamy (2015) refers to micro-moments as “intent-driven moments of decision-making and preference-shaping” that occur during the entire user journey and ultimately determine how that journey ends (Adams et al., 2015). These micro-moments happen when individuals almost reflexively reach for a device (usually smartphone) to promptly act on any sort of immediate need. In these moments, user expectations are very high because they expect businesses to proactively anticipate their needs powered by contextual data (Husson, Ask, 2014). In addition, digitally-savvy users expect companies to immediately deliver useful content to help them shape preferences and ultimately make decisions (Milhinhos, 2015).

Micro-moments unfold through a variety of user-oriented scenarios (Solis, 2015). Adams et al. (2015) propose 4 categories of micro-moments: I-want-to-know, I-want-to-go, I-want-to-buy, and I-want-to-do moments. In several articles additional categories or sub-categories of micro-moments are also mentioned. Solis (2015) suggests an additional micro-moment type: I-want-to-learn (even though it might be considered within the I-want-to-know category). Regardless of the micro-moment category, every micro-moment is determined by user intent, context and immediacy.

Wan et al. (2010) mention micro-moments in the context of information services of smartphone applications, yet the detailed elaboration of the term is missing. However, the same authors continue to conclude that personalized information services of smartphones support many micro-moments within the travel process (Wang et al., 2013; Karanasios et al., 2015) in addition to supporting main travel activities such as planning, reservation and navigation. The similar influence on user searching and purchasing activities is apparent across multiple mobile devices (Ghose et al., 2013; Google, 2012).

Several researches (Luo et al., 2014; Bernoff et al., 2014) use the term mobile-moments along with micro-moments. Luo et al. (2014) suggest that mobile-moments are specific situations when users reach for a mobile device “for instantaneous response to a moment in context”. Furthermore, Bernoff (2014) differentiates the two terms suggesting that micro-moment is a mobile moment that requires only “a glance to identify and delivers quick information that you can either consume, or act on immediately”. Some marketing professionals even propose the term moment marketing (Friedman, 2014; Ferreira, 2015; Pollock, 2016; eMarketer, 2015a) or micro-moment marketing (Lacoste, 2016) suggesting that micro-moments create a significant starting point of understanding the target audience behavior. In the following subsections, the influence of micro-moments in specific market-related situations and fields will be addressed.

## **2.1 MICRO-MOMENTS IN MOBILE COMMERCE**

One of the most important marketers’ goals over time is reaching target audience at the moments they are open to be influenced and motivated towards preferred action, namely purchase decision (Samarhan, 2016; Court et al., 2009). For many years these moments were understood through a funnel where users evaluate a number of potential actions and reduce the number of alternatives, ultimately choosing one desired action (Court et al., 2009). The funnel approach proposes that users “systematically narrow the initial consideration set” as they evaluate alternatives in order to reach a final decision about the purchase (Samarhan, 2016). However, the funnel concept doesn't capture the complexity of the decision process (Baik et al., 2014; Marvin, 2015). The path of user experience is less linear and far more complicated as it is comprised of various micro-moments of user experience.

Solis (2016) suggests that understanding user intentions, context and expectations for immediacy and relevance helps marketers in reaching their target audience more effectively. Digitally versed companies capture their target audience earlier in the decision-making process by creating useful content and utilizing those micro-moments (Think with Google, 2016). Users are attracted to the brands that best address specific micro-moment needs namely because mobile and digitally connected users are far more oriented on their personal needs than they are loyal to a particular brand or product (Fulgoni, 2016).

The rapid adoption of mobile devices as well as the widespread use of mobile applications has fueled the growth of mobile commerce (or m-commerce) worldwide (Xu et al., 2016). A recent study (Meeker, 2016) showed that the average global mobile phone user has 33 applications (apps) installed on the device, out of which 12 apps are used on a daily level. eMarketer (2016) estimates that US retail m-commerce sales will reach \$123.13 billion in 2016, which is slightly under a 40% increase in comparison with 2015 and more than double the amount compared to 2014. In addition, m-commerce will account for just under one-third of retail e-commerce sales in 2016.

Based on a recent Google/Ipsos study (Ramaswamy, 2015), 91% of US based smartphone users, look up information on their smartphones while in the middle of a task. Furthermore, 82% use their phones while they're standing in a physical store deciding which product to purchase. One in 10 of those buy a different product than they had initially planned. A similar study (Google, 2016) revealed that 88% of online users accessed a device for immediate information or ideas while 78% of smartphone users regularly turn to their smartphone for ideas while doing a given task. In addition, more than half of smartphone users agree that the last time they used their smartphone while shopping at the physical store, the information found impacted their purchase decision. Furthermore, 50% of consumers conducting research on their smartphone have purchased a product they would not normally purchase because of relevant information available on their smartphone in the specific moment (micro-moment).

Xu et al. (2016) confirmed that users rely on micro-moments across devices to browse for products and make purchases and in fact positively influence the consumer purchase process. In addition, Milhinhos (2015) investigated how the intersection of content marketing and e-commerce affects attitudes and behavioral intent, thus leveraging the micro-moments of user experience. The results indicate that content marketing in commercial product pages is relevant in driving consumer attitudes and purchase intentions. Interestingly enough, recent changes in user online behavior also influenced the frequency of physical store visits. Adams, Burkholder and Hamilton (2015) propose that even though the physical store visits have declined, consumers are spending more when they visit as a result of prior research and decisions made ahead of coming to the physical store.

A recent study of the US market (Forrester, 2015) indicated that many businesses recognize the sense of urgency that mobile-oriented user behavior has on user experience. In fact, 70% of companies stated they have begun to transform their businesses on account of mobile device usage among their target audiences. Furthermore, the same study found that businesses that act on implementing the micro-moment approach in their strategies reap tangible benefits in overall marketing investment.

## **2.2 MICRO-MOMENTS IN ONLINE ADVERTISING**

Bearing in mind the popularity and global connectivity of mobile devices, it is apparent that mobile advertising presents major opportunities for various businesses. The global mobile advertising market is growing, with estimation to reach over \$100 billion and account for more than half of total digital advertising spending in 2016 (eMarketer, 2015b).

Professional research has shown that the consumer engagement and the impact of advertising is higher on mobile devices than on desktop computers (comScore et al., 2015). Fulgoni (2016) suggest that the reason behind this is less advertising clutter on mobile devices in comparison

to traditional desktop computers and that advertisements can be delivered closer to the actual point of purchase or, in more general terms, closely aligned to the consumer mindset utilizing the micro-moments of user experience.

The message oversaturation of advertising communication channels has traditionally driven advertisers towards the need of being unique and different at almost any cost thus alienating them from the initial communication goals. Although target audience might respond to the novelty of advertising message, Gevelber (2015) argues that the consumers value utility over novelty which ultimately leads to achieving desired business goals. However, leveraging the potential of mobile advertising has proven to be a significant challenge with somewhat questionable effectiveness (Del Rey, 2012). In addition, a large percentage of consumers perceive mobile ads as irrelevant, thus considering them as irritating and often ignoring those ads entirely. This perception can lead to absence of any positive effect or even create negative influence on consumer attitudes and purchase intentions (Bart et al., 2014; Patel et al., 2013). On the other hand, prior research has shown that valid geo-targeting or consumer micro-location context is crucial to mobile ad effectiveness (Ghose et al., 2014; Luo et al., 2014).

### **2.3 MICRO-MOMENTS IN ONLINE TRAVEL INDUSTRY**

Smartphones appear to have substantial influence on travelers enabling them to access online information virtually anytime and anywhere (Brown, Chalmers, 2003) and construct their personal travel experience (Wang et al., 2010; Rasinger et al., 2007). Mobile devices “can change tourists’ behavior and emotional states by addressing a wide variety of information needs” while empowering them to solve problems more effectively, share their experiences and even preserve memories (Wang et al., 2013).

Common travel usages for smartphones usually include taking photos, social networking, viewing maps, finding transportation and searching for shops and restaurants (Mang et al., 2016). However, smartphone apps support tourists’ information processing activities in the consumption stage, but also the activities in the pre-consumption and post-consumption stages of tourism services (Wang et al., 2010). A number of activities that had been traditionally conducted by tourists in the pre-travel and the post-travel stage (searching for information, booking, feedback, reviews) are now being carried out in the during-travel stage. Karanasios et al. (2015) refer to this as a ‘concertina effect’ on tourism-related activities.

Location-based capabilities of mobile devices can foster “a scale of response and immediacy by tourists” which can’t be matched by any traditional means of tourist attention seeking (Brown et al., 2013). The omnipresence and strong computational capability of smartphones motivate tourists’ impulsive action (Wang et al., 2013) which accentuates the significance of micro-moments and the necessity of examining their influence.

### 3 CONCLUSION

In recent years, there have been significant changes in patterns of information search and information consumption. With the increasing number of mobile phone users worldwide, user behavior has been changing and evolving at a significant pace. Mobile devices have been rapidly altering user behavior: the change is evident in the way users search, interact, socialize and make purchases. This type of change is affecting the entire user experience across various screens, devices and channels. Furthermore, mobile devices enabled consumers' global access to digital information while empowering them to initiate engagement with desired content at the time and place of their preference. The user behavior is influenced by specific micro-moments which are truly the moments of consumer needs and therefore provide a significant platform of research. Micro-moments are intent-driven moments of decision-making and preference-shaping that occur during the entire user journey. These micro-moments happen when individuals reflexively reach for a mobile device to promptly act on any sort of immediate need. In those specific moments, user expectations are very high because they expect businesses to proactively anticipate their needs powered by contextual data. Therefore, every micro-moment is determined by the user intent, context and immediacy. In addition, mobile devices and smartphones in particular, possess the ability to promptly meet the immediate needs of their users thus shaping new opportunities for marketers to capture and utilize. In order to have a better understanding of online user intention and behavioral patterns, the paper provides an insight of recent studies of user micro-moments within the digital environment. The main goal of this paper is to provide an overview of recent academic and professional papers on the changes in online user experience and behavior and suggest the theoretical background for further research. The implications of these findings are important as they empower the possibilities of direct marketing in the digital era. Therefore, in order to obtain a more comprehensive understanding of this issue, further research is encouraged to test, observe and measure the influence of micro-moments of user experience and behavior.

### REFERENCES

- [1] Adams, L., Burkholder, E., Hamilton, K. (2015), Micro-Moments: Your Guide to Winning the Shift to Mobile, Think with Google, <https://www.thinkwithgoogle.com/research-studies/micromoments-guide-pdfdownload.html>, [August, 25<sup>th</sup> 2016]
- [2] Avci, B. (2013). Multitasking with mobile devices in contemporary cultural industry.
- [3] Bacile, T. J., Ye, C., & Swilley, E. (2014), From Firm-Controlled to Consumer-Contributed: Consumer Co-Production of Personal Media Marketing Communication, *Journal of Interactive Marketing*, 28(2) 117–133.

- [4] Baik, A., Venkatesan, R. & Farris, P. (2014). Mobile shopper marketing: assessing the impact of mobile technology on consumer path to purchase. Shopper marketing and the role of in-store marketing, *Review of Marketing Research*, 11, 1-25.
- [5] Bart, Y., Stephen, A. T. & Sarvary, M. (2014). Which Products Are Best Suited to Mobile Advertising? A Field Study of Mobile Display Advertising Effects on Consumer Attitudes and Intentions. *Journal of Marketing Research (JMR)*, 51(3), 270–285.
- [6] Bernoff, J. (2014). Your Mobile Moments Are Shrinking. *Marketing Management*, <https://www.ama.org/publications/MarketingNews/Pages/your-mobile-moments-are-shrinking.aspx>, downloaded: [August, 22<sup>nd</sup> 2016]
- [7] Bernoff, J., Ask, J., Schadler, T., & Rogowski, R. (2014). Mobile Moments Transform Customer Experience. *FORRESTER Research White Paper*, January Issue, 1–19.
- [8] Brown, A., Kappes, J., & Marks, J. (2013). Mitigating theme park crowding with incentives and information on mobile devices. *Journal of Travel Research*, 0047287512475216.
- [9] Brown, B., & Chalmers, M. (2003). Tourism and mobile technology. In *Proceedings of the eighth conference on European Conference on Computer Supported Cooperative Work* (pp. 335-354). Helsinki, Finland: Kluwer Academic Publishers.
- [10] Court, D., Elzinga, D., Mulder, S. & Vetvik, O.J. (2009) The consumer decision journey, *McKinsey Quarterly*, <http://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/the-consumer-decision-journey>, [August, 25<sup>th</sup> 2016]
- [11] Del Rey, J. (2012). Will Mobile's Massive Growth Ever Equal Real Revenue? Advertising Age, <http://adage.com/article/digital/mobile-s-massive-growth-equal-real-revenue/237511/>, downloaded: [August, 22<sup>nd</sup> 2016]
- [12] eMarketer (2015a). In the UK, Real-Time Marketing Moves to Moment Marketing, <http://www.emarketer.com/Article/UK-Real-Time-Marketing-Moves-Moment-Marketing/1013369>, [August, 25<sup>th</sup> 2016]
- [13] eMarketer (2015b). Mobile Ad Spend to Top \$100 Billion Worldwide in 2016, 51% of Digital Market, <http://www.emarketer.com/Article/Mobile-Ad-Spend-Top-100-Billion-Worldwide-2016-51-of-Digital-Market/1012299>, downloaded: [August, 22<sup>nd</sup> 2016]
- [14] eMarketer (2016). Shoppers Are Downloading More Mobile Retail Apps, <https://www.emarketer.com/Article/Shoppers-Downloading-More-Mobile-Retail-Apps/1014041?ecid=MX1086>, [August, 26<sup>th</sup> 2016]
- [15] Ferreira, J. (2015). Why Brands Need to be Living in the Micro-Moment, State Of Digital, <http://www.stateofdigital.com/brands-need-living-micro-moment/>, [August, 25<sup>th</sup> 2016]
- [16] Forrester Consulting (2015) Moments That Matter Intent-Rich Moments Are Critical To Winning Today's Consumer Journey, <https://storage.googleapis.com/think/docs/forrester-moments-that-matter-research-study.pdf>, [August, 27<sup>th</sup> 2016]

- 
- [17] Friedman, L. (2014). 3 Ways To Capitalize On Moment Marketing, iMedia Connection, <http://www.imediaconnection.com/articles/ported-articles/red-dot-articles/2014/feb/3-ways-to-capitalize-on-moment-marketing/>, [August, 25<sup>th</sup> 2016]
  - [18] Fulgoni, G. M. (2016). In the Digital World, Not Everything That Can Be Measured Matters. *Journal of Advertising Research*, 56(3), 9-13.
  - [19] Gevelber, L. (2015). A Micro-Moments Report Card: Are We Making the Grade?, Think with Google, <https://www.thinkwithgoogle.com/articles/micro-moment-report-card.html>, [August, 27<sup>th</sup> 2016]
  - [20] Ghose, A. & Han, S. P. (2014). Estimating demand for mobile applications in the new economy. *Management Science*, 60(6), 1470-1488.
  - [21] Ghose, A., Han, S. P., & Xu, K. (2013). Mobile commerce in the new tablet economy. In *Proceedings of the 34th International Conference on Information Systems (ICIS)* (pp. 1-18). Chicago
  - [22] Google (2012). The New Multi-Screen World: Understanding Cross-platform Consumer Behavior, [http://services.google.com/fh/files/misc/multiscreenworld\\_final.pdf](http://services.google.com/fh/files/misc/multiscreenworld_final.pdf), downloaded: [August, 22<sup>nd</sup> 2016]
  - [23] Google (2016) Moments that Matter Research, April 2016
  - [24] Google Trends (2016) micro-moments (Explore), <https://www.google.com/trends/explore?date=all&q=micro-moments>, downloaded: [August, 24<sup>th</sup> 2016]
  - [25] Grewal, D., Bart, Y., Spann, M., & Zubcsek, P. P. (2016). Mobile advertising: a framework and research agenda. *Journal of Interactive Marketing*, 34, 3-14.
  - [26] Husson, T & Ask, J. A. (2014). Predictions 2015: Most Brands Will Underinvest In Mobile Brands Embracing The Mobile Mind Shift Will Pull Ahead Of Those Treating Mobile As Just Another Channel, Forrester Research, <https://www.forrester.com/report/Predictions+2015+Most+Brands+Will+Underinvest+In+Mobile/-/E-RES118065>, [August, 26<sup>th</sup> 2016]
  - [27] Karanasios, S., Burgess, S., & Sellitto, C. (2015). Mobile devices and information patterns amongst tourists. *Information Research*, 20(1).
  - [28] Lacoste, J. (2016). WTF is Micro-Moment Marketing? Inc.com, <http://www.inc.com/jonathan-lacoste/wtf-is-micro-moment-marketing.html>, [August, 25<sup>th</sup> 2016]
  - [29] Lecinski, J. (2014). ZMOT: Why It Matters Now More Than Ever, Think with Google, <https://www.thinkwithgoogle.com/articles/zmot-why-it-matters-now-more-than-ever.html>, [August, 25<sup>th</sup> 2016]
  - [30] Llewellyn, G. (2015). Micro-moments: What are they and how do marketers need to respond?, Smart Insights, <http://www.smartinsights.com/digital-marketing-platforms/google-marketing/google-micro-moments/>, [August, 25<sup>th</sup> 2016]
  - [31] Luo, X., Andrews, M., Fang, Z., & Phang, C. W. (2014). Mobile Targeting. *Management Science*, 60(7), 1738–1756.
-

- [32] Luo, X., Reinaker, A., Phang, C. W. & Fang, Z. (2014). Mobile moments. Available at SSRN.
- [33] Mang, C. F., Piper, L. A. & Brown, N. R. (2016). The Incidence of Smartphone Usage among Tourists. *International Journal of Tourism Research*.
- [34] Marvin, G. (2015). Google Says Micro-Moments Are The New Path To Purchase, Marketing Land, <http://marketingland.com/google-says-micro-moments-are-the-new-path-to-purchase-131009>, [August, 26<sup>th</sup> 2016]
- [35] Meeker, M. (2016). Internet Trends 2016 – Code Conference, Kleiner Perkins Caufield & Byers, <http://www.kpcb.com/internet-trends>, [August, 26<sup>th</sup> 2016]
- [36] Milhinhos, P. R. V. (2015). *The impact of content marketing on attitudes and purchase intentions of online shoppers: the case videos & tutorials and user-generated content*. Escola Brasileira de Administração Pública e de Empresas, Centro de Formação Acadêmica e Pesquisa. (Doctoral dissertation)
- [37] Nicholas, D., Clark, D., Rowlands, I., & Jamali, H. R. (2013). Information on the go: A case study of European mobile users. *Journal of the American Society for Information Science and Technology*, 64(7), 1311-1322.
- [38] Nielsen Research (2013). The Mobile Consumer: A Global Snapshot, <http://www.nielsen.com/us/en/reports/2013/mobile-consumer-report-february-2013.html>, [August, 24<sup>th</sup> 2016]
- [39] Patel, D., Schneider, J. & Surana, K. (2013). Cracking the Mobile Advertising Code. Harvard Business Review, <http://blogs.hbr.org/2013/09/cracking-the-mobile-advertisin/>, downloaded: [August, 22<sup>nd</sup> 2016]
- [40] Pollock, C. (2016). Making "Moment Marketing" Work for Your Brand, iProspect, <https://www.iprospect.com/en/us/our-blog/making-moment-marketing-work-for-your-brand/>, [August, 25<sup>th</sup> 2016]
- [41] Ramaswamy, S. (2015) How Micro-Moments Are Changing the Rules, Think with Google, <https://www.thinkwithgoogle.com/articles/how-micromoments-are-changing-rules.html>, [August, 24<sup>th</sup> 2016]
- [42] Rasinger, J., Fuchs, M., & Hopken, W. (2007). Information search with mobile tourist guides: A survey of usage intention. *Information Technology & Tourism*, 9, 3(4), 177–194.
- [43] Samarhan, A. (2016). *In-store Consumer Shopping Behaviour Through Mobile Phones*. (Doctoral dissertation)
- [44] Sarvepalli, M. S. K. K., & Prakash, N. M. (2016). Conceptual Study on Online Shopper Behavior Towards E-Tailers Shift From Portal To APP Strategy. *PARIPEX-Indian Journal of Research*, 5(5).
- [45] Solis, B. (2015) Best Practices: 10 Ways Marketers Can Compete for Micro-Moments: The New Moment of Truth: Google's Micro-Moments Reshape the Marketing Funnel, <http://adage.com/article/digitalnext/practices-cmos-advantage-micro-moments/298855/>, [August, 24<sup>th</sup> 2016]

- [46] Solis, B. (2016) Intents Vs. Demographics: How Micro-Moments Reshape The Future Of Digital Advertising, Forbes,  
<http://www.forbes.com/sites/briansolis/2016/01/28/intents-vs-demographics-how-micro-moments-reshape-the-future-of-digital-advertising>, [August, 26<sup>th</sup> 2016]
- [47] Statista (2016a). Mobile phone users worldwide 2013-2019,  
<http://www.statista.com/statistics/274774/forecast-of-mobile-phone-users-worldwide/>, [August, 28<sup>th</sup> 2016]
- [48] Statista (2016b). Smartphone phone users worldwide 2013-2019,  
<http://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>, [August, 28<sup>th</sup> 2016]
- [49] Think with Google (2016). How to Create and Measure Effective Mobile Content for Micro-Moments, <https://www.thinkwithgoogle.com/articles/create-and-measure-effective-mobile-content-for-micro-moments.html>, [August, 26<sup>th</sup> 2016]
- [50] Wang, D, S. Park, & Fesenmaier, D (2010). "An examination of information services and smartphone applications." *Proceedings of 16th Annual Graduate Student Research Conference in Hospitality and Tourism*, Houston, TX, USA.
- [51] Wang, D., Park, S., & Fesenmaier, D. R. (2012). The role of smartphones in mediating the touristic experience. *Journal of Travel Research*, 51(4), 371-387.
- [52] Xu, K., Chan, J., Ghose, A., & Han, S. P. (2016). Battle of the Channels: The Impact of Tablets on Digital Commerce. *Management Science*, 1-24.



## NEW BUSINESS MODELS – FROM BUSINESS PROCESS REDESIGN TO THE DIGITAL TRANSFORMATION

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### ABSTRACT

*Companies are today faced with challenges that are driven by the new technologies, innovations or the advent of new companies that are completely adapted to the digital era. Modern technological trends, such as social networks, mobile devices, cloud computing and data analytics together with the complexity of coordinating all these aspects are bringing several new issues and unanswered questions. One of the main challenges of the existing companies is transforming their business models into the digital ones. Easily said; however hardly done. Existing companies are heavily relying on the tradition and their past success making that transformation even harder. However, digital transformation cannot be done without rethinking existing business processes. Companies that want to remain competitive should have well-regulated and optimized business processes that are enabling them to efficiently perform their business. Moreover, changing business models is highly related with business process redesign, which requires additional endeavour particular in companies with a long tradition. The paper will thus focus on the challenges based on the new digital models and examine some practical examples of innovative digital products. Furthermore, the paper will also focus on the business process management as an important prerequisite for successful digital transformation. The paper thus analyses the possibilities to implement business process redesign and key challenges during business process redesign. Lastly, the paper will focus on the trends that should be researched in the future.*

**KEYWORDS:** digitalization, business processes, business models, transformation, CRODMA

### 1 INTRODUCTION

The digital transformation era is currently going on and will probably even hasten in the next years, since it is one of the core topics of several academic and practitioner conferences. Some even denote it as a next revolution. Although the digitization drive began in the 1980s it has become more important over the last 10 and is set to accelerate even more in the decades ahead [Gerth and Peppard, 2016]. However, many organisations will have problems adapting to this revolution. Not merely due to lack of finances or skills but rather due to not having a proper

vision of the future and being unsure of how to align organisational strategy with the so many options and possibilities that are challenging them in their digital transformation.

In contemporary organisations, digital skills are greatly valued and enquired and it is anticipated that in the future they will become critical. Digitalization has spread to all areas of business and is creating new job possibilities with particular skills. It has been claimed more than a decade ago that by adjusting the business to the new technologies, the need for skilled IT personnel will appear in order to maintain a competitive advantage with value adding activities [Kakabadse and Korac-Kakabadse, 2000]. Highly required skills are today related to cloud computing, big data, analytics, HTML, Android, iOS and the future seems to even increase the need for these skills.

Digital transformation has an important impact on the corporate world. Contemporary technological trends have considerable influence on business processes, services, products and business models. All these trend and issues are forcing companies to rethink their strategies and their value proposition. Existing companies are relying on the tradition and their past success, and therefore making the transformation even harder. However, these traditional companies are under pressure of new emerging companies that have larger potential for rapid innovation and growth. Therefore, digital transformation of existing companies cannot be done without rethinking existing business processes. The purpose of the paper is thus to focus on the business process management as an important prerequisite for successful digital transformation.

Over the past two decades, both academics and practitioners have frequently misused the term business model. It has been suggested that business models are particularly important; however, consensus on its meaning has not been established [da Silva, 2013]. The term business model often denotes various things from strategy, marketing, products to revenue model. Therefore, the paper will also focus on the concept of business models together with its changes over the years. The paper will also present new challenges that are based on the digital transformation and discuss the possibilities for future research.

## **2 DIGITAL TRANSFORMATION ERA**

The digital transformation era is sometimes called as a new revolution [I-SCOOP, 2016]. It is claimed that digital transformation will transform business processes, the customer experience and the entire business model and consequently improve competitive success. However, the question is to what extent the digital transformation differs from the business process management. Since transformation cannot be done without rethinking business processes, business process management is crucial the era of digital transformation.

## **2.1. BUSINESS PROCESS MANAGEMENT**

BPM is generally defined as a top-down set of organizational principles and methods designed to organize, manage and measure the organization based on the organization's core processes [Harmon, 2014]. Awareness for BPM is increasing both in practice and research [Houy et al., 2010] and is becoming even more important in the last few years. Nevertheless, it has been claimed that business processes are a method for achieving a value for internal and external clients [Melão and Pidd, 2000] while proper BPM can bring a long-term competitive advantage [Gartner, 2006]. Therefore, it seems that BPM has been claimed to have the same advantages as it is claimed today for digital transformation.

Some considered BPM a management innovation [Rich, 2008], while others regard BPM a management fad [Steininger et al., 2009]. Generally, the implementation part of BPM is claimed to be the most problematic and is often leading to several failed projects [Sarker et al., 2006]. The success of BPM namely rest on careful implementation and is depended on a several organizational factors [Sidorova and Isik, 2010] which is true for most organizational transformations including the digital transformation.

One of the most important key success factors for a successful BPM is the proper approach of the employees and management. People are the key issue in this process [Wahid and Corner, 2009]; therefore, developing a proper mind-set is the critical part [Smart et al., 2009]. For BPM a proper mid-set refers to process thinking and process orientation. Therefore, BPM presents a holistic management discipline that needs to consider several aspects for its successful adoption [Rosemann and vom Brocke, 2010].

## **2.2. BUSINESS MODELS**

The concept of business model was presented in an academic paper more than fifty years ago [Bellman et al., 1957] and after that the concept experienced a constant evolution and consolidation. One of the first contemporary attempts [Slywotzky, 1996] defined a business model as a holistic approach, namely (1) how the organizations select their clients; (2) how to differentiate their offerings; (3) how to plan tasks to be performed out within the organization and also outside the organization for which external experts will be needed; (3) how to organize organizational own resources; (4) behaviour on the market; (5) creating products designed for customers; and (6) making profit. Later several additional definitions were proposed [Osterwalder et al., 2005; Zott and Amit, 2008]. However, it has been claimed [Nenonen and Storbacka, 2010] that research on business models is still at the beginning, mainly due to no commonly agreed definition.

Business model was presented as [Amit and Zott, 2001] governance of transactions designed in order to create value through the utilization of different business opportunities. Later

[Chesbrough and Rosenbloom, 2002], additional importance was given to the value creation process and how the organisation fits in the value chain. Further definitions focused on emphasizing the strategic view, competition and resources needed for a success [Chesbrough, 2007; Shafer et al., 2005]. Moreover, the importance of partnership and value network has later been claimed as well as an important part of a business model [Zott and Amit, 2008]. In the recent years the focus of research moved to the relations between business models and sustainability [Schaltegger et al., 2015; Stubbs and Cocklin, 2008]. In order to assess the possibilities for business model growth it is important to interact between infrastructure, institutions and other actors that build the whole systems [Bolton and Hannon, 2016]. However, the problem with definitions dealing with the business models exist in the components of a model; and therefore, there is confusion in terminology, since business model, revenue model, economic model or strategy are often interchangeably used [Morris et al., 2005].

Even though several academic and practitioner papers propose different definitions for business models without a matching base, it is possible to identify similarities among their viewpoints [Nenonen and Storbacka, 2010]. Namely, one common point is that definitions consist of how business models explain customer value creation. Additional common point is focusing on strategic orientation and value network, particularly on organizational relations with stakeholders. Lastly, the majority of definitions focus on explaining how organizations create profit in their business activities.

The popularity of the topic is evident from the scientific articles dealing with the business models. In the last five years there has been more than 700 papers published in SCI or SSCI journal based on the data derived from the Web of Science. In 2015 alone, there were 113 scientific articles with the term “Business Model” or “Business Models” in the title of the paper. Including also the indexed conferences and books, the number rises to more than 300 in just one year. In 2016, the number of SCI or SSCI articles dealing with the same topic has already exceeded 100.

### **2.3. DIGITAL TRANSFORMATION AND NEW CHALLENGES**

All disruptive changes that were driven by new technology like the information and communication technologies in general have resulted into new forms of business models. Technological advancement required and enabled a faster adaptation to innovations. Therefore, business models from the industrial age were not appropriate to deal with the coming challenges of the information age [Venkatraman and Henderson, 1998]. Moreover, it has been claimed that new business models were even more important as the talent of individual entrepreneurs [Hamel, 2002] and were the key reason behind the success of several corporations like Wal-Mart, eBay, Microsoft, Amazon or Southwest Airlines [Afuah, 2004].

One of the main challenges in the last decade is related to the cloud computing and how to utilize its power. Cloud computing delivers on-demand computing resources via the Internet on a pay-for-use basis or any other predefined method. Allowing access from anywhere anytime, it presents a new way how individuals and organisations work and communicate over the internet [da Silva, 2013]. The cloud offers a scalable IT system infrastructure enabling organizations to promptly build scalable businesses at a lower starting costs [Hugos and Hulitzky, 2010]. Lastly, it offers additional business models like infrastructure as a Service, Platform as a Service, and Software as a Service.

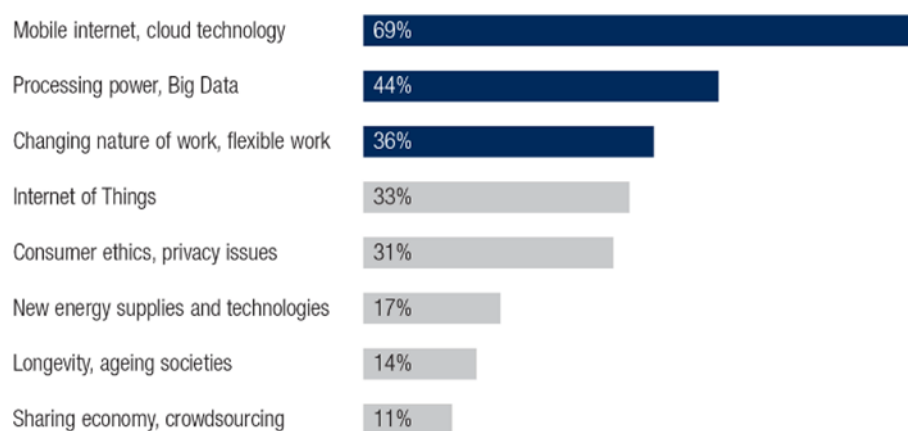
Cloud computing, social networks and other contemporary challenges are presenting new possibilities for organizations. Several ideas were live for a decade; however, the technological advance makes them possible. Beside already known examples of digital transformation for the products that are easily transformed into digital (like banking, insurance, marketing etc.), the main challenge is to digitalize non-digital products. The table below presents a few examples of innovative ideas or products that were digitalized.

Table 1. Digitalizing non-digital products

Product / service	Provider	Characteristics
A tennis racquet	Babolat Play	application & sensor
Sport T-shirt	Athos	application & sensor
Book experience	Lost my name	offer flexibility
A fax machine	aFax	application
A locomotive production	GE transportation	sensor
The whole physical store	Tesco	application
Motivation	SAP	application & motivation
Flavour	uFlavor	application

These examples were more or less successfully transformed into digital, and therefore present a motivation for many other companies for not being afraid of innovative thinking and starting rethinking of their existing business models and their products. Some examples required completely new business models; however at times there is a merely a need for new digital products. Nevertheless, all these organizations are presenting a driving force for other companies and are forcing them into changes together with the general trend that are impacting business models. These general trends are presented in the Figure below.

Figure 1. Top trends influencing business models



Source: WEF, 2016

The figure confirms the most disruptive technologies and contemporary issues are cloud computing, big data, flexible work and internet of things.

## 2.4. STRATEGIC INSIGHTS

Examining the influence of IT on the business value has been a main challenge for several researchers in the last few decades [Luo et al., 2012; Piccoli and Ives, 2005; Wagner and Weitzel, 2007]. It has been suggested that presenting the value of investing in IT is quite an important contribution of the IT discipline, mainly because understanding the impact of IT encourages ideas concerning the future IT applications [Agarwal and Lucas Jr, 2005]. Thus, several researchers have been motivated to study and understand the impact of applying IT within organisations on improved organisational performance [Melville et al., 2004]. The latter has become even more important in the era of digital transformation.

It has been claimed that IT is enabling business process redesign, strategic alliances and competitive advantages [Avison et al., 1999]. Nevertheless, IT generates business value by enabling efficient business processes and performing their activities better compared to the competitors [Luo et al., 2012].

As it is evident there are several issues related with the digital transformation. Despite the fact that digital transformation is sometimes claimed to be just another buzzword, it is evident there important changes are overflowing the business world. These changes should be considered by other organizations that want to follow this new wave. Therefore, the table below presents some of the most evident differences between organizations that are leaders in the digital era and other traditional organizations.

Table 2. The comparison between traditional and digitally transformed organizations

Item	Traditional organizations	Digital transformation era
Hierarchy & organisation	The importance of hierarchy	Unclear hierarchy
	Expert groups	Interdisciplinary groups
Workday	Routine work	Improvisational work
	Relying on formal rules	Formal rules are digitalized
	Formal procedures	Formal procedures are digitalized
	Repeatable work	Flexible teams
Planning	Predicting the future	Agile responsiveness
Products	Relying on trademark	Relying on services
BPM	Different BPM maturity	Agile processes
Education	Formal training	Agile flexibility
IT	Supporting role	Partnering role

It is important to add that these items are based merely on some examples of organizations offering digital products, which presents a limitation of this paper and therefore a future research should be done to justify these items and to provide a more sophisticated list of differences between traditional and digitally transformed organizations.

However, digitalization should be an essential component of the organisational strategy since the technology only does not contribute to organisational performance by itself. Therefore it is important that IT as an enabler of digitalization is part of an overall system that improves the creation of economic value [Piccoli and Ives, 2005].

### 3 FUTURE RESEARCH

Future research is needed to discover main differences between business process redesign or business process management and digital transformation. Further, since digital transformations is becoming more and more accepted concept there is a strong need to identify the key factors that are driving a company towards digital transformation. A lot has been written in the last months regarding the personnel responsible for starting and leading the process of digital transformation in the company.

However, all these guidance rules were based more on the individual consultants' impressions, and therefore a detail research on who should participate in the digital transformation together with knowledge and skills needed for successful transformation is more than welcome. Nevertheless, the debate regarding the importance of different knowledge and skills is as old as IT field itself, although up until the 1980s the importance of technical versus business and management skills was mainly emphasised [Byrd and Turner, 2001; Vitalari, 1985]. That view gradually changed in the 1990s when it became obvious that IT personnel need a combination

of technical, business and interpersonal skills [Mata et al., 1995]. It has been shown that technical and managerial skills are some of the determining factors of successful IT implementation [Caldeira and Ward, 2003] and the importance of the different skills and capabilities of IT personnel was confirmed in various studies [Lerouge et al., 2005; Parolia et al., 2007; Wade and Parent, 2001].

Nevertheless, the new era of digitalization also requests a new detailed research on knowledge and skills items, since proper cooperation between business and IT is becoming more important as ever before. Moreover, the future research should also focus on the trends in the digitalization and to the extent to which new business models may continue to affect the future business.

Some of the common items for the digitally transformed organizations were already presented; however, additional research should be carried out to offer a more detailed list of differences between traditional and digitally transformed organizations together with the impact of these items on the overall successful digital transformation.

## 4 CONCLUSION

The paper focused on one of the main contemporary business challenges, namely transforming the existing business models into the digital ones. The problem became even more complex since several existing companies are depending on the tradition and their previous success, which is making that transformation even harder. Therefore, it is particularly important that organizations rethink their existing business processes and existing business models. The paper thus focused on the business process management as an important prerequisite for successful digital transformation. Further, the paper shed light on the concept of business models that is significantly changing over the years. The paper also presents new challenges that are based on the digital transformation together with some main differences between traditional and digitally transformed organizations. Lastly, the possibilities for future research were discussed.

## REFERENCES

- [1] Afuah, A. (2004). Business models: A strategic management approach.
- [2] Agarwal, R. and Lucas Jr, H.C. (2005). The information systems identity crisis: Focusing on high-visibility and high-impact research, *MIS Quarterly*, 29, 381-398.
- [3] Amit, R. and Zott, C. (2001). Value creation in e-business, *Strategic management journal*, 22, 493-520.
- [4] Avison, D.E., Cuthbertson, C.H. and Powell, P. (1999). The paradox of information systems: strategic value and low status, *The Journal of Strategic Information Systems*, 8, 419-445.

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- [5] Bellman, R., Clark, C.E., Malcolm, D.G., Craft, C.J. and Ricciardi, F.M. (1957). On the construction of a multi-stage, multi-person business game, *Operations Research*, 5, 469-503.
  - [6] Bolton, R. and Hannon, M. (2016). Governing sustainability transitions through business model innovation: Towards a systems understanding, *Research Policy*, 45, 1731-1742.
  - [7] Byrd, T.A. and Turner, D.B. (2001). An Exploratory Analysis of the Value of the Skills of IT Personnel: Their Relationship to IS Infrastructure and Competitive Advantage, *Decision Sciences*, 32, 21-54.
  - [8] Caldeira, M.M. and Ward, J.M. (2003). Using resource-based theory to interpret the successful adoption and use of information systems and technology in manufacturing small and medium-sized enterprises, *European Journal of Information Systems*, 12, 127-141.
  - [9] Chesbrough, H. (2007). Business model innovation: it's not just about technology anymore, *Strategy & leadership*, 35, 12-17.
  - [10] Chesbrough, H. and Rosenbloom, R.S. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies, *Industrial and corporate change*, 11, 529-555.
  - [11] da Silva, C.M. (2013). Business Models: Theoretical Foundation and Application in E-business Companies: Doctoral Dissertation.
  - [12] Gartner (2006). Gartner's Position on Business Process Management,, 26.
  - [13] Gerth, A.B. and Peppard, J. (2016). The dynamics of CIO derailment: How CIOs come undone and how to avoid it, *Business Horizons*, 59, 61-70.
  - [14] Hamel, G. (2002). *Leading the revolution: How to thrive in turbulent times by making innovation a way of life*. Harvard Business School Press Boston, MA.
  - [15] Harmon, P. (2014). *Business Process Change: A Business Process Management Guide for Managers and Process Professionals*, (Third ed.). Morgan Kaufmann.
  - [16] Houy, C., Fettke, P. and Loos, P. (2010). Empirical research in business process management – analysis of an emerging field of research, *Business Process Management Journal*, 16, 619 - 661.
  - [17] Hugos, M.H. and Hultitzky, D. (2010). *Business in the cloud: what every business needs to know about cloud computing*. John Wiley & Sons.
  - [18] I-SCOOP. (2016). Digital transformation: online guide to digital business transformation, from <http://www.i-scoop.eu/>
  - [19] Kakabadse, A. and Korac-Kakabadse, N. (2000). Leading the pack: future role of IS/IT professionals, *Journal of Management Development*, 19, 97-155.
  - [20] Lerouge, C., Newton, S. and Blanton, J.E. (2005). Exploring the systems analyst skill set: perceptions, preferences, age, and gender, *Journal of Computer Information Systems*, 45, 12-23.
  - [21] Luo, J., Fan, M. and Zhang, H. (2012). Information technology and organizational capabilities: A longitudinal study of the apparel industry, *Decision Support Systems*, 53, 186-194.
-

- [22] Mata, F.J., Fuerst, W.L. and Barney, J.B. (1995). Information technology and sustained competitive advantage: A resource-based analysis, *MIS Quarterly*, 19, 487-505.
- [23] Melão, N. and Pidd, M. (2000). A conceptual framework for understanding business processes and business process modelling, *Information Systems Journal*, 10, 105-129.
- [24] Melville, N., Kraemer, K. and Gurbaxani, V. (2004). Information technology and organizational performance: An integrative model of it business value, *MIS Quarterly*, 28, 283-322.
- [25] Morris, M., Schindehutte, M. and Allen, J. (2005). The entrepreneur's business model: toward a unified perspective, *Journal of Business Research*, 58, 726-735.
- [26] Nenonen, S. and Storbacka, K. (2010). Business model design: conceptualizing networked value co-creation, *International Journal of Quality and Service Sciences*, 2, 43-59.
- [27] Osterwalder, A., Pigneur, Y. and Tucci, C.L. (2005). Clarifying business models: Origins, present, and future of the concept, *Communications of the Association for Information Systems*, 16, 1.
- [28] Parolia, N., Goodman, S., Li, Y. and Jiang, J.J. (2007). Mediators between coordination and IS project performance, *Information & Management*, 44, 635-645.
- [29] Piccoli, G. and Ives, B. (2005). Review: IT-dependent strategic initiatives and sustained competitive advantage: A review and synthesis of the literature, *MIS Quarterly*, 29, 747-776.
- [30] Rich, E. (2008). Management fads and information delays: An exploratory simulation study, *Journal of Business Research*, 61, 1143-1151.
- [31] Rosemann, M. and vom Brocke, J. (2010). The six core elements of business process management Handbook on Business Process Management 1, Introduction, Methods and Information Systems, Springer, Berlin, pp. 105-122.
- [32] Sarker, S., Sarker, S. and Sidorova, A. (2006). Understanding Business Process Change Failure: An Actor-Network Perspective, *Journal of Management Information Systems*, 23, 51-86.
- [33] Schaltegger, S., Hansen, E.G. and Lüdeke-Freund, F. (2015). Business Models for Sustainability Origins, Present Research, and Future Avenues, *Organization & Environment*, 1086026615599806.
- [34] Shafer, S.M., Smith, H.J. and Linder, J.C. (2005). The power of business models, *Business Horizons*, 48, 199-207.
- [35] Sidorova, A. and Isik, O. (2010). Business process research: a cross-disciplinary review, *Business Process Management Journal*, 16, 566-597.
- [36] Slywotzky, A.J. (1996). *Value migration: how to think several moves ahead of the competition*. Harvard Business Press.
- [37] Smart, P.A., Maddern, H. and Maull, R.S. (2009). Understanding Business Process Management: Implications for Theory and Practice, *British Journal of Management*, 20, 491-507.

- [38] Steininger, K., Riedl, R., Roithmayr, F. and Mertens, P. (2009). Fads and Trends in Business and Information Systems Engineering and Information Systems Research – A Comparative Literature Analysis, *Business & Information Systems Engineering*, 1, 411-428.
- [39] Stubbs, W. and Cocklin, C. (2008). Conceptualizing a “sustainability business model”, *Organization & Environment*, 21, 103-127.
- [40] Venkatraman, N. and Henderson, J.C. (1998). Real strategies for virtual organizing, *MIT Sloan Management Review*, 40, 33.
- [41] Vitalari, N.P. (1985). Knowledge as a Basis for Expertise in Systems Analysis: An Empirical Study, *MIS Quarterly*, 9, 221-241.
- [42] Wade, M., R. and Parent, M. (2001). Relationships between job skills and performance: A study of webmasters, *Journal of Management Information Systems*, 18, 71-96.
- [43] Wagner, H.T. and Weitzel, T. (2007). Towards an IT production function: Understanding routines as fundamental for IT value creation, *Journal of Enterprise Information Management*, 20, 380-395.
- [44] Wahid, R.A. and Corner, J.L. (2009). Critical success factors and problems in ISO 9000 maintenance, *International Journal of Quality & Reliability Management*, 26, 881-893.
- [45] WEF. (2016). World Economic Forum: The Future of Jobs, 2016, from <http://reports.weforum.org/future-of-jobs-2016/>
- [46] Zott, C. and Amit, R. (2008). The fit between product market strategy and business model: implications for firm performance, *Strategic management journal*, 29, 1-26.



## PERCEPTION OF THE SOCIAL NETWORKS' IMPACT ON THE REPUTATION OF ICT COMPANIES

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### ABSTRACT

*Globalization trends presupposes social cohesion in one network in order to exchange information without any boundaries. Hence, communication technology has a leading role in planning and organization of private lives and, especially, businesses. This paper explains the theoretical concept of social networks' usage as an informational tool for providing content with stakeholders with the purpose of improving reputation and business management.*

*After integrating social networks into the business structure, it is necessary for the company to plan and evaluate actions as well as to be prepared for the upcoming changes and possible difficulties that may stand in the way. Because of the importance of social networks that nowadays directly impact business results and reputation, this paper focuses on building relationships with customers and public, planning and evaluating communication strategies and following trends about social networks marketing.*

*Including social networks in its business is challenging for every industry because it is public, fast and it demands flexibility. This paper demonstrates how social networks affect Croatian ICT companies' reputation. Furthermore, this paper examines, via the survey method, managers' attitudes and opinions about the subject in order to show how companies, whose primary activity is ICT development, use social networks and which behaviours have a good or bad impact in building a reputation.*

**KEYWORDS:** social networks, communication, communication technology, reputation, ICT, Croatian ICT companies, customer relationship management

## 1 INTRODUCTION

Over the past two decades constant development of IT-based economy have resulted with surrounding characterized by information flow and redesigned business processes towards ICT integration. Therefore, it is not surprising that ICT has the highest rate of growth in the world economy and is an integral part of all economic and non-economic activities. In such surrounding, management faces with: changes in organizational structure, management mode, using human and other resources, usage of new knowledge and training of personnel for the implementation of technologically new knowledge and skills [Živadinović and Zelić, 2014].

The aim of this paper is to show the correlation between social networks activities and their impact on building ICT companies online reputation which is reflected through stakeholders trust and operating results. In order to reach more precise results, 13 managers of the largest Croatian ICT companies have described their perception about planning such communication strategies and incorporate them using social networks.

### 1.1. LITERATURE REVIEW

According to *Quadrans konzalting* research from September 2015, in which social networks activities of hundred biggest Croatian companies have been analyzed, the most successful companies by followers, fans or reputation were ICT companies. ICT's importance to aspects of social relations and business development, arising out of their use, have created information society. Furthermore, technologies have changed the global market and related industries, customer relationship, market research, pricing formation and business transactions [Brakuš, 2015].

On the one hand, by properly combining the use of these services, especially social networks, and applying proper strategy, it is possible to achieve a good company reputation in challenging and changing online environment [Brakuš, 2015]. Researchers from the VU University Amsterdam conducted a study that revealed that corporate reputation can be enhanced through social networks activities [Dijkmans et al., 2014]. On the other hand, social networks expand the spectrum of reputation risks and boost risk dynamics [Aula, 2010]. Although corporate reputation is a valuable asset, it seems that its constitution is rather fragile and exposed to many reputation risks. Social networks users can publish true and false facts about companies, or distribute information about them that differs from what the companies are willing to share [Grützmacher, 2011].

Despite risks, in 2001 Michel Porter said it was not the key issue of competitiveness of companies to apply or not to apply Internet technology, but how to do it [Gujić et al., 2016]. In terms of strategic reputation management, it is important that social networks content cannot be controlled. Namely, social networks users spread opinions about what organizations should

focus on in the future. In other words, on social networks, „an organization cannot just look good; it has to be good“. Once they have built a picture, they share it with others and the subjective truth turns into a collective truth about what an organization is and what it should be [Aula, 2010]. However, the followers and fans of ICT companies leave traces of themselves on social networks, so that data can be used as a basis for building reputation and dealing with reputation risks. Therefore, in managing online reputation other companies are learning from ICT companies [Brakus, 2015].

Leading to the notion that the reputation of companies is no longer defined only by their actions and accomplishments, but by how stakeholders perceive, share and comment on company's social networks [Grützmacher, 2011]. The three principles of social networks are information, persuasion and networking, in order to build company's image and strengthen reputation [Lančić, 161]. According to Gotsi and Wilson [2001] “corporate reputation is a stakeholder's overall evaluation of a company over time. This evaluation is based on the stakeholder's direct experiences with the company, any other form of communication and symbolism that provides information about the firm's actions and/or a comparison with the actions of other leading rivals”. Reputation can even be formed through indirect experiences with the firm triggered, through word-of-mouth, the media, or other publics [Grützmacher, 2011].

Word-of-Mouth, online named World-of-Mouse, is used on social networks for increasing awareness of the company and creates the potential for prolonged duration of the desired message [Brakus, 2015]. Furthermore, it is necessary to differentiate corporate reputation from the related concepts of corporate image and corporate identity, which, as key components of corporate communication, form the internal and external perception of companies [Grützmacher, 2011].

In order to build good corporate reputation, communication model of ICT companies has to be two-way, interactive and directed on „one to one“ and „many to many“, while the desires and requirements of the stakeholders are trying to be accepted as partners [Lančić, 2009]. Corporate communication affects corporate reputation because ICT companies, through its chosen messages, enable stakeholders to appreciate the company's operations on social networks, and it positively loads the perception of the company's activities, which can lead to an overall positive evaluation of the company [Floreddu and Cabiddu, 2013].

In order to build and maintain their reputation, ICT companies have to understand who their stakeholders on social networks are and how they perceive them. Hence, ICT companies need to measure, monitor and coordinate different stakeholder reputations that they possess, in order to manage their corporate reputation. The more these stakeholder reputations are identical, the stronger the reputation of ICT companies is [Grützmacher, 2011].

Further, there is also a direct relationship between the company's reputation and investing in newest IT developments which affect on the number of mass-customers, revenue growth and market share. Practice shows that business culture, along with the implementation of multi-media materials, is successfully stabilizing an already built reputation of ICT companies on social networks [Živadinović and Zelić, 2014].

According to *Grayling Pulse* research, the two most common goals of ICT companies when developing digital strategies are improving reputation and increasing awareness. In this sector, 83 % of companies have developed digital strategy and use social networks for the fulfillment of mentioned goals. [Ličina Borja, 2012].

## **2 EXPLANATION OF METHODS**

A research has been conducted for the purposes of this article. A anonymous sample of 13 managers from different Croatian ICT companies was taken (all of them use social media profiles).

Online survey took place in August 2016 and had 35 questions. After survey was done and the data was gathered, a thorough content analysis was performed.

Possible limitations of the study are: giving socially desirable answers, misunderstanding of questions due to errors in setting, lack of knowledge about the subject of study and the inability of generalization because of non-representative sample.

## **3 RESULTS AND DISCUSSION**

From the 13 companies that participated in the survey, 12 of them use Facebook, 10 LinkedIn, 9 Twitter, 6 Instagram, 2 Google+, 2 Quora, 2 Slideshare and 2 of them use other social networks. Companies were able to choose more than one answer.

61.5% of the companies stated that they have a preplanned communication strategy on their social networks accounts, 30.8% mentioned they do not have any strategy and 7.7% does not know whether the company has a strategy or not. Thereunto, 53.8% of the companies do not have a predefined budget for social activities, while 46.2% of them have.

11 of 13 managers participate in the communication on their companies social networks accounts. What is interesting is that 7 companies do not have a dedicated person for the position of community manager which executes only online marketing activities, while 6 of them have a person dedicated only for digital marketing. It is obvious that new roles dedicated for doing

only online marketing are developing. That is why companies spend so much time on social networks profiles engaging with the community. Namely, 15.4% of companies stated that they are active on social networks less than 1 hour per week, 30.8% are active from 1 to 5 hours per week, 15.4% from 5 to 10 hours per week and the most of them (38.5%) are active more than 10 hours a week.

46.2% of the companies share internal photos, 23.1% share blog posts, 15.4% industry news, 7.6% articles and 7.7% share other materials. 46.2% stated that the main goal of communication on social networks is to improve the reputation of the company, 23.1% choose attracting employees, 15.4% increase sales, 7.6% information and 7.7% other. Reputation and employee loyalty is connected. Nowadays, ICT is the most wanted and highest paid profession. If companies want to attract and keep employees, they have to invest in the brand image. The more respectable the company is, the more quality staff will they attract and retain. ICT is constantly changing and the biggest capital consists of human resources. By sharing internal photos and showing their culture they are attracting employees and target audience. This is also why 69.2% of them pointed out that they have opened social networks in order to promote the company itself and offered services and/or products, 23.1% in order to attract quality pool of candidates and 7.7% because of customer relationship management.

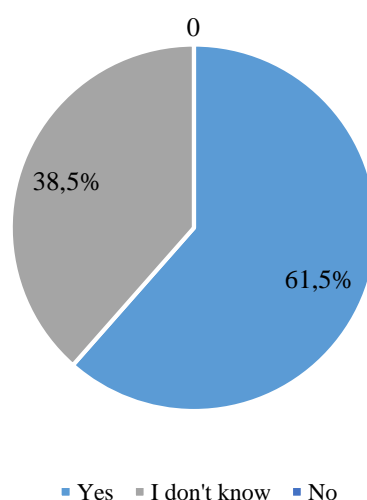
According to the international survey, 84% of the interviewed companies (n=600) said that they are able to reach more customers by using social media and 68% of them used social media for promoting their products/services [Bhanot, 2011].

### **3.1. SOCIAL NETWORKS' IMPACT ON THE REPUTATION**

As mentioned before, brand image and reputation are crucial in any industry for attracting employees and customers. In ICT industry customers are mostly “online” and it is not strange that 8 of 13 companies mentioned that using one or more social networks accounts has direct positive impact on reputation, while 5 of them does not know. Nobody answered that using social networks is not affecting reputation, which proves the impact of social media on reputation.

Furthermore, 69.2% of the companies believe that the amount of posts published on social networks has an affect on improving or disproving reputation of the company, 23.1% do not know, 7.7% say that the amount of posts are not affecting reputation. It can be connected with the next answers that show how 53.8% of the companies believe that all the activities on social networks are crucial for their reputation, 38.5% believe that they are not crucial, and 7.7% do not know. As we can see, more than half of the companies told that using social networks is crucial for their reputation, but more of them (69.2%) said that in the next two years activities on social networks will impact even more on the reputation of the company, 23.1% of them do not know and 7.7% think it will not affect more than today.

Figure 1. Impact of the number of social network accounts on the reputation



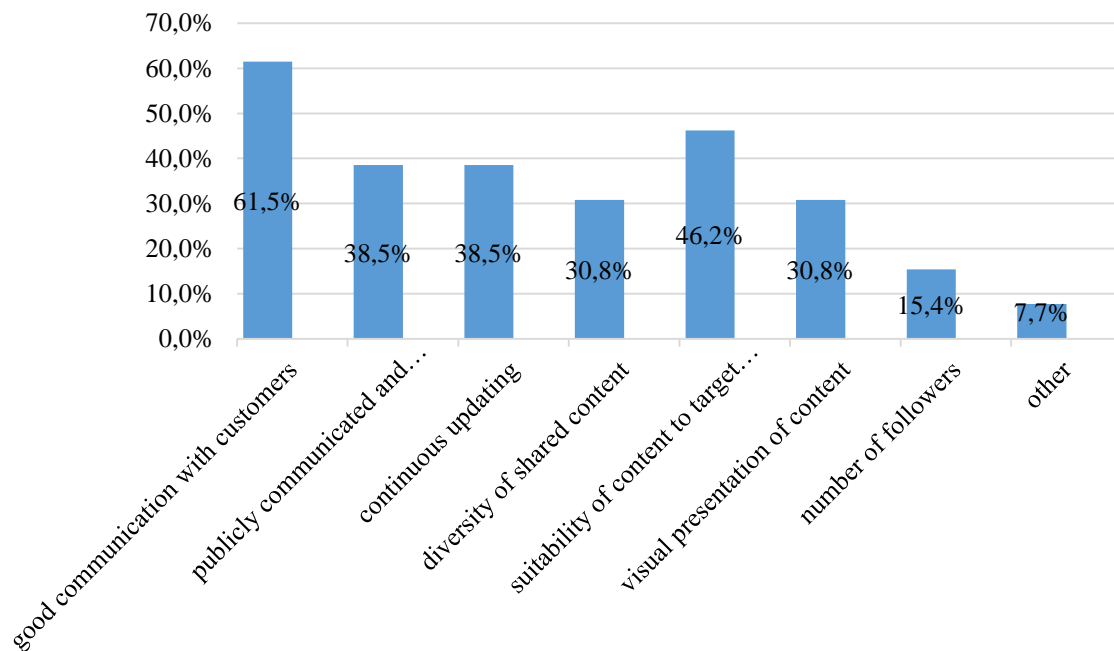
No company disagrees with the statement that one of the benefits of using social networks for reputation is preventive PR, 7.7% of the companies mainly disagree, 30.8% have no opinion about it, 38.5% agree with the statement and 23.1% strongly agree.

Further, no company disagrees with the statement that one of the benefits of using social networks for reputation is understanding the needs of consumers by analyzing their communication habits, 7.7% of the companies mainly disagree, 38.5% have no opinion about it, 30.8% agree with the statement and 23.1% strongly agree.

It's known that articles in media are very important for building the reputation of any company. Therefore, since ICT companies cooperate with a lot of foreign customers and are managing contracts world wide exporting their services or/and products, it is crucial to be visible to foreign media. Local media are more important for employee branding attracting good potential employees. That is why 30.8% of them agree and 30.8% strongly agree with the statement that one of the benefits of using social networks for reputation is presentation of services or/and products.

From all social activities the biggest impact on the company's reputation is good communication with network users (61.5%), suitability of content to the group of users that reads it (46.2%), publicly communicated and transparent information (38.5%), continuous updating (38.5%), diversity of content shared (30.8%), visual presentation of content (30.8%), number of followers (15.4%) and other (7.7%). Companies were able to choose more than one answer.

Figure 2. Impact of social network activities on the company reputation



Companies mentioned that what harms the reputation the most is bad communication with customers and users (46.2%), no suitability of content to the group that follows it (23.1%), no diversity of content shared (15.4%), no transparent information (7.7%) and rare updating (7.6%).

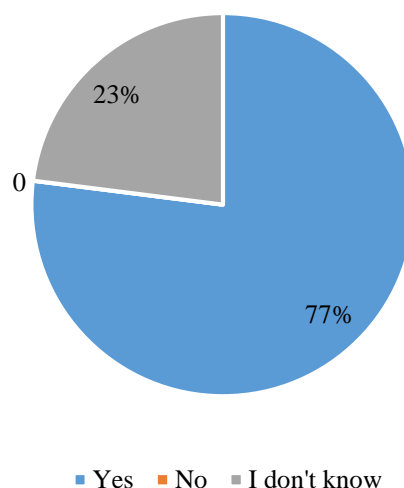
46.2% of companies said that they should be better in updating information on social networks, 15.4% said they should be better in communicating with network users, 15.4% think that they should work more on diversity of content shared, 7.7% said they should work more in getting more followers, 7.7% in visual presentation of content and 7.7% on suitability of content to the group that follows it.

### 3.2. SOCIAL NETWORKS' IMPACT ON THE EMPLOYEE BRANDING

According to the international survey, which asked over 600 human resources and recruiting professionals as to how they use social networking in their recruiting process, 73.3% said they currently use social media to recruit candidates [Bhanot, 2011].

76.9% of companies said that there were candidates who had come to the interview already heard something about company on social networks, while 23.1% of them do not know.

Figure 3. Potential employees perception of the company based on company's activities on social networks



77% of the companies believe that candidates who came to the job interview already had a certain perception of the company based on company's activities on social networks, while 23.1% of them do not know and nobody answered no. This is a proof that potential employees are studying companies carefully and that the online presence is crucial for presenting the company in an attractive way. Companies that are not “famous” and do not have a good online presence will have a harder time finding (and keeping) good employees. Before the actual job interviews, it is important to get as much applications as possible. The reputation, then, directly affects how many applications will the company receive. 69.2% of companies said that they believe that the response to the interviews and open positions (applications) would be less popular if there was no communication on social networks, while 30.8% of them do not know.

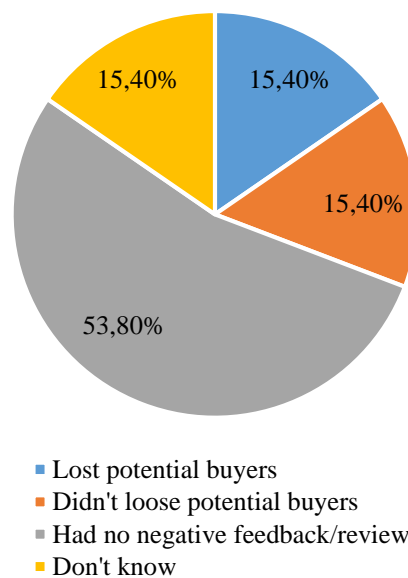
It is not only how popular their social network accounts are, but also the power of word of mouth, apropos how will existing employees present the company online, tell their friends about it or share open positions. 61.6% of the companies believe that social activities affect directly on employee satisfaction and the perception of the company, 30.8% of them do not know while 7.7% of them disagree. Further, 12 companies declared that their employees are involved in sharing and commenting content on social networks, while only 1 said that the employees are not sharing or commenting the content published by the company.

The power of social networks is allowing people to write and publish their thoughts, opinions and critics. It is also easy to find all information online or to leave a review with just a few mouse clicks that will be visible to all people around the globe. That is why 53.9% of the companies encourage employees to take education in the field of online marketing, while 46.2% of them do not.

### 3.3. SOCIAL NETWORK USERS AND POTENTIAL BUYERS

Only 1 company stated that negative comments on their networks do not affect the company's business, 2 of them do not know, 4 companies claimed that negative comments are affecting the company's business while 6 of them claimed that they never had a negative comment.

Figure 4. Impact of negative feedback/review on the company's business



15.4% of the companies said that they do not lose potential customers because of the negative feedback or review, 15.4% do not know, 15.4% claim to have lost potential customers based on negative feedback, while 53.8% of them stated that there was no negative feedback. It is possible that there was no negative feedback because of the knowledge how to manage social network accounts, how to communicate and what to share. As mentioned before, over 50% of companies are investing in educating their staff for online marketing management. Even if the company is not paying professional courses, people are teaching themselves by reading free online courses, articles and ebooks.

No company disagrees with the statement that because of the social activities their brand has a strong subliminal effect on customer preferences, 15.4% of the companies mainly disagree, 38.5% have no opinion about it, 38.5% agree with the statement that because of the activities on their networks the brand has a strong subliminal effect on customer preferences and 7.7% of them strongly agree with that statement.

No company disagrees with the statement that because of the social activities they seem more reliable than companies that do not use social networks, no company mainly disagrees, 30.8% have no opinion about it, 30.8% agree with the statement that because of the activities on their

networks they seem more reliable than companies that do not use social networks and 38.5% strongly agree with that statement.

No company disagrees with the statement that because of the social activities they seem more serious than companies that do not use social networks, no company mainly disagrees, 38.5% have no opinion about it, 30.8% agree with the statement that because of the activities on their networks they seem more serious than companies that do not use social networks and 30.8% strongly agree with that statement.

No company disagrees with the statement that because of the social activity they seem to have better quality than companies that do not use social networks, no company mainly disagrees, 46.2% have no opinion about it, 23.1% agree with the statement that because of the activities on their networks they seem to have better quality than companies that do not use social networks, while 30.8% strongly agree with that statement.

No company disagrees with the statement that because of the social activities they seem to be more professional than companies that do not use social networks, 7.7% of the companies mainly disagree, 23.1% have no opinion about it, 38.5% agree with the statement that because of the activities on their networks they seem to be more professional than companies that do not use social networks and 30.8% strongly agree with that statement.

No company disagrees with the statement that because of the social activities they seem to be more popular than companies that do not use social networks, no company mainly disagrees, 15.4% have no opinion about it, 53.8% agree with the statement that because of the activities on their networks they seem to be more popular than companies that do not use social networks and 30.8% strongly agree with that statement.

These results show that the biggest difference in numbers is visible when companies were asked if they consider themselves more popular than companies that do not use social profiles. By using social networks, companies are engaging with a cool and young community which makes the brand more popular and follow technological trends. That is specially important in ICT industry. Their goal is to have active fans that spread the word about the company to their friends, which, in the end, can be profitable.

## **4 CONCLUSIONS**

It is assumed that ICT companies are most focused and invest the most of all industries in social networks activities because such focus on technologies is their primary work. With this assumption survey was conducted and confirmed in most answers. Most companies believe that

they are more professional, more popular, more credible and more serious than companies in the same sector that do not have social network accounts.

However, there were few surprising facts. Even 4 out of 13 companies doesn't have a developed strategy for communicating on social networks, and 7 of them doesn't have a community manager or a preplanned budget for social networks activities, although they agree that those activities are crucial for building reputation. Hence, it is important to notice that there is a need for educating managers and employees in ICT sector and showing them the importance of online reputation management in order to be competitive globally. Regardless of that, companies recognize that primarily communication goals on social networks are to improve reputation, increase sale and attract potential employees. Also, they believe that postponement of communication with users can ruin company's reputation and that there is a space for improving that within their own company, especially because users have created an image about them through content on their social networks accounts.

To conclude, this paper has proved positive relationship between social networks usage and the reputation of the Croatian ICT companies. Namely, managers in ICT sector are mostly aware of the importance of online communication strategies and activities for building and maintaining online reputation. Also, they equate terms online reputation and reputation in general. But, there is more space for exploring. This findings can be used as a starting point for future research. For instance, relations between social networks activities, reputation demolition and its affect on the business can be examine in more details.

## 5 REFERENCES

- [1] Aula, P. (2010). Social media, reputation risk and ambient publicity management. *Strategy and Leadership*, 38(6), pp 43-49.
- [2] Bhanot, S. (2011). A study on impact of social media on company performance. *College of Management Studies*, pp 1-14, Nerul, Navi Mumbai.
- [3] Brakus, A. (2015). Mediji i marketing. In *Medias Res: časopis filozofije medija*, 4(7), pp 1096-1103, 2008.
- [4] Caruana, A., Chircop, S. (2000). Measuring Corporate Reputation: A Case Example. *Corporate Reputation*, 3(1), pp 43-57.
- [5] Demeterffy Lančić, R. (2010). Novi mediji i odnosi s javnošću. *Medijske studije*, 1(2), pp 157-169.
- [6] Dijkmans, C., Kerkhof, P., Beukeboom, C. J. (2014). A stage to engage: social media use and corporate reputation. *Tourism Management*, 7(1), pp 58-67.
- [7] Floreddu, P. B., Cabiddu, F. (2013). Managing online reputation: the role of social media. 73th Annual Meeting of the Academy of Management, pp, 1-24, Anaheim, California.

- [8] Gotsi M., Wilson, A. M. (2001). Corporate reputation: Seeking a definition. *Corporate Communications: An International Journal*, 6(1), pp 24-30.
- [9] Grützmacher, A. (2011). Reputation 2.0: The role of social media in corporate reputation – Case Nokia. *International Business Communication*, Aalto University, pp 1-160.
- [10] Gujić, M., Kraljević, R., Milun, T. (2016.) Poduzetnici i nova komunikacijska tehnologija: zapreke ili izazovi. *Acta Economica Et Turistica*, 1(2), pp 113-212.
- [11] Ličina Borja, B. (2012). 22% tvrtki ne posjeduje strategiju za komunikaciju na društvenim mrežama, <http://www.planb.hr/22-tvrtki-ne-posjeduje-strategiju-za-komunikaciju-na-drustvenim-mrezama/>, downloaded: [August, 11th 2016]
- [12] Quadrans konzalting (2015). Like, Tweet i Share u službi Top 100 tvrtki, <http://www.quadrans.hr/images/PDF/LikeTweetShareuTop100.pdf>, downloaded: [August, 11th 2016]
- [13] Živadinović, V., Zelić, M (2014). Uticaj online-tržišta i digitalnih tehnologija na reputaciju preduzeća. *Infotech-Jahorina*, 13(1), pp 723-726.

## **ROLE OF THE NEW MEDIA AS A DISTRIBUTION CHANNEL FOR ACCOMMODATION SERVICES IN TOURISM**

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### **ABSTRACT**

*The new media has changed the tourism and hospitality industry on many levels bringing an unprecedented change in the way consumers purchase the accommodation services. More and more consumers in a tourism industry use the new media in order to seek information and purchase. At the same time companies that sell accommodation services, or are intermediaries in their sales, are adapting and rapidly increasing an implementation of the new media in their business as a new and innovative channel of distribution. Use of the new media is therefore widely accepted by accommodation providers in a tourism today. This paper gives a brief review of main forms of the new media, which are used in purchasing and selling of the accommodation services, including web sites (and blogs), e-mail, social medias and mobile commerce. An empirical research have been conducted in order to investigate the role of the new media as a channel for distribution of accommodation services in tourism. Exploratory research used for survey a highly structured questionnaire answered by a sample of 102 respondents. The objective was to explore their experience and perspective of their use of the new media in seeking information and purchasing. According to the research, it can be concluded that the new media is the core and the key to a successful business, not only in the sale of accommodation services, but in the whole tourism and accommodation industry. As a result large share of the sales have moved to the new media as a dominant channel for distribution of such services.*

**KEYWORDS:** new media, accommodation service, distribution channels, internet, tourism

## 1 INTRODUCTION

“New media of 21<sup>st</sup> century” have several definitions. Most of them revolve around internet and user interactions through different technologies carrying video, text, pictures and sound. The definition changes as new media change during to the advances in technology (Peruško, 2011). Beal (2016) defines new media as content available on demand through the internet which is available to be used on any digital device and that usually contains user feedback and creative and interactive response. Therefore examples of the new media would include web pages such as newspaper portals, blogs, videogames and social networks. Key characteristic of such media is a dialogue. They enable sharing and interacting with the content. Unlike traditional media those new media are based on user involvement and interaction. Television, movies, journals, books and other printed materials are not new media. In defining new media Manovich (2001) goes further and proposes that new media does not means only interactivity and hypermedia but should also have the following characteristics:

- Numeric in nature – they are composed of data, digital codes
- Modularity – they are made from different elements such as sounds, pictures, forms, that can exist separately
- Automatization – many operations in process of generating content, distribution and manipulation are automatized
- Changeability – new media are changing over time
- Transcoding – computer logic influences how we understand and perceive ourselves.

For the purpose of this paper we define new media according to some of their main characteristics: availability through the internet, interactivity, availability on digital devices in real time without time and spatial boundaries. Those include web pages, blogs, live streaming of sounds and video, chat rooms, social networks, certain mobile applications, virtual reality and similar. Importance of communication through new media with potential customers are rapidly gaining importance. Companies have tangible benefits when using different channels such as social media for communication and promotion of its products and services. Social media are important for building and managing relationships with customers and employees, for making new contact points for extending service to the customers, for identification and motivation of customers in promoting a brand, for creating events, audience and followers, and similar (Marta and Thomas, 2013). As customers spend more time online and on social networks, those media became more and more important for business strategies of a companies (Panian, 2013). New media promote not just user interaction but also become an important channel for distribution of different goods and services, especially today through different applications optimized for smartphones (Urbančić, 2016).

## 2 ROLE OF NEW MEDIA AS A DISTRIBUTION CHANNEL IN TOURISM SERVICES

During purchase decision making for touristic services customers are influenced by different factors that can be grouped into four distinct groups: culture, social, personal and psychological (Kotler and Armstrong, 2011). Most purchase decisions in this particular field will be also influenced by emotions, discretionary time and income level.

Tradition sales funnel becomes obsolete as travelers report spending roughly one hour evaluating and researching different hotels for their most recent stay (Inversini and Masiero, 2014). Research by Hawk and Partners (2012) reveals that number of factors influences the selection process. In the past this process was relatively linear but now it has become more dynamic and cyclical with different touchpoints and feedback loops influencing and reinforcing each other as shown on the next diagram.

Picture 1. Purchase process for the accommodation tourist service



**Source:** Hawk Partners (2012): Hotel Channel Usage Study, available on: [2012http://rss.hsynidicate.com/file/152004811.pdf](http://rss.hsynidicate.com/file/152004811.pdf)

Recent research in this field show that it is prevailing trend using new media for searching and booking of tourist services. In Switzerland in year 2011 79% of respondents were already using

new media for booking stays (Law *et al.*, 2015). Booking.com was the main site used and providers of service such as small hotels, house owners and similar rated it as very important sales channel. Some of the most important factors contributing to the success of the new media as a distribution channel are their extensive reach, nonstop availability, user ratings, user friendliness and automatization of the whole search and booking process which results in a low transaction costs (Laškarin, 2010).

It is no wonder that hotels and other providers of room and board services recognized the importance of IT, internet and new media as a new channels for distributing or selling of their touristic services. New media enable more reach at lower costs while at the same time ensure more information and easier purchasing for the consumers seeking those services (Baldigara *et al.*, 2013). Such technologically supported channels make it much easier to manage free resources, automatically adjust pricing and in some instances to exclude unnecessary intermediaries from the process (Galičić *et al.*, 2008).

### **3 RESEARCH GOALS AND METHODOLOGY**

Main goal of the research was to explore application of new media as a distribution channel for tourist services, more accurately for selecting and booking touristic stays. Also levels of communication and level of adoption have been investigated. Research methodology included quantitative exploratory research that was carried out on a sample of 102 respondents via highly structured questionnaire. Data was gathered by snowballing. Questionnaire contained 17 questions mostly in a form of Likert and Thurstons scales. Questions have been modified according to existing research tools used on this topics by Kwon *et al.* (2013) and Wongkalng (2013). Data was gathered during August 2016.

### **4 RESEARCH RESULTS**

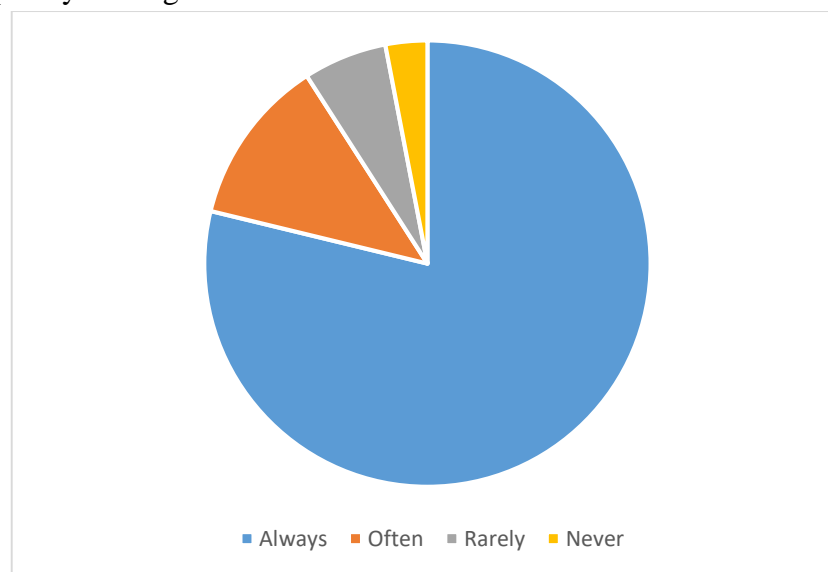
Demographic characteristics of sample as presented in the table 1 shows that majority of respondents were female (64%) and that most of respondents were young people currently enrolled in higher education institution mainly Faculty of Business and Economics at University of Zagreb.

Graph 1 shows the frequency of usage of a new media when looking for information about booking and selecting hotel stays and touristic services. 78% of respondents stated that they are always using new media, while 12% uses them often, 6% rarely and 3% never as shown below.

Table 1. Demographic structure of sample

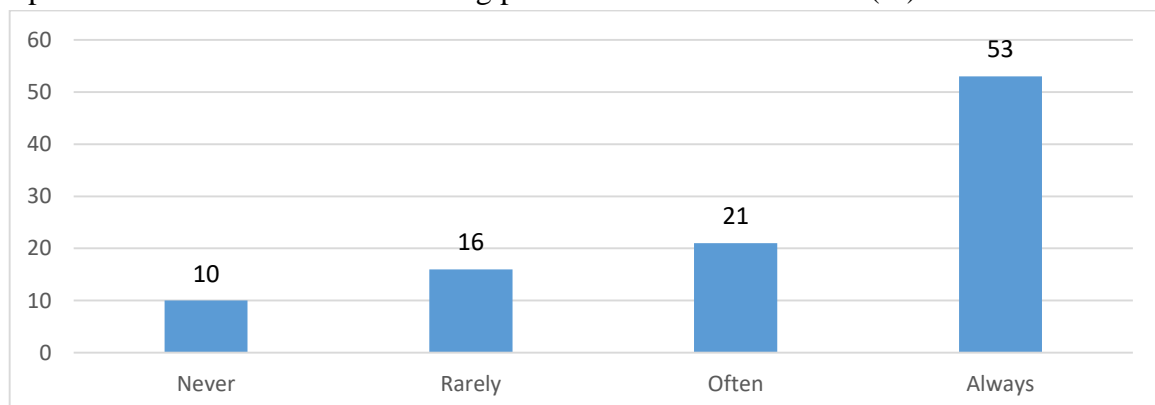
		Frequency	Percent
Gender (n = 102)	Female	65	64%
	Male	37	36%
Age (n = 102)	18-25	49	48%
	26-34	28	27%
	35-44	16	16%
	45-54	7	7%
	55+	2	2%

Graph 1. Frequency of usage of new media for information about accommodation services



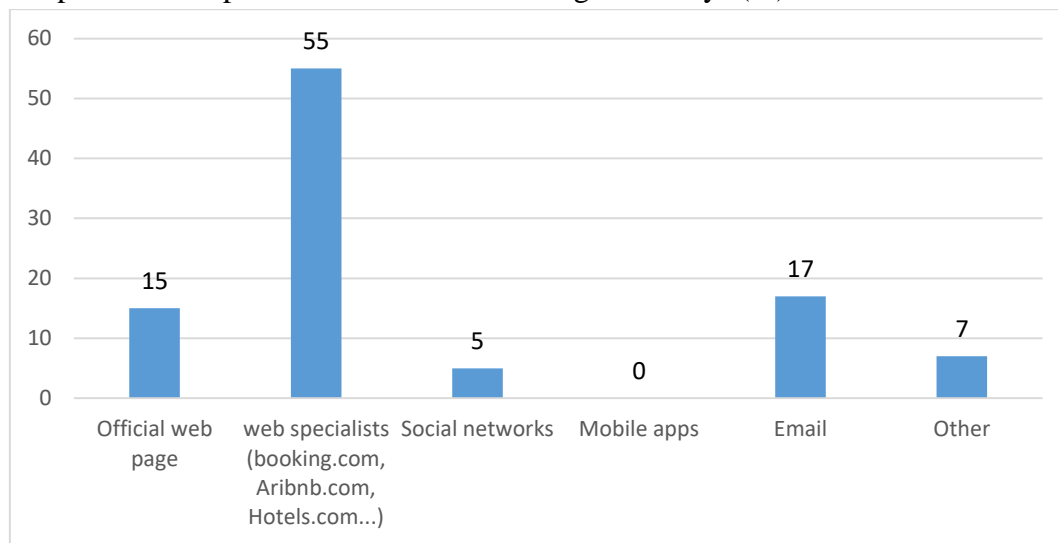
Next graph displays the use of new media for reservation or booking of a stay. Out of 99 respondents that reported using new media 53% always uses new media for making booking, 21% does it often and 16% rarely and 10% never. It is interesting to mention that respondents for this purposes mostly used computer (90%) and only occasionally (10%) smartphone or tablet.

Graph 2: Use of new media for booking/purchase of accommodation (%)



Results showed that most often used were specialized web pages and intermediaries such as Airbnb, Booking.com, Hotels.com and similar by 56% of respondents, followed by official web pages (15%), then by social networks (5%) e-mail (17%) and other forms by 7%. It seems no mobile applications specialized for this purpose have been used among respondents which comes as a surprise and will surely change in the future.

Graph 3: Use of particular media for bookings of a stays (%)



As displayed in the table 2, specialized web pages such as Airbnb, Booking, Hotels.com and similar are the most popular channels to use when doing any activity regarding search, comparison or booking of a tourist stay. This finding is very important because it points toward development and adoption of this type of digital channel of distribution among consumers. It also indicates that for the companies offering accommodation it might be more important to invest into better rankings of their offering with those specialized intermediaries than to have its own webpage.

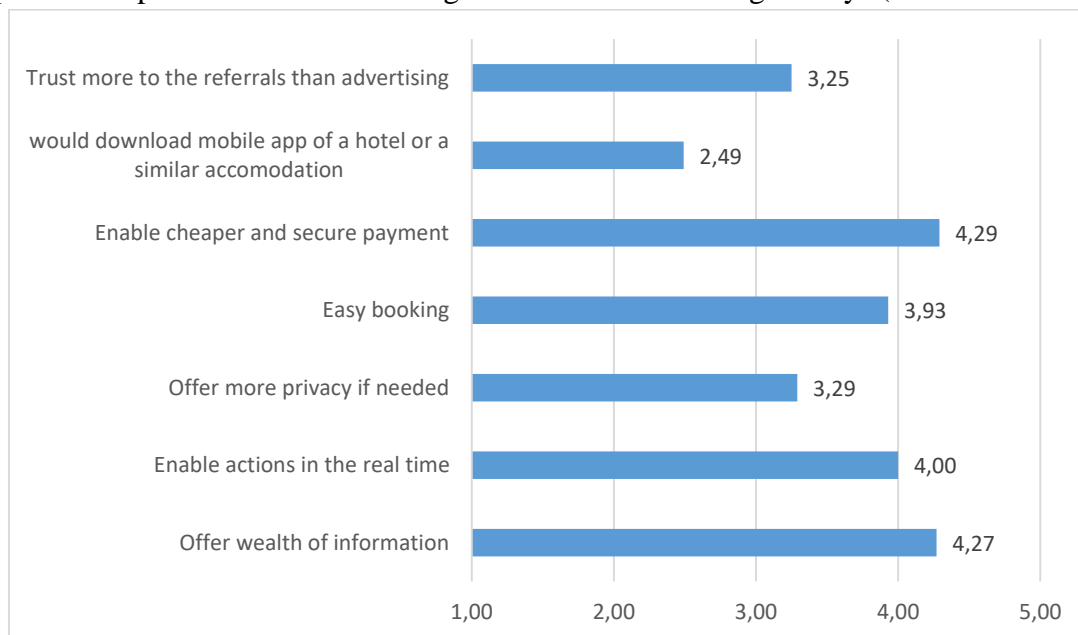
Table 2: Use of different channels by activity

Variable	New media type	Frequency
Search for information about accommodation (n=99)	Specialized web pages (intermediaries)	75
	Social media	11
	Official web pages	10
	E-mail	3
	Blog	0
	Mobile apps	0
Comparison of offerings and prices (n=99)	Specialized web pages (intermediaries)	80
	Official web pages	13
	Social media	3
	E-mail	3

	Mobile apps	0
	Blog	0
Getting discounts (n=41)	Specialized web pages (intermediaries)	18
	Official web pages	12
	E-mail	8
	Social media	3
	Forums	0
	Mobile apps	0
	Blog	0
Searching for information about events in the vicinity of accommodation (n=75)	Specialized web pages (intermediaries)	52
	Social media	14
	Official web pages	5
	Forums	4
	Mobile apps	0
	E-mail	0
	Blog	0

Finally, on the graph 4 there is a result of 5 point Likert scale regarding agreement with statements about benefits of using new media. Respondents most agree with the statements that new media offer them cheaper and secure payment ( $M=4.29$ ) and offer wealth of information ( $M=4.27$ ) and they tend to agree the least with the idea of downloading mobile application of a hotel or similar accommodation provider ( $M=2.49$ ).

Graph 4: Perception of benefits of using new media for booking of stays (arithmetic mean, M)



## 5 CONCLUSION AND RESEARCH LIMITATIONS

The results might not be generalized to the whole population because the sample was small and sampling method was not adequate for such purpose. However, there are some interesting and indicative results. Almost all of the respondents (97%) used new media at past at least once when booking or searching for the information about their stays. This shows high market penetration of new media and their importance during the purchase of touristic services process. New media has also become an important channel of distribution for such services as 90% of respondents reported using them at least once for actual booking/purchasing of their stay. Out of that number 74% reported using them always or often which points toward high adoption rate and their maturity. Most of the customers used specialized digital intermediaries such as Airbnb, Booking.com and similar. Implications for the hotels are numerous as this shows that they should pay more attention and channel their marketing efforts also through those specialized digital intermediaries. Classical channels such as tourist agencies are losing market share fast and can not compete with digital channels in availability 24/7, quality and quantity of information and price. Therefore agencies have to add additional value for the consumers and offer more complex touristic products. In the future it is expected that such trend toward adoption of digital channels of distribution for touristic services will increase even further as all of the specialized intermediaries already offer their applications for the mobile devices. The only unexpected result of the survey was actual negligence of mobile devices among respondents. Industry reports show that mobile devices in the next few years will be the main source for using different internet services and that already significant number of customers is using them for doing business transactions today. It is important for managers in this sector to understand importance of new media for business success and to invest into meaningful presence of their companies on all those channels in order to be closer to the customers who changed their behavior and spend more and more time online posting, sharing, liking and living.

## REFERENCES

- [1] Baldigara, T., Štambuk, A., Mamula, M. (2013): „Contribution to e-tourism demand modelling“, *Informatol*, 46 (4), pp. 343.-352.
- [2] Beal, V. (2013): *New media*, available at: [http://www.webopedia.com/TERM/N/new\\_media.html](http://www.webopedia.com/TERM/N/new_media.html), (25.07.2016.)
- [3] Galičić, V., Ivanović, S., Lupić, M. (2008): *Hotelska prodaja i recepcijsko poslovanje*, Fakultet za turistički i hotelski menadžment Opatija, Opatija
- [4] Hawk Partners (2012): *Hotel Channel Usage Study*, available at: [2012http://rss.hsyndicate.com/file/152004811.pdf](http://rss.hsyndicate.com/file/152004811.pdf) (20.07.2016.)
- [5] Inversini, A., Masiero, L. (2014): „Selling rooms online: the use of social media and online travel agents“, *International Journal of Contemporary Hospitality Management*, 26 (2), pp. 272. – 292.

- [6] Kotler, P, Armstrong, G.M., Adam, S., Denize, S. (2011): *Principles of Marketing*, 5th edition, Pearson: New Jersey
- [7] Kwon, J.M., Bae, J., Blum, S.C. (2013): "Mobile applications in the hospitality industry", *Journal of Hospitality and Tourism Technology*, 4 (1), pp. 81. – 92.
- [8] Laškarin, M. (2010): „Upravljanje web komunikacijom u hotelskom marketingu“, *Informatologija*, 45 (4), pp. 314.-322.
- [9] Law, R., Leung, R. ,Lo, A. ,Leung, D. , Nang Fong, L.H. (2015): „Distribution channel in hospitality and tourism: Revisiting disintermediation from the perspectives of hotels and travel agencies“, *International Journal of Contemporary Hospitality Management*, 27 (3), pp. 431. – 452.
- [10] Manovich L. (2001): *The Language of New Media*, Massachusetts Institute of Technology
- [11] Martha, A.C., Thomas, J.T. (2013): „The new customer-facing technology: mobile and the constantly-connected consumer“, *Journal of Hospitality and Tourism Technology*, 4 (2), pp.177. – 187.
- [12] Panian, Ž. (2013): *Elektroničko poslovanje druge generacije*, Ekonomski fakultet, Zagreb
- [13] Peruško, Z. (2011): *Uvod u medije*, Naklada Jesenski i Turk, Zagreb
- [14] Urbančić, M. (2016): *Internet marketing u turizmu : vodič za bolju popunjenost smještajnih kapaciteta*, Paradox, Rijeka
- [15] Wongklang, K. (2013): „Mobile Applications in the Hotel Industry: A Case Study of Hotels in Phuket“, available at:  
<http://kb.psu.ac.th/psukb/bitstream/2010/9776/1/391123.pdf> (24.04.2016.)



## **SOCIAL NETWORKS AS CHALLENGE FOR MARKETING INTELLIGENCE**

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### **ABSTRACT**

*Social networks are changing the way of connection and communication between people by increasing the amount of publicly available information and knowledge. People of similar professional backgrounds and occupations link to online communities to share information. This has a direct impact on what is one of the most difficult aspects of marketing intelligence "efficient and rapid collection and sharing of data and information". The aim of marketing intelligence is not only access data but manage them, analyze them and based on the analysis to make the right decisions related to customers, products, price, promotion, sale. Therefore, a large number of companies today are looking for solutions by marketing intelligence that will enable access to text data, analyze them and improve the quality of marketing decisions. The paper raises the hypothesis that it is possible to build a system for marketing intelligence that collects and analyzes data from social networks and uses the analysis results (information) to make precise, concise and accurate marketing decisions. In the paper is used the R programming language for marketing intelligence system and the R language demonstrated satisfactory simplicity and application power.*

**KEYWORDS:** marketing intelligence, text mining, social network, sentiment analysis, marketing decision making.

### **1 INTRODUCTION**

Marketing intelligence is a systematic approach to gathering data from internal and external sources of companies with the ultimate goal of generating reliable, usable and timely

information for making marketing decisions. Crowley, Ed., [1] analysis marketing intelligence by three interconnected pyramids: information, communication and people / processes. Information pyramid as component of marketing intelligence has three levels: data, analysis and insight, communication pyramid has again three levels: gathering, dissemination and dialogue and people& processes have research, reporting and capability. Marketing intelligence for Crowley is decomposing in competitive insight (competitor intelligence and product intelligence) and market insight (market understanding and customer insight). Marketing intelligence on social networks is focusing on customers, their preferences, satisfaction rates, customer opinion and attitudes. Social networks are today a big data sources available to marketing intelligence. The real power of the social networks for marketing intelligence are feedbacks of customers about products, promotion, prices, employees, brand awareness, brand preferences, loyalty.

Market intelligence is closely related to marketing research. But there are some differences because marketing research involves solving a specific marketing problem at a specific point in time, market intelligence involves gathering information on a regular, ongoing basis to stay in touch with what's happening in the marketplace [8]. According to Kotler [4] marketing intelligence provides current information about marketing environment to help managers to organize and prepare marketing plans. Marketing intelligence increasing attention from internal data such as transaction histories, databases, data warehouses, data marts, loyalty cards and so to social networks. Social media monitoring is a type of marketing intelligence that overlaps with market research. But the social networks analysis is not specific marketing problem because today it involves gathering and analysis on a regular basis.

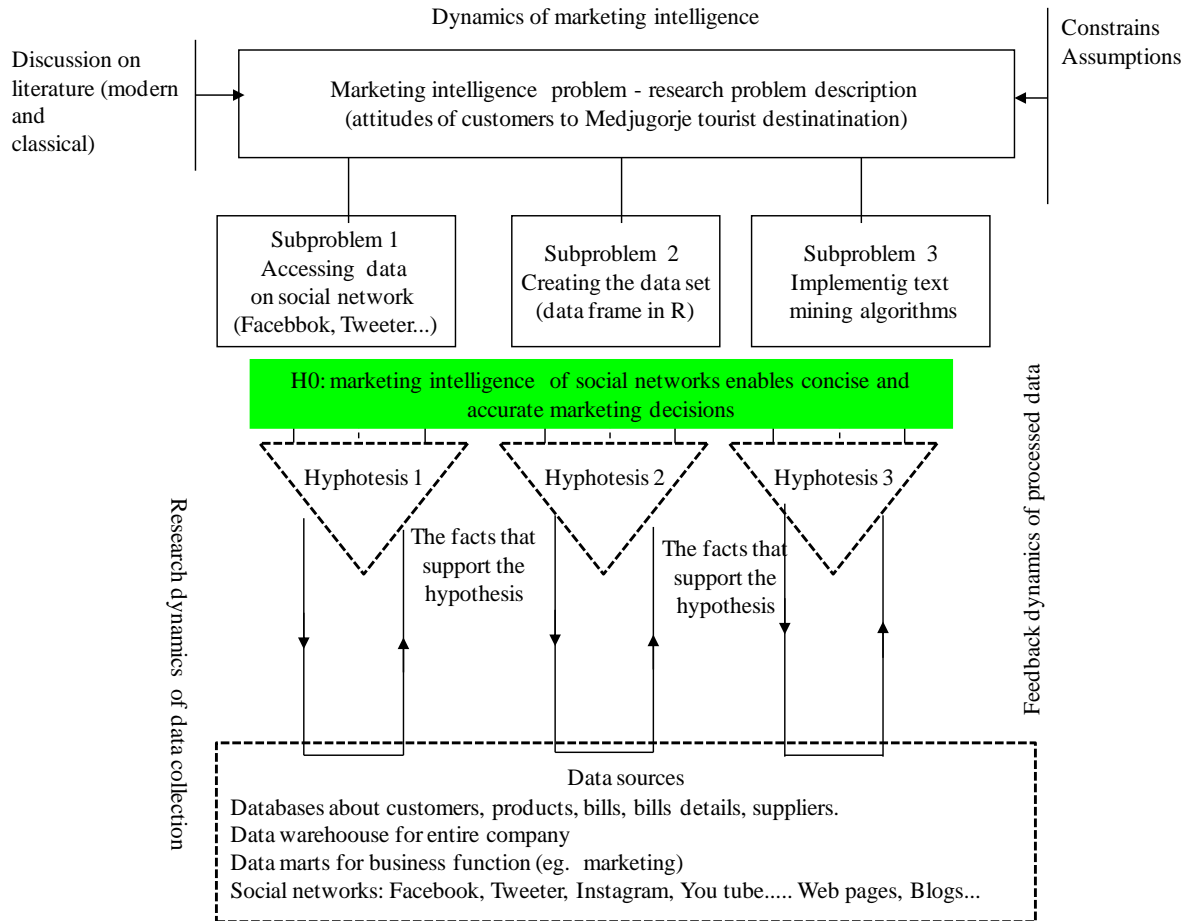
Social networks are becoming a safe source of quality data about the products, the mood of the market to the products but also the image of the company as a whole, as a system on the market. Without proper software tools and information technology support is not possible to collect and analyze huge amounts of data in the form of messages and comments on social networks.

However, it is necessary to be cautious in the use of data from social networks. The reliability of conclusions and information obtained by analysis is particularly important. The representativeness of data on social networks depends on the wide of their use. If social network has more users then the data representativeness for marketing intelligence is higher (properly represent the views of the whole market and exclude dominant influence of opinion leaders).

## **2 MARKETING INTELLIGENCE AND THE SOURCE OF DATA**

Marketing intelligence follows the logic of any scientific research. The research is based on a preset reasonable assumption about the relationship of two or more research variables. Such logical and meaningful assumptions in terms of analysis are called hypotheses.

Figure 1. Marketing intelligence dynamics



Research dynamics within the marketing intelligence presupposes the existence of data and appropriate algorithms (methods) of data analysis in order to refute or accept the proposed hypotheses. Data from social networks contributes to shape a complete view of the market, the market intelligence view. Today, research is based in principle on the huge amounts of data and uncovering hidden regularities that are established among them. Such regularities are not trivial nor simple. Information technology is almost at all stages of marketing intelligence from collecting, storing data to their analysis and visualization of the analysis results.

The corporate database relational or object oriented is first and indispensable data source for marketing intelligence. In transactional database are stored data about all daily business transaction. This database records data about customers, suppliers, order details, products, orders, inventories etc. Semantically rich data model implemented in the form of a database enables marketing experts analysis and this analysis ends with information for better decision making [7]. However, transactional database hiding most information about customers, their behavior, correctness ways of pricing, the results of promotional campaigns.

The growth of transactional databases is very fast and they are not adequate for analytical purposes. Therefore, medium and large enterprises develop specific databases for analytical purposes. These are called data warehouses. Foundation of the data warehouse concept is a separation of day-to-day transactions from analyzing and reporting that make marketing analysts or entrepreneurs.

According to Inmon [2] the key objective of data warehouse is to place end users directly in touch with the data they need to make better decisions. Kimball [3] states data staging process called ETT (Extraction, Transformation, and Transportation) as the key part of the data warehouse project.

However, databases and data warehouses are not the only sources of data for marketing intelligence. Thus, the views and opinions of the customers can be analyzed by using a questionnaire as an instrument of data collection or data stored in social networks.

Corporate website may contain valuable data about who is looking for its products or services. Finding hidden patterns and correlations within the data from a large dataset is a challenging data mining or text mining.

### **3 SOCIAL NETWORKS AS DATA SOURCE FOR MARKETING INTELLIGENCE**

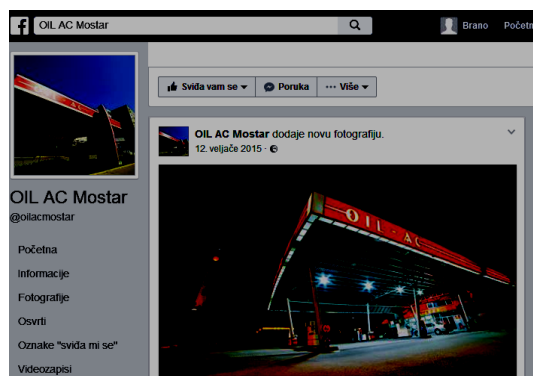
Social networks such as Twitter, Facebook, LinkedIn, blog, online forums have important roles for people, business, political parties, science because enable communication and sharing information with others. Internet marketing implements various social networks in order to achieve integrated marketing communication by supporting activities of social sharing of content, images, and video. Social networks are important element in marketing plans. Namely, internet marketing using social networks may offer valuable information that customers will find interesting, may create a variety of content by implementing videos, images, graphics in addition to classic text-based content. Using social networks improves business sharing of original content in order to gain followers and fans. Sharing content and linking to outside sources stimulates customers to improve trust and reliability in products and corporate.

The Facebook social network is accessible online communication service used for business purposes. Allows you to connect with users. They save money, they cost almost nothing and are made very quickly. Simply, invitations sent via social networks save you money and time. Marketing and promotion are particularly valuable for social networks and vice versa. Measuring the success of promotional activities and marketing decisions is carried out by analyzing the content on social networks.

The idea of Facebook social network is based on a personal profile and communication among friends but the profile can not be used for commercial purposes. For the promotion activities customers can access the group. In the group are linked profiles with some common characteristics so they can interchange information on familiar topics (eg. from a same professional area as is marketing analytics).

The fan page can promote a product, service, tourist destination. Friends (fans) read messages, informing about products, events, services, prices. Commitment is to shape the page so it is interesting to the users and they want to follow. It becomes a channel for two-way communication and social network channel for the promotion of ideas, products, services. Companies that constantly innovate existing products or create new products and services need to communicate with customers but the customers have also a need to monitor their news, ask them questions and seek answers. In Figure 2. is given one example of brand page on Facebook:

Figure 2: Brand Page on Facebook social network



Facebook becomes a channel of communication with the market. Companies have at disposal a social network as an indispensable channel of communication with consumers and its environment and often, on a daily basis, inform customers, publish sweepstakes, undertaken action, price changes, provide new products or services. Number of fans becomes the main measure of the relevance of the page as well as the product or service. The obligation of the management is to recognize and exploit the potential of information technology.

On social networks are huge amounts of data that are often do not even analyze. There are many reasons but the the two most significant. The first is the lack of time and insufficient level of training and knowledge management. These reasons may be called subjective. Other reasons can be attributed to complexity of the data analysis on social networks in terms of building the appropriate software tools and recognition of algorithms that enable analysis [6].

For marketing intelligence the most important are comments posted by people, customers where they express their attitudes, emotions and opinions via texts.

## 4 RESEARCH METHODOLOGY

The research framework in this paper consists of four main phases which are definition of research problem, data gathering and building the data set for analysis, text mining and result analysis.

### 4.1. DATA COLLECTION

The first step will be to take data from Medjugorje Facebook pages. For access any data from facebook pages, user required to login to Facebook (the assumption is that there is a profile on Facebook). A precondition for data collection from Facebook's is to access URL address: <https://developers.facebook.com>, register and fill required information on Facebook developer page (form).

After register and login to Facebook the next step for the user (marketing intelligence) is getting the basic application settings: (the name of application is BrAnSa) application ID and secret code.

Data from Facebook will be collected as well as analysed using R programming language<sup>3</sup>.

The packages `devtools` and `Rfacebook` have to be installed using the statements<sup>4</sup>:

```
>install.packages("devtools")
>library(devtools)
>install_github("Rfacebook", "pablobarbera", subdir="Rfacebook")
```

The package „Rfacebook“ provides a few functions that allow R users to get information about Facebook users, pages, comments and posts.

After installing these packages need to connect R session with test application and authenticate it to Facebook Profile for Data Mining. The package `Rfacebook` offers a very simple function for that. All you need is to copy *app id* and *app secret* from *app settings* on the Facebook developer page:

```
>require("Rfacebook")
> library(httr)
> fb_oauth <- fbOAuth(app_id=" app id from our app settings ", app_secret = " app secret
our app settings ", extended_permissions = TRUE).
```

---

<sup>3</sup> R is an interpreted computer programming language where most user-visible functions are written in R itself. R is made up of: operators (+ - <- \* %\*% ...) for calculations, collection of functions for making quality graphics and sets of functions (packages). R is simple and also suitable for data analysis.

<sup>4</sup> These packages are installed from github as this is currently the most recent version.

The function `fbOAuth` creates an access token that enables R to make authenticated calls to the Facebook API<sup>5</sup>.

The package `httr` is organised around four most popular verbs of http (hypertext transfer protocol): GET (*fetch* an existing resource), POST (*create* a new resource), PUT (*update* an existing resource) and DELETE (*delete* an existing resource).

After dialog with R language using the `fbOAuth()` function:

```
> fb_oauth <- fbOAuth(app_id=" app id from our app settings ", app_secret =" app
secret oour app settings ", extended_permissions = TRUE)
```

Copy and paste into Site URL on Facebook App Settings: `http://localhost:1410/`

When done, press any key to continue...

The main hypotheses of this paper is that it is possible to build a system for marketing intelligence that collects and analyzes data from social networks in order to make accurate marketing decisions.

Therefore will be collected data in the form of comments for the pages with keyword Medjugorje on social network Facebook. The packet `Rfacebook` includes the function `searchPages()` whichs retrieves public pages that mention a given keyword.<sup>6</sup>

```
> pages<-searchPages(string="Medjugorje", token= fb_oauth, n = 20)
```

The keyword is Medjugorje, token is assigned `fb_oauth` and the number of pages is 20.

The application goal is to extract list of posts from a public Facebook page Medjugorje. The function `getPage()` with three parameters is applied:

```
> pageMedjugorje <- getPage("Medjugorje", token= fb_oauth, n = 2000)
```

where the first parameter „*Medjugorje*“ is page name, the second parameter *token= fb\_oauth* is the OAuth token created with `fbOAuth` and the third parameter *n=2000* is number of posts of page to return. We were requested 2000 posts and API returns all of them:

```
> pageMedjugorje <- getPage("Medjugorje", token= fb_oauth, n = 2000)
```

```
>25 posts 50 posts 75 posts 100 posts..... 1796 posts 1821 posts 1823 posts
```

The total number of messages that contain the name of Medjugorje destination is 2000 so we in the R session did not get any warning message (we defined in the previous statement 2000 posts). The first three among 1823 posts are:

```
>pageMedjugorje[1:2,]
```

<sup>5</sup> OAuth is a protocol that provides to clients a "secure delegated access" to server resources on behalf of a resource owner.

<sup>6</sup> This function has three parameters `searchPages(string, token, n = 100)`, where parameters have the next meaning: `string`: containing keywords to search, `token`: either a temporary access token created at <https://developers.facebook.com/tools/explorer> or the OAuth token created with `fbOAuth`, `n`: mximum number of pages to return. Authors of this function are Pablo Barbera and Joel Gombin.

The returned data frame basically contains the fields `from_name`, `from_id` for every single like of the post, `message`, `created_time`, `type`, `likes_count`, `comments_count` and `shares_count`. For the first row in data frame `pageMedjugorje` result is displayed in the next table:

Table 1. Data frame of posts for pages Medjugorje on Facebook

	from_id	from_name	message	created_time	type
1	169173713621	Medjugorje	nella tempesta, fidiamoci di Gesu...	2016-08- 18T14:02:54+0000	link

id		likes_count	comments_count	shares_count
1	<a href="http://www.amicidilazzaro.it/index.php/la-fiducia-in-dio-forza-nelle-tempeste-raniero-cantalamezza">http://www.amicidilazzaro.it/index.php/la-fiducia-in-dio-forza-nelle-tempeste-raniero-cantalamezza</a>	166	5	15

The last three columns in data frame `pageMedjugorje` contain information about the number of likes, comments and shares. This information can be used to get the popularity of a post in a page. The most messages are written in italian language<sup>7</sup>.

Marketing intelligence is concentrated only on text data stored in column `message` of data frame `pageMedjugorje`. This is the third column in data frame and extraction of all messages (comments) enables the function:

```
>fb_wcloud=pageMedjugorje[, 3]
```

The first eight messages will display the next statement of R languages:

```
> comMed=pageMedjugorje[1:3,3]
```

```
> comMed
```

```
[1] "nella tempesta, fidiamoci di Gesù..."
```

```
[2] "Affidarsi a Dio...\n\n(in English : Act fo trust ---> http://goo.gl/NKWocM)"
```

```
[3] "\"Aiutaci a portare il fardello delle tribolazioni quotidiane, non con l'anima dei disperati, ma con la serenità di chi sa di essere custodito nel cavo della mano di Dio... If you followed all the previous steps of the algorithm for extracting data from Facebook pages and R language commands data in the form of text will be stored in variable fb_wcloud. This data can be analyzed using text mining algorithms and in theb paper will be implemented a word cloud. It is an acceptable form of textual data analysis because in graphical form shows the keywords most frequently-occurring in the text.
```

<sup>7</sup> Now we could analyse the gender of users by implementation the R functions which are based on the column `from_id`. The user insights can get with the `getUsers()` function. This function extracts the `user_id` which is the field `from_id`. From the returning user data is possible extract the gender and save it to a temporary `gender_frame`. The complete code and solution is at the URL <https://www.r-bloggers.com/gender-analysis-of-facebook-post-likes/>.

## 4.2. TERM DOCUMENT MATRIX

Initial data sets `fb_wcloud` consisted of textual messages and comments. Term document matrix represents the frequency of each term in document. If the  $D_i$  denotes  $i$ -th document (message) and  $T_j$  denotes  $j$ -th term then  $f_{ij}$  is frequency of  $j$ -th term in  $i$ -th document. Often used in information retrieval and text mining is `tf-idf` parameter. This parameter stands for *term frequency - inverse document frequency* and evaluates how important a word is to a document in a corpus (collection). The package `tm` is a framework for text mining in R language and need to be load first.

The main structure for handling documents in the package ***tm*** makes the so-called `Corpus` and it represents a set of documents [9]. You must enter the following sequence of commands:<sup>8</sup>

```
> library(tm)
> fb_Corpus <- Corpus(VectorSource(fb_wcloud))
```

The package `tm` provides a set of predefined sources (`DirSource`, `VectorSource`, `DataframeSource`). `VectorSource` interpreting each component as document and only accepts (character) vectors. After being "caught" a collection of documents (`fb_Corpus`) we need to modify this collection so that will eliminate the blank spaces in the documents (messages), signs of punctuation and the like. The logic is to eliminate all signs and words that do not carry information relevant to the semantics of the text. The aim is to translate the documents into a simpler form so that they are suitable for parsing. It is sufficient in the loop *for(i in seq(fb\_Corpus))* add commands that from the collection of documents extract characters or words that will be replaced by spaces. It displays the following loop<sup>9</sup>

```
for(i in seq(fb_Corpus))
{
  fb_Corpus[[i]] <- gsub("del", " ", fb_Corpus[[i]])
  fb_Corpus[[i]] <- gsub("#", " ", fb_Corpus[[i]])
  fb_Corpus[[i]] <- gsub("\\\\", " ", fb_Corpus[[i]])
  fb_Corpus[[i]] <- gsub("con", " ", fb_Corpus[[i]])
  .....
  fb_Corpus[[i]] <- gsub("que", " ", fb_Corpus[[i]])
}
```

It is very useful implement the transformation of corpus to be sure all of data is in `PlainTextDocument`:

<sup>8</sup> To understand the commands, packages and functions in the R language is helpful to visit websites that give detailed explanations of the use of the. For package `tm` useful site is:  
<http://cran.r-project.org/web/packages/tm/vignettes/tm.pdf>.

<sup>9</sup> Most of the text in the collection of documents `fb_Corpus` is written in Italian. Therefore, from the text are eliminated the Italian words that not have a special semantic value.

```
>fbCorpus<- tm_map(fb_Corpus, PlainTextDocument)10
```

The next step is to create a matrix for learning which includes frequency of terms. A document term matrix or term-document matrix is a mathematical matrix that describes the frequency of terms that occur in a collection of messages from Facebook pages Medjugorje as tourist destination. In a document term matrix, rows correspond to documents in the collection `fb_wcloud` and columns correspond to terms. `DocumentTermMatrix` is a central part of text mining and in the *tm* package the functions `DocumentTermMatrix` or `TermDocumentMatrix` (depending on whether you want documents as rows and terms as columns, or vice versa) transforms corpora into matrix. This is very important step because the analysis and text mining is based on the quality of document term matrix. The function `DocumentTermMatrix()` in R language has the following syntax:

```
TermDocumentMatrix(x, control = list())
```

where is: *x* - a corpus for the constructors; *control* - a named list of control options

In our example control includes in term document matrix only the words with minimum length of five characters:

```
> fb_tdm<- TermDocumentMatrix(fbCorpus, control = list(minWordLength = 5))  
> fb_tdm  
<<TermDocumentMatrix (terms: 9910, documents: 1823)>>
```

The number of terms in given example is 9910 and documents 1823. The terms (terms) are chosen based on the frequency of the document (Document Frequency-DF). Words that exceed a certain threshold (minimum length of three characters) will form a list of index terms.

### 4.3.RESULT ANALYSIS

The next step is to create a term matrix that contains frequencies of terms for learning. In our example, the number of terms is 9910 and the number of documents 1802. On term document matrix can be applied a huge amount of R functions for data mining like classifications, prediction, clustering etc.

First will `fb_tdm` transform in matrix by function `as.matrix()`. It is generic function and for data frames will return a character matrix:

```
>m_dtm<- as.matrix(fb_tdm)
```

Ne next very useful step is to sum the frequency each one term (row of term document matrix) and sort the frequency in decreasing order.

```
>m_s<- sort(rowSums(m_dtm),decreasing=TRUE)
```

---

<sup>10</sup>**Plain text** is file contents that represent only characters but not its graphical representation nor other object. That is done by `fbCorpus<- tm_map(fb_Corpus, PlainTextDocument)` and now should made `DocumentTermMatrix`.

Then will be created the data frame `m_df` with two columns: word and freq (frequency):

```
>m_df<- data.frame(word = names(m_s),freq=m_s)
```

Ten words with the highest frequency shows the function `head()`:

```
> head(m_df,3)
```

Table 2. The most frequency terms in term document matrix of collection `fb_corpus`

word	freq
medjugorje	805
dio □	185
reina	173

Now we can start asking questions like: what are the most association with word „dio“ where correlation is greater than 0.28? Answer is very simple by implementation the function `findAssocs()`:

Table 3. Associations in `fb_corpus` with word „dio“

<pre>&gt; findAssocs(m_dtm, "dio", corlimit=0.28)</pre>								
\$dio								
dio:	liberaci,	suppli,	disprezzare,	protezione,	prova,	rifugio,	santa,	benedetta,
0.31	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.29
icolo,	ogni,	tua,	cerchiamo					
0.29	0.29	0.29	0.28					

The primary goal of the paper is to present the analysis result in visual form which is especially acceptable in business environment. There are a few reasons why is word cloud used to represent the research information, First, word cloud discovers the essential and an overall sense of comments and messages about Medjugorje as destination. It may stimulate more questions and answers, but that it is a good entry point to take marketing and promotional actions. The marketing intelligence using word cloud may give a fast insights in products, services, customer satisfactions, perception etc. Marketing expert does not need to understand all technological and software aspects of research results but can share back results from research very quickly. To display the results of research it is necessary to load the wordcloud package in the R session:

```
>library(wordcloud)
```

The function `wordcloud` plot a word cloud<sup>11</sup>:

<sup>11</sup> The first argument `m_df$word` takes the terms from data frame `m_df`, the second argument `m_df$freq` is the words frequency, the third argument `scale=c(4,5)` scale a vector of length 2 indicating the range of the size of the words, `min.freq` denotes that words with frequency below `min.freq` will not be plotted, the argument `max.words` is maximum number of words to be plotted, the argument `random.order` plot words in random order (false means they will be plotted in decreasing frequency) and the last argument `colors` choose colors of the word cloud.



application and development power. The research results are visualized in the form of a word cloud and are simple to use in marketing.

This system is open to new extensions in terms of collecting data from social networks Facebook and analyze them by other complex algorithms such as are algorithms of clustering (k-means or fuzzy c-means), classification (naive Bayes classifier, logistic regression, Support Vector Machines) and prediction.

## REFERENCES

- [1] Crowley, Ed., (2004), *Market intelligence versus marketing research*, Quirk's Marketing Research Review.
- [2] Inmon W.H., Welch J.D., Glassey K.L., (1997), *Managing the Data Warehouse*, New York: John Wiley & Sons.
- [3] Kimball R., Reeves L., Ross M., Thornthwaite W., (1998), *The data warehouse Lifecycle Toolkit*, New York: John Wiley & Sons.
- [4] Kotler, P., (1996), *Principles of Marketing*. The European Edition, USA: Prentice Hall.
- [5] Markić, B., Bijakšić, S., Bevanda, (2016), *Sentiment analysis of social networks as a challenge to the digital marketing*, Ekonomski vjesnik/ECONVIEWS, God.XXIX, BR. 1/2016, str. 95-107.
- [6] Markić, B., Bijakšić, S., Bevanda (2016), *Customer Intelligence Analytics on Social Networks*, Expert Journal of Marketing, 4 (1), pp. 24-30.
- [7] Markić, B., Bijakšić, S., Bevanda, A., (2016), *Data driven marketing as a challenge for entrepreneurship*, REDETE 2016 Conference; Economic development and entrepreneurship in transition economies: Assessment of the last 25 years, going beyond the „transition“; Belgrade, Serbia, October, 2016.
- [8] Tanner, John F. , Raymond, M., A., (2010), *Principles of Marketing 2.0*, University of Minnesota Libraries Publishing.
- [9] Wu, H., Luk, R., Wong, K., Kwok, K., (2008), *Interpreting TF-IDF term weights as making relevance decisions*", ACM Transactions on Information Systems, 26 (3).



## THE CORRELATION BETWEEN SOCIAL MEDIA APPLICATIONS USE AND THE NUMBER OF REQUESTS FOR PROPOSALS IN TOURISM

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### ABSTRACT

*Nowadays, social media provides customers and businesses of modern times new ways of communication and interaction on both B2C and B2B markets. Companies in tourism have recognized the limitless opportunities for creating long-term relationships with their customers. Therefore, a large number of companies have involved the social media into their marketing strategies. In order to improve the engagement with the fans at the most influential social media - Facebook, some companies use Facebook application. Those software solutions help companies organize the contests and simultaneously collect the users' data. With the long-term tracking of users' online behaviour and the interpretation of the gathered data, the companies can boost brand awareness and improve sales.*

**KEYWORDS:** social media, Facebook applications, contest, tourism, advertising, data collection

### 1 INTRODUCTION

The Internet and new technologies have changed the way people communicate, share their knowledge, experiences and spend their working and free time. Today, social media has a global influence on customer behaviour due to its characteristics: two-way communication in real time and transparency [Kesić, 2003]. Consequently, it boosts the power of customers and other market participants.

Facebook is the most influencing social media both in Croatia [Alexa, 2015] and globally. In the end of the 2015, it counts 1.44 billion users worldwide [The Statistic Portal, 2015]. Facebook applications are one of the most important communicational tools. Those software solutions are used for boosting communication with the Facebook users, increasing the reach of current and potential customers, improving the Facebook Pages' content and collecting the data about

users' behaviour. This data is afterwards used for other marketing activities such as email marketing, remarketing campaigns and custom advertising [Facebook guide, 2015].

The research aimed to determinate is there an increase in the number of users' interactions on the Facebook page in a period when social media contest is implemented on a page in form of application, in comparison with the period in which the application is not available. The research is conducted on three cases in the tourism industry for a period of six months in 2013, 2014 and 2015. which is a very long period for the digital industry. The applications observed refer to ones used for the promotion of services through the contest in tourism. Concurrently, brands benefit from the data gathered during the contests, such as users' travel habits and interests. By participating in the contest users permit usage of data available on their public Facebook profile and email address in exchange for the opportunity to be awarded at the end of the contest [Račić, 2015]. All the data is automatically stored in a database which enables easy segmentation of users according to predefined factors. For example, the users can be filtered according to their interests and demographic data. The information and contacts collected could be used for ongoing marketing activities, e.g. for special offers through email marketing campaigns in pre/post season in tourism. Online contests are also used to grab users' attention, increase the time they spend on brand's Facebook page and gain new fans e.i. potential customers in a long run [Kirman, B., et al, 2010]. The process of transforming the fans into loyal user demands careful interpretation of the data collected, usage of the email contact for custom newsletter campaigns and finally increases the users' motivation for sending the request for proposal.

## **2 RESEARCH METHODOLOGY**

The paper bases its conclusion on cases involved in tourism business environment -Camping Šimuni, Municipality tourist board Orebić and the anonymous company doing business in tourism. All data is provided by Croatian Advertising agency Degordian Ltd. and its social media applications named Socialpuzzle. Socialpuzzle presents the group of generic application software which automatically create a database when user approaches the application and fill in a contact form [Račić, 2015]. The data analyzed in the research was collected via statistic tools such as Facebook Insights and Socialnumbers. The common Facebook metrics observed for each case are the number of fans on the page and talking about. In addition, the number of application visits, unique users and the number of newsletter subscriptions was reviewed because they imply the users' interest for the brands' content in general. Financial metrics are not available for the public use so that they are excluded from the research.

### 3 RESULTS AND DISCUSSIONS

#### 3.1. CASES OVERVIEW

The Facebook page Visit Orebić has used the Socialpuzzle application Runner game in 2014 and early 2015. The application is created with the aim of entertaining the users with an animated character who run through the Orebić town, avoiding obstacles, trying to reach the finish line as soon as possible. The entrance number for the users was not limited so that they could play the game as many times as they wanted. The users were motivated by awards such as free dinner in an expensive restaurant. All the results were gained organically.

The Camping Village Šimuni and anonymous page have used the Socialpuzzle application quiz. The second application was live in 2014 while the third was introduced in 2013. The goal of setting up those applications was to examine the users' familiarity with the brand and the destination promoted via social media. Additionally, the purposes of the contests were collecting the information about users' vacation planning and booking habits which would be taken into consideration for the strategic planning of next touristic season. The users' were inspired to run the quiz at most three times by free accommodation for a week and booking gift coupons. The results of the campaigns are shown in Table 1. Application review.

Table 1. Applications review

Facebook page	Type of application / contest used	Duration (in days)	The number of visits	The number of unique users	The number of newsletter subscription
Visit Orebić	Runner game	75*	347	45	13 (opt-in)
Camping Village Šimuni	Quiz	23**	3885	3082	3082 (opt-out)
Anonymous	Quiz	30***	8431	6506	8431 (opt-out)

Source: Degordian Ltd.

\*From 11th November to 24th December 2015

\*\*From 19th November to 11th December 2014

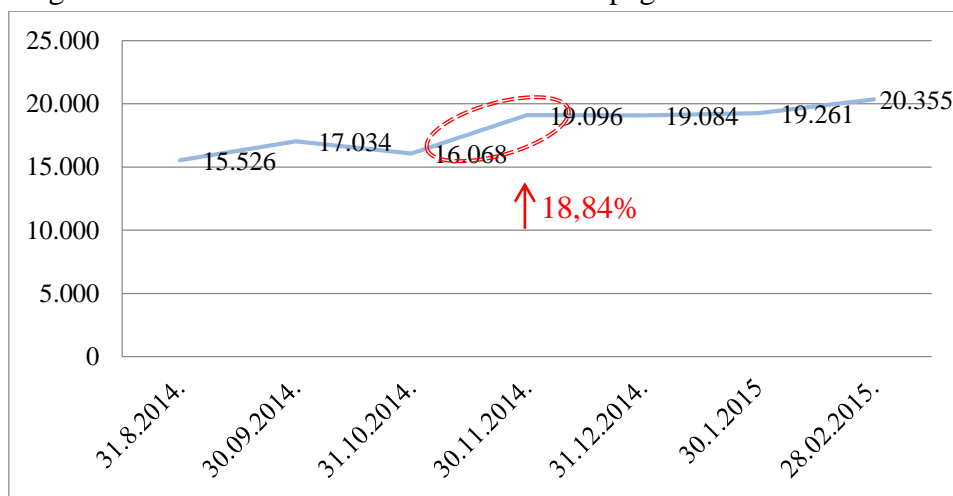
\*\*\*From 8th of August to 8th September 2013

As seen in Table no. 1. the huge difference is shown in the performances between Runner game and Quizzes. This is a result of the organic communication in comparison with the results gained through using advertising campaigns of Quizzes. Further, the first application

has direct newsletter subscription form available whereas the other two used opt-out system. Opt-out was allowed according to the contest rules.

This study also confirms that the applications have increased overall communication on the Facebook page and consequently impact the increase in a number of fans. The results are illustrated for the six months in the following charts.

Chart 1. The growth in a number of fans on Visit Orebić page

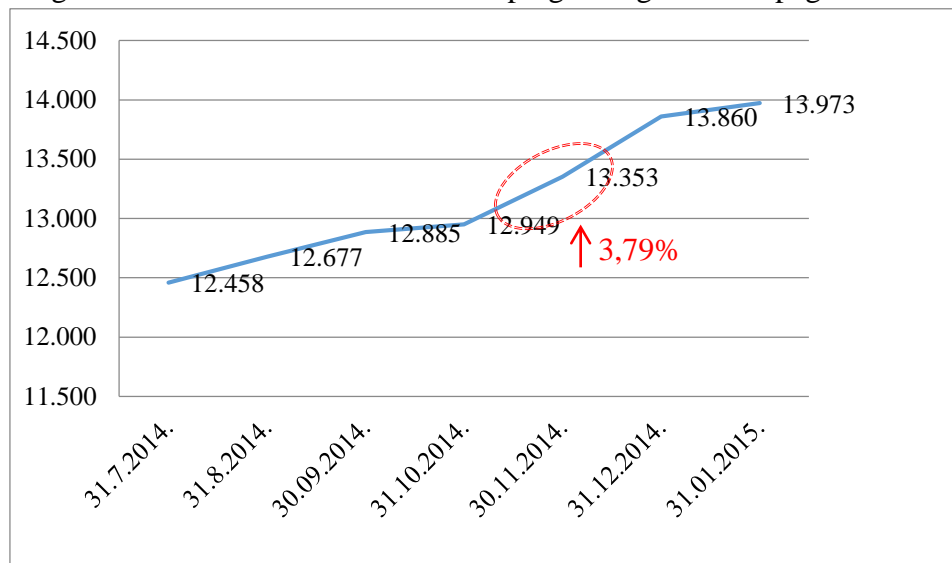


Source: Author's production according to data gathered through Socialnumbers statistic tool

In the month when the application was implemented on the Facebook page, the page has reached the highest rate of fan growth (18,84%) in a six months. That month the page gained 3028 new fans. The major rise happened in the first month which was followed by stagnation and slightly increase in February 2015.

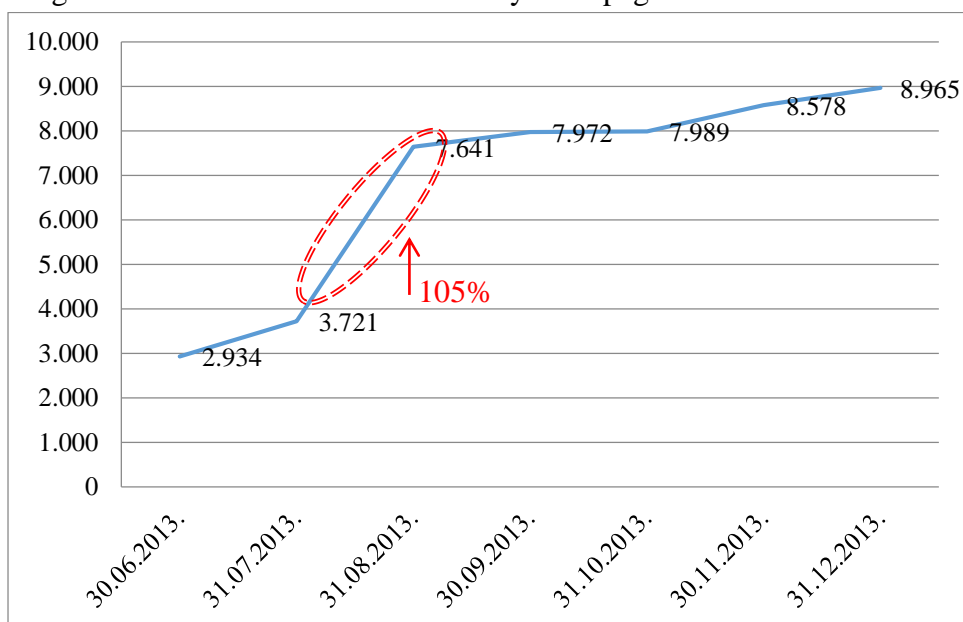
In a period of introducing the quiz contest, December 2014, the fan page Camping Village Šimuni has also gained the largest amount of fans (620) in analyzed period. The calculated growth rate was 3,79%. In comparison with Visit Orebić application, the page has gained fewer users which are a result of regular advertising and different conditions in terms of reach, engagement and Facebook algorithms in general.

Chart 2. The growth in a number of fans on Camping Village Šimuni page



Source: Author's production according to data gathered through Socialnumbers statistic tool

Chart 3. The growth in a number of fans on anonymous page



Source: Author's production according to data gathered through Socialnumbers statistic tool

The third application has equally gained the majority of new fans in the first month of organizing the contest. 812 fans were gathered in 30 days and the rising trend was kept in the following months.

The first case study presents that activity on the Facebook site can be increased organically. In 75 days during the contest, 45 unique users have visited the application. One user has approached the application 7,1 times on average. The number of page visits had boosted page

interactions which are in positive correlation with higher placement on Facebook according to its Edge rank algorithm [Newman, 2012]. In a first month, the page has gathered 3028 new fans. In the period of 75 days, the application has gained more than 500 interactions and 13 newsletter subscriptions.

Second and third case studies have used advertising in order to attract more fans to enter the application. Camping Village Šimuni page has grabbed the attention of 3082 unique users and their email addresses in 23 days. Each user has entered the application 1,26 times on average. With the social media contest and all other factors such as regular communication with fans, the page has got 620 new fans and 550 fans' interactions. In 6 months the number of impressions and the average interaction per page post have significantly increased.

The third case study shows that the anonymous page has gained 6506 unique users and their contacts (emails addresses and phone numbers). To specify, out of all unique users each user have start quiz on average 1,29 times. In the first month of the contest, the page has gathered 812 new fans. All the users reached through Facebook posts related to the contest have made more than 1300 interactions on th page during 30 days. The number of total impressions and the interaction per post have increased accordingly.

The number of visits per application significantly differs due to different types of contests. In the Runner game contest, the number of entrance per user was not limited whereas it was limited to three in quizzes which examine users familiarity with brand e.i. destination.

### **3.2. DISCUSSION**

Generally it can be remarked that today a great number of people willing to travel towards specific touristic locations choose online communicating and planning alternatives, being influenced by social media applications [Dina & Sabou, 2012]. Social media applications enhance the voice of consumers [Munar & Jacobsen, 2014] allowing those who share a common interest to join ideas and points of view and concurrently influence global market. On the other hand, brands who have recognized this trend benefit from gathered data which is afterward used for newsletter campaigns e.i. custom made emails for a specific segments of users [Kumar, Zhang & Luo, 2014]. Applications are available on the Facebook from the early beginning, since 2007 [Facebook, 2015]. Hence Hargittai and Thelwall have conducted the research related to Facebook users' gender. The study results suggest that women spend more time using Facebook application than men [Giannakos et al., 2012]. Much research relates to the impact of social media on the tourism industry. Kaplan and Haenlein [2010] claim that web 2.0 technology has enabled connecting people in general, which has reflected on transparency and real-time communication. Xiang and Gretzel [2010] have established that consumers have the high rate of confidence in people who use the same social media as they do. This statement could be compared with the research in 1979. made by Coher and Golden which explains that

consumers whose attitude toward a product is not defined will prefer the product which is imposed by the community they belong.

While a large number of studies discuss the factors mentioned in this research, none of the research found analyzes the impact of the applications on Facebook page fans, engagement with fans and the use of the information gained. Furthermore, some research elaborates the contest influence on users' decision making and the use of database but no research have combined those two approaches.

### **3.3.LIMITATIONS OF THE REVIEW**

The presented review is not free from limitations, which should be enumerated. First, the applications covered in this research have not been embedded on pages in the same period, which means that the data could not be compared. Moreover, regarding the same metrics observed, the presented data was taken from 2013, 2014 and 2015. This is a very long period when taking into account frequently changes in Facebook algorithm regarding reach, available buying ads space, the cost of advertising and the number of growing number of features available for the marketers. Second, all contests have different duration while they were organized by separate brands and under different conditions. Third, the runner game results were gained organically whereas quizzes were promoted through the Facebook ads and the newsletter campaigns.

## **4 CONCLUSION**

Regardless of the aforementioned limitations, the findings presented in this paper indicate that there is a positive correlation between social media application and the increase in the Facebook page interactions which present the amount of brand awareness to the Facebook audience. The awareness can not only boost interaction on a page in the short run but can also encourage users' future actions while the page is already known to greater group of people. Facebook application have enabled the marketers to implement an additional content to the page and to collect the information about consumers' interests and their online behaviour. Those data are highly valued for future offline and digital activities such as email marketing or remarketing campaigns. To conclude, the Facebook application can gather new leads, increase brand awareness, but can not directly impact consumers' behaviour such as sending the request for proposal to a certain company in tourism.

## REFERENCES

- [1] Alexa Internet, (2015), *Top sites in Croatia*, <http://www.alexa.com/topsites/countries/HR>, downloaded [June, 27th 2015]
- [2] Camping Šimuni official Facebook page, (2015), <https://www.facebook.com/orebic.croatia?fref=ts>, [December, 17th 2015]
- [3] Cohen, J.; Golden, E. (1972). Informational social influence and product evaluation. *Journal of Applied Psychology*, 56 (1), pp 54–59.
- [4] Dina, R.; Sabou, G. (2012), Influence of social media in choice of touristic destination. *Cactus Tourism Journal*, 3(2), pp 24-30.
- [5] Email statistics report, (2013.), <http://www.radicati.com/wp/wp-content/uploads/2013/04/Email-Statistics-Report-2013-2017-Executive-Summary.pdf>, pristupljeno: 07.09.2015.
- [6] Facebook Platform Policy, Facebook developers, <https://developers.facebook.com/policy/>, [June, 27th 2015]
- [7] Facebook, (2015.), Business Guide, <https://www.facebook.com/business/ads-guide/video-views/>, [September, 4th 2015]
- [8] Giannakos, N.M.; Chorianopoulos, K.; Giotopoulos, K.; Vlamos, P. (2013), Using Facebook out of habit. *Behaviour & Information Technology*, 32 (6), pp 594-602.
- [9] Hargittai, E. (2007), Whose space? Differences among users and non-users of social network sites. *Journal of Computer-Mediated Communication*, 13 (1), pp 29-34.
- [10] Kaplan, A. M; Haenlein, M. (2010.), Users of the world, unite! The challenges and opportunities of Social Media, *Business horizons*, 53 (1), pp 59-68.
- [11] Kesić, T., (2003.), *Interactive marketing communication*, Opion, Zagreb, pp 418-420.
- [12] Kirman, B., et al., (2010.), Improving social game engagement on Facebook through enhanced socio-contextual information, *Proceedings of the 28th international conference on Human factors in computing systems* (CHI '10), New York, pp1753–1756.
- [13] Kumar, V.; Zhanh, Xi.; Luo, A. (2014), Modeling Customer Opt-In and Opt-Out in a Permission-Based Marketing Context, *Journal of Marketing Research*, pp 403-419.
- [14] Munar, A.M.; Jacobsen, J.K.S., (2014) Motivations for sharing tourism experiences through social media. *Tourism management*, 43 (1), pp 46-54.
- [15] Newman, K. (2012.), Facebook Edgerank: What marketers need to know, <https://econsultancy.com/blog/9770-facebook-edgerank-what-marketers-need-to-know>, downloaded [October, 15th 2015]
- [16] Račić, J. (2015) About Socialpuzzle, <http://www.socialpuzzle.com/app/>, downloaded [January, 26th 2016]
- [17] Socialnumbers, (2015), <http://hr.socialnumbers.com/>, [Janury, 22th 2016]
- [18] The Statistic Portal, (2015), Facebook: Number of monthly active users worldwide 2008-2015, <http://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>, downloaded [June, 20th 2015]

## **CRM IN A CROATIAN HOTEL CHAIN**

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### **ABSTRACT**

*The paper aims to research the application of CRM's quality business practice in the Croatian hospitality industry. The reason why this topic is being researched is a continued growth of the hospitality industry in Croatia and worldwide. In Croatia tourism represents the key economic sector. The factors such as addition on personal income, more free time and the customers' desire to experience as much as possible while travelling are significantly influencing and changing the hospitality industry. This means that the application of CRM in hospitality is becoming ever more demanding and challenging. This paper used qualitative analysis so as to research the application of CRM in one of Croatia's leading hospitality companies. The applied case analysis used a specific example in order to analyse the application of CRM's quality business practice. The paper focuses on analytical and operative challenges in CRM, for example how to collect useful information out of all the numerous contact points which appear between customers and companies, how to make sense of them and use them in the best possible way. In accordance with the above mentioned, the focus is on the possibility of a successful and efficient customer segmentation, determining the offer which satisfies the customers' needs the most, as well as on determining the customers' value and applying the collected knowledge about the customers in order to increase their value. The results of this research exhibit a successful application of CRM in hospitality, and as such they might be interesting and useful to researchers whose area of interest is CRM in general and especially CRM in the hospitality industry. Furthermore, the paper might be interesting to managers and practitioners who through a proper implementation of CRM want to segment their customers according to their value and, finally, increase the value of their customers. The limitation of this paper is the*

*limited experience in the implementation of CRM within one company and a display of the business practice within one market.*

**KEYWORDS:** customer relationship management, hospitality industry, customer service, customer value, Croatia.

## 1 INTRODUCTION

Customer relationship management (CRM) is one of the basic and most crucial elements of the marketing philosophy. CRM puts in focus the customer and their satisfaction in such a way that all the company's activities are pointed towards the customer (Mandić, M., Vranešević, T. 2012). The main aim of CRM is to get to know the customer as well as possible, which can help a company deliver better, more appropriate and higher added value to the customer. CRM is all about collaborating with each customer – being able to create the classic win-win situation: you add value to each customer's daily life, and they give you loyalty in return (Temporal, Trott, 2001).

The primary goals of CRM are to: build long-term and profitable relationships with chosen customers; get closer to those customers at every point of contact; and maximize the company's share of the customer's wallet. Simply stated, CRM is about finding, getting, and retaining customers. So, it is possible to conclude that CRM is business strategy and therefore more than a functional strategy alone. It affects the organisations as a whole: marketing, IT, service, logistics, finance, production and development, HR, management, etc (Peelen, 2005).

Also, Kumar and Werner (2005) look at CRM from a business strategy perspective. The aim is to gain long-term competitive advantage by optimally delivering value and satisfaction to the customer and extracting business value from the exchange. From this standpoint, CRM is the strategic process of selecting the customers a firm can most profitably serve and of shaping the interactions between a company and these customers. The goal is to optimize the current and future value of the customers for the company.

CRM is a strategic process that includes all business units and departments. It is a process that must be integral to the whole organisation (Mandić, Zbodulja, 2014). In other words, CRM is not merely a technical solution; It is a continuous process of learning that entails business strategy, business philosophy as well as a database (Osarenkhoe i Bennani, 2007).

The Interest in customer relationship management (CRM) began to grow in the 1990s. Regardless of the size of an organization, businesses are still motivated to adopt CRM to create and manage the relationships with their customers more effectively. An enhanced relationship with one's customers can ultimately lead to greater customer loyalty and retention and, also,

profitability. In addition, the rapid growth of the Internet and its associated technologies has greatly increased the opportunities for marketing and has transformed the way relationships between companies and their customers are managed (Ngai, 2005).

CRM is a field encountered in marketing, management, but also in information technology as well as science. A CRM application (software) strategy requires the usage of information, processes, technology and people who work on maintaining a relationship between the company and its clients (such as marketing, sales and support department etc.) An effective CRM increases client loyalty, reduces costs and increases the overall value to the company as well as to the interest groups that the company does business with (Kangal, 2012).

CRM appeared as a new concept at the peak of the Internet boom. In 1998 JPMorgan's analysts forecasted that the demand for CRM technology would grow with double-digit annual rate because the Internet was causing a quiet revolution in the way were customers would demand to interact with companies. All the mentioned points to the same conclusion - companies need CRM because they have to improve their performance.

In today's globally competitive world, customers expect more, have more choices, and are less brand loyal. The only thing that is constant is change. Customers will continue to change with regard to needs, demographics, lifestyle, and consumption behaviour. The companies that survive and grow will be the ones which understand change and are in the lead, often creating change.

Many businesses work hard to acquire new customers, but this is where the customer relationship often stops. However, in implementing the CRM strategy, managers must recognize the cultural orientation required to energize inter-firm communication and knowledge sharing routines and build innovation and joint action. Infrastructure alone will not build relationship bridges with strategic partners not leverage the resources that lie within those partners. Thus, managers will need to ensure that processes are in place to stimulate new ideas about relationship management and to capture current knowledge about relationship practice and productivity (Jarratt, 2008). The development and implementation of the customer relationship management strategy is influenced by a large number of factors. The three most commonly present are as follows (Chen and Popovich, 2003, Liew, 2008):

- The technology,
- Business processes.
- People.

The importance and influence of technology has already been mentioned several times since it has offered support which has resulted in the current level of possibilities and application of customer relationship management.

Furthermore, an emphasis has been put on efforts and aims of all companies which want to implement the customer relationship management strategy in order to make all business processes directed towards the customers, meaning satisfying the wishes and needs of their customers. This includes activities inside all the companies' departments.

Satisfying the previously mentioned factors without the support of the employee as the most important factor is futile and does not make any sense. The given elements are basic according to the latest theoretical findings but the question is whether they are sufficient for achieving success.

A successful customer relationship management strategy implementation should in one company cover all steps which are in contact with the customer. For the given approach to be successful, companies should above all apply a systematic strategic approach. Crosby (2002) says one of the biggest misapprehensions (or myths) concerning CRM is that it all evolves around information technology. He claims the complete opposite (Crosby, 2002) by saying that it is about the business strategy and that the loss or lack of strategy leads to undesired results and a waste of big financial means, pouring money down the drain, if invested in CRM software or hardware.

Kotorov (2003) thinks the same and in his opinion the success of customer relationship management most importantly depends on understanding and approach according to which customer relationship management is a strategy and not a software solution or a software package. The commonly accepted belief is that the implementation of customer relationship management strategy (CRM) strives to improve relationships with customers and their loyalty but also it tends to reduce costs through business enhancements, boosting sales per customer and attracting new customers.

Moreover, the aim of customer relationship management can be the total customer experience. Improving customer relationships is definitely based on good communication skills, which are ensured by a quality approach to customer relationship management strategy. No matter how deeply rooted the customer and his satisfaction in the essence of marketing philosophy is, it is still questionable how many companies truly know their customers. It is to understand that the process is long-term and prone to changes which require continuous monitoring. Today's business environment is such that companies need customer relationship management (CRM) in order to improve their businesses.

Implementing CRM requires an increase in knowledge and capability of the employees, ensuring additional training, motivation and authority. One of the key requirements for this to work is to create a new business culture and a new set of values, based on the client that will result in a reorganization of the business process.

Company related obstacles are in fact the reason why employee related obstacles can be encountered before and during CRM implementation. The company's actions will directly influence the employees' behaviour. As it has already been stated, implementing CRM requires all departments in the company to work together (Yurong, et al. 2002) so many companies took different actions in order to better develop their employees and achieving a satisfactory level of internal and external relations as well as client satisfaction (Proctor, 2003.; 268). CRM is often linked with high expectations and, consequently, dissatisfaction with its implementation.

Unfortunately, a high percentage of customer relationship management strategy implementations fail because of the existence of elementary non-understanding of the strategic approach here in question. Hoots (2004) stresses the importance of a more active role of "top management" and defines customer relationship management as a development of a universal image of customers' needs, of their expectations, behaviour and of managing the mentioned elements (factors) which influence a company's business. A more active role is especially expected with regard to research into customers' expectations and determining whether the expected value has been delivered.

Kotorov (2003) supports the same approach and emphasises the importance of involvement of top management. Otherwise, it is obvious that just implementation or acceptance of customer relationship management will not be successful. Furthermore, Hoots (2004) introduced a model, the so called "3R", which represents resources, response and respect. The given model shows there is a gap between customers' expectations and value delivery.

On account of all this, customer relationship management is currently one of the most interesting ("burning") issues in the business world. The crisis has done its part and proved the importance of customer loyalty, so customer relationship management is experiencing growth in practically all sectors and companies, regardless of the fact whether those companies are focused on the market of final or business consumption expenditure.

## **2 METHODOLOGY**

Qualitative research was carried out in order to collect primary information, while the secondary sources were taken from books and scientific articles from the CRM area of study. The analysis of previous works was an attempt of reaching general conclusions which can be used as references for further implementations. Qualitative method is suitable for this type of research because it is to be expected that such approach would contribute to a better understanding of customer relationship management (Plakoyiannaki and Saren, 2006). An in-depth approach can be achieved via detailed description of happenings, situations and communications which occurred between the participants in customer relationship management. The data received

from this part of the research (qualitative) are linked with things and events which really took place inside the company.

Methodologically, it is a combination of a case study analysis and an in-depth-interview with an expert who took part in the CRM implementation. Case studies have been a commonly used and legitimate method of research inquiry for studying related fields (McLeod, MacDonell, 2011). Case studies also typically involve multiple data sources, including observation, interviews, documents and archival records, in order to develop a triangulated and in-depth analysis and a contextual understanding of the research setting (McLeod, MacDonell, 2011).

Case study research offers a degree of flexibility in that key parameters of the research design can be altered during the study in order to react or adapt to “the complex and dynamic characteristics of real world phenomena” (McLeod, MacDonell, 2011).

Case theory can offer higher validity and relevance by focusing on outcome instead of on details of the research process and techniques to augment reliability and rigor (Gummesson, 2014).

The choice of in-depth interview as a method seemed the appropriate with regard to the set goals of the research. According to Finnegan and Willcocks (2007), the in-depth interview is a good research method because it functions as a personal interview in which each interviewee answers questions of the interviewer so as to reveal motives, beliefs, attitudes, feelings connected with the topic, in this case feelings related to customer relationship management strategy. An in-depth interview per se does not possess a high level of structure so in this case, likewise, it was based on open questions which enable an “informal” conversation about the interviewee knowledge concerning customer relationship management.

The interview guide covered topics such as introduction to the field, the roles of the interviewee and the interviewer, including the key elements from literary sources and previous research on CRM. The interview had been previously arranged over the telephone and email and conversations took place when and where it was most convenient for the interviewee, provided that the conversations would not be interrupted.

The limitation of this paper is that the analysis of the CRM application was carried out in only one hotel chain in Croatia. However, the results of this research could be useful to the scientific and business community because they have shown a real case of CRM implementation, together with many useful findings which reveal the steps in the application of CRM in the hospitality industry.

### 3 RESULTS

This paper describes the quality business practice of applying customer relationship management (CRM) in the hospitality industry. If CRM is to be used in a correct and efficient way, it is of key importance that it is approached in a strategic manner. This means the first step is by no means technological. In order to be able to approach CRM in this way, it is necessary to have the support of the management and a clear understanding of what the objectives are, as well as to ensure the required resources. Besides the financial resources, just like everywhere else, it is the people who are the factor of utmost importance. Besides the needed support from the top management, it is required that one person in the company is employed especially for the purpose of implementing CRM, and that this person has an assistant to deal with the administrative work connected to it. Ideally, the person employed in the given company should be very well acquainted with their business, its processes and its organisation.

A strategic application of CRM requires cooperation and inclusion of all departments of a company, where the closest collaboration is expected with the marketing department. Besides achieving the required level of cooperation, a precondition for successful implementation is surely the level of a company's maturity with regard to accepting CRM.

The simplest steps in applying the CRM strategy include customer identification, customer differentiation, interaction with customers and customize treatment (Peppers, Rogers, 2004). The given steps are carried out continually, which means this is a constant process of identification, differentiation interaction and adjustment to clients.

Customer identification in a hotel involves managing all of the recorded information about the guests, no matter where the information came from (for instance Wi-Fi, reservations, check-in, manual reception entries, call centre, web, social media, newsletter, loyalty programme points, questionnaire, or any other way in which guest information can be recorded). This is followed by data cleansing in order to get a data base which is as accurate as possible. Here the key challenge is to identify the customer in the sense that if in a period of one year a customer stayed at the hotel several times, then it was not several different people but the same person. In this manner CRM can provide data about how many guests actually stayed at the hotel, which surpasses the information about the number of nights per stay.

This is a precondition for the ability to start differentiating clients. Besides the name and surname and their basic contact details (address, email, date of birth), it is also required to gather data about the stay (the room, stayed alone or with family), how much the customer spent, how many times he or she stayed in that particular hotel, which services he or she used (for instance only accommodation or also the restaurant, room service, wellness centre or services outside the hotel).

In order to gain all the above mentioned information, it is necessary to motivate the employees to enter all the data, but also to have the system collect the information from various other sources (such as what was searched on the Internet, how active a person is, etc.), and that all information is regularly updated. In this stage it is very important that the receptionists enter all the required information about the guests.

The emphasis is placed on the guests' interests, so as to later create customised offers in accordance with those interests. Besides monitoring how much data they are entering in the system on a weekly basis, in order to achieve a quality level of the employees' engagement, it is important the employees understand why this is being done.

The given data constitutes a guest's profile, based on which customers can be differentiated according to how much they spend and segmented into various value groups (for instance, average spender, above average spender or below average spender). Since this paper describes the application of CRM in a hotel chain, it is important to say that the value of each customer, that is their differentiation, is done on the level of the hotel where they are staying. This means the value segmentation on the hotel level takes into account all transactions a guest made in the hotel. It is especially challenging to update a guest's profile so as to ensure a continued flow between the four mentioned steps, since the final goal is the conversion of a customer/guest from one value category into another.

Differentiating between customers involves preparing various offers and creating different activities for different customer groups. Premium customers, of course, receive different offers than the customers who spend below average, and the communication with the two is not the same either. Companies most commonly focus on the four different customer groups. Upon creating campaigns, the content which is created for each group is of key importance. It is evident that communication and the adaptation of the offer to the customers is taking place at the same time.

What is important here are the interests the receptionists gathered and whether the employees are providing the guests with the offers which suit their interests. For written communication the staff are required to ask permission from the guest and allow the guest to choose the language in which he or she wishes to receive information and offers. Information protection is a fundamental precondition, and the only data which can be used is that which was approved by the customer. When activating the guest data it is necessary to pay attention to whether the channel through which the data is gained allows for their use. This usually happens with the Online Travel Agency (OTA) channel (Booking.com and similar). Although the activation collects data, the contract does not allow their use in communication with the guest. Since a considerable number of reservations arrive through such channels, introducing a loyalty programme would enable receiving contact permission by the guest, after which a hotel would have the right to include the guest in their communication.

No matter how adaptable to customers a business is, and how much they attempt to send them offers in their native language, the content of an offer is of key importance in whether it will be successful or not. Therefore, it is recommended to use less language options but to work on the quality and variety of offers. A newsletter is one of the possible communication channels towards customers, and its options are many, with the only limiting factor being the amount of sensible activities an organisation is able to create. CRM enables hotels to know precisely the channel a customer used to get to them. The additional tool which can also be of great use in collecting and updating the necessary data for the application of CRM is a loyalty programme. Considering all the above mentioned, it is evident that there are many sources of customer data. All the information has to be updated. Companies have to make sure the data is not duplicated, that the base undergoes regular cleansing, so it could provide the information based on which further decisions can be made.

In practice, a considerable amount of data cannot be used in a systematic and organised way by marketing and sales departments. In many cases, a company's marketing department and sales department operate in an old-fashioned way, and CRM is not used as a strategy but only as a tool which provides support in creating campaigns. There is room for progress in revealing the amount of potential coming from the customers. The question is how many guests can a certain offer cover? Connecting CRM-created offers and price lists suited for each guest group, as well as establishing a connection with feedback, is of great importance to CRM application on a higher level.

Finally, it can be said that technology is not a problem, and in technological sense nothing is impossible. The key issue in quality CRM application is in how mature a company so as to be able to apply all the possibilities CRM can offer.

## **4 CONCLUSION**

It is necessary for hotels to implement CRM if they want to know how many guests they really had, as opposed to only looking at nights per stay. A possible approach to the implementation can occur in four steps: customer identification, customer differentiation, interaction with a customer and customize treatment. As the first and crucial step for data quality, identification enables recognising a customer in a way that the information which used to be stored "in the receptionist's mind", or at best in an Excel document, is now systematically organised and available to everyone who needs to communicate with the guest.

CRM application can yield key information for the business, for instance when a guest stayed in the hotel for the first time, the last time, how he or she arrived, how long he or she stayed, the people he or she stayed with, the number of adults, the number of children, how much he or she spent and on which activities and services.

CRM includes the performance analysis which shows the total number of guests who repeated their stay. That data enables to determine the sales efficiency, such as: what was being sold, in which way, at what price, and, finally, what was actually achieved. CRM enables simple and fast reporting to the management, according to whichever success criteria they choose. The only limitation in CRM application is whether a company is mature enough to accept and apply all its possibilities.

A particular challenge and a recommendation for further research is how to successfully manage all the above mentioned data. A lack of adequate methodology is evident, so further research has to be directed towards preparing a methodological frame which could respond to that challenge. The key limiting factor, once again, is whether a company is mature enough to accept and apply all CRM possibilities.

## REFERENCES

- [1] Chen I.J., Popovich, K. (2003). Understanding customer relationship management (CRM), *Business Process Management Journal*, Volume 9, Number 5, pp 672-688, ISSN 1463-7154
- [2] Crosby, L.A. (2002). Exploding some myths about customer relationship management, *Managing Service Quality Journal*, Volume 12, Number 5, pp 271-272, ISSN 0960-4529
- [3] Finnegan, D. J., Willcocks, L. P. (2007). *Implementing CRM; From Technology to Knowledge*, John Wiley & Sons, Ltd, England
- [4] Gummesson, E. (2014). Service Research Methodology: From Case Study Research to Case Theory, *Revista Ibero - Americana de Estratégia*, vol. 13, no. 4, pp. 8-17.
- [5] Hoots, M. (2004). Customer relationship management for facility managers, Emerald group publishing limited, 1741-0983, *Journal of Facilities Management*, Vol. 3., No. 4, pp 346-361 *Intelligence & Planning Journal*, Volume 23, Number 6, pp 582-605, ISSN 0263-4503
- [6] Jarratt, D. (2008). Testing a theoretically constructed relationship management capability, *European Journal of Marketing*, Volume 42, Number 9/10, pp 1106-1132, ISSN 0309-0566
- [7] Kangal, A. (2012). Identifying the Dominant Perspective on Customer Relationship Management in the Last Decade 2000 – 2010, *Journal of Business Research / Isletme Arastirmalari Dergisi*, 4 (4), pp. 45-61.
- [8] Kotorov, R. (2003). Customer relationship management: strategic lessons and future directions, *Business Process Management Journal*, Volume 9, Number 5, pp 566-571, ISSN: 1463-7154
- [9] Kumar, V., Werner, J.R. (2005). *Customer Relationship Management a Databased Approach*, John Wiley & Sons, Inc., USA

- [10] Liew, C-B, A. (2008), Strategic integration of knowledge management and customer relationship management, *Journal of Knowledge Management*, Vol. 12, No. 4, pp 131-146, ISSN: 1367-3270
- [11] McLeod, L., MacDonell, S.G. & Doolin, B. *Empir Software Eng* (2011) 16: 430. doi:10.1007/s10664-010-9153-5
- [12] Mandić, M., Zbodulja, M. (2014). Importance of employees in CRM implementation, 2014 M-Sphere Book of Papers, Accent, Zagreb, pp. 286-291., ISBN 978-953-7930-06-6
- [13] Mandić, M., Vranešević, T. (2012). Successful Customer Relationship Management implementation // 6th International Conference „An Enterprise Odyssey: Corporate governance and public policy – path to sustainable future“, Ekonomski fakultet Zagreb, pp. 179-180.
- [14] Ngai, E.W.T. (2005). Customer relationship management research (1992-2002), *Marketing*
- [15] Osarenkhoe, A., Bennani, A. E. (2007). An exploratory study of implementation of customer relationship management strategy, *Business Process Management Journal*, 13 (1), pp. 139-164.
- [16] Peelen, E. (2005). *Customer Relationship Management*, Pearson Education Limited, Essex
- [17] Plakoyiannaki, E., Saren, M. (2006). Time and the customer relationship management process: conceptual and methodological insights, *Journal of Business & Industrial Marketing*, Volume 21, Number 4, pp 218-230, ISSN 0885-8624
- [18] Proctor, T. (2003). Change management: the role of internal communication and employee development, *Corporate communications: An International Journal*, 8 (4), pp. 268-274.
- [19] Peppers, D., Rogers, M. (2004). *Managing Customer Relationships*, John Wiley & Sons, Inc., New Jersey
- [20] Temporal, P., Trott, M. (2001). *Romancing the Customer: Maximizing Brand Value Through*
- [21] Yurong Xu (et al.) (2002). Adopting customer relationship technology, *Industrial Management & Data Systems*, 102 (8), pp. 443.



## **THE POTENTIAL FOR BIG DATA APPLICATION IN THE MARKETING OF BANKING INSTITUTIONS**

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### **ABSTRACT**

*The application of big data technology in various industries and sectors has been a significant area of research interest lately. The aim of this paper is to contribute to the field by summarizing existing knowledge on the topic of big data and explore its application in the domain of marketing with special emphasis on banking institutions. The reason for this is the fact that banks, with their turbulent environment characterised by high competition, strict regulatory requirements and consumer centricity, are especially eligible for absorbing benefits of big data technology adoption. The paper is structured in a way that general big data characteristics are presented after the introductory notes. Following is the section related to big data application in marketing. In the fourth section authors discuss banking environment and potential for big data application in the marketing of banks.*

**KEYWORDS.** Big data, marketing, banks

### **1 INTRODUCTION**

Big data technology has been an important topic of research among scientific public in recent years and there is a great interest for its usage in different industrial sectors. The purpose of this paper is to examine potentials of usage of big data technology for marketing purposes in

banking industry. Motivation of authors is to present possible applications of big data in marketing in banks with the aim of enhancing the business processes.

Provost and Fawcett [11, 2013] state that “with vast amounts of data now available, companies in almost every industry are focused on exploiting data for competitive advantage”. Bakshi [1, 2012] argues that “the challenge is not only to collect and manage vast volume and different type of data, but also to extract meaningful value from it”. According to Ruediger et al. [13, 1997] better understanding of customer needs can help banks acquire new customers, sell more products to those customers and prevent other customers from taking their business elsewhere. This statement is as topical nowadays due to the fact that banks are exposed to multiple challenges: coping with the pressure of competition, satisfying customer needs and being complied with regulatory requirements related to risk management but also on legal provisions regarding consumer protection.

This paper is divided in five sections. Following the introductory notes, authors in second section discuss general terms related to big data. Third section is related to overview of existing research on the topic of big data in marketing. The focus of the fourth section is on discussion of the application of big data in marketing in banks. Finally, conclusions are presented.

## 2 GENERAL OVERVIEW OF THE BIG DATA CONCEPT

Syed, Gillela and Venugopal [14, 2013] define big data as “data that exceeds the processing capacity of conventional database systems. The data is too big, moves too fast, or does not fit the strictures of your database architectures. To gain value from this data, you must choose an alternative way to process it.”

Desouza and Smith [5, 2014] define big data through its characteristics, the so called “7 V’s”, namely:

- *Volume*: considers the amount of data generated and collected,
- *Velocity*: refers to the speed at which data are analysed,
- *Variety*: indicates the diversity of the types of data that are collected,
- *Viscosity*: measures the resistance to flow of data,
- *Variability*: measures the unpredictable rate of flow and types,
- *Veracity*: measures the biases, noise, abnormality, and reliability in datasets,
- *Volatility*: indicates how long data are valid and should be stored.

Desouza and Smith [5, 2014] also argue that “the most challenging V for organizations is *variety*” due to the fact that integration of heterogeneous datasets and integration of new sources of data (in terms of origin and type) requires economisation of process.

As for potential benefits of big data usage for organizations some authors discuss that in the past departments across organization have had each their own datasets which they managed separately, but big data analytics is based on the premise that this data can be linked together in order to receive synergic effects for both the organization, clients and business partners [12, 2012]. The others argue that the value of big data to an organization falls in one of following two categories: analytical use or enabling new products [14, 2013]. Watson [16, 2014] points out that “collecting and storing big data creates little value; it is only data infrastructure at this point. It must be analysed and the results used by decision makers and organizational processes in order to generate value”. Davenport and Dyche [3, 2013] argue that managers are impressed with one of three other aspects of big data: the lack of structure, the opportunities presented and low cost of the technologies involved. The same authors also point out following opportunities arising from big data usage in organisations:

- Cost reduction,
- Substantial improvements in the time required to perform a computing task, or new product and service offerings,
- Support for internal business decisions [3, 2013].

According to a survey conducted by TDWI [15, 2011] 70% of respondents consider big data technology as an opportunity and not a problem for their organisation because it yields detailed analytics for business advantage.

In order to use big data as a tool for business decisions support organizations are expected to incorporate big data analytics process. Gandomi and Haider [7, 2015] define following possible types of big data analytics for structured and unstructured data:

1. Text analytics
  - a. Information extraction
  - b. Text summarization
  - c. Question answering
  - d. Sentiment analysis
2. Audio analytics
  - a. Large-vocabulary continuous speech recognition systems
  - b. Phonetic based systems
3. Video analytics
  - a. Server-based architecture
  - b. Edge-based architecture
4. Social media analytics
  - a. Content based analytics
  - b. Structure based analytics
  - c. Community detection
  - d. Social influence analysis
  - e. Link prediction

## 5. Predictive analytics (statistical methods)

Power [10, 2013] defines three major types of analyses that can be prepared with new data sources and data manipulation technologies:

1. Retrospective data analyses – using historical data and quantitative tools to understand patterns and results to make inferences about the future. This is the area of business intelligence.
2. Predictive data analyses – using simulation models to generate scenarios based on historical data to understand the future. Predictive means ‘looking forward’ and making known in advance.
3. Prescriptive data analyses – using planned, quantitative analyses of real-time data that may trigger events. Prescriptive analyses recommend actions.

## 3 BIG DATA IN THE MARKETING CONTEXT

The application of big data in marketing has been a topic of interest among scientific public but also among marketing specialists. In this section the authors will present an overview of existing available research related to big data usage in the domain of marketing.

According to TDWI Best practices report [15, 2011] implementation of big data technology ensues benefit for following areas: better targeted social influencer marketing, more numerous and accurate business insights, segmentation of customer base, recognition of sales and market opportunities, automated decisions for real time processes, definition of churns and other customer behaviour, detection of fraud, greater leverage and ROI for big data, quantification of risks, trending for market sentiments, understanding of business change, better planning and forecasting, identification of root causes of cost, understanding consumer behaviour from clickstreams, manufacturing yield improvements. McKinsey Global Institute [8, 2011] specifies, amongst others, following potential of big data in retail segment: in store behaviour analysis, variety and price optimization, product placement design, improved performance, labour inputs optimization, distribution and logistics optimization, web based markets. As can be seen from the cited sources, the researchers find big potential for big data usage and its implementation in the marketing field.

The influence of new, digital data on marketing is noticeable also when discussing types of data used for analysis. In continuation to this, Rogers and Sexton [12, 2012] divide possible types of data collected by marketers as:

- traditional (demographic, customer transaction data, customer usage data) and
- digital (social media content created by customers and targets, social network ties and influence between customers and targets, customer mobile phone/device data).

Having in mind the fact that the dynamics of retrieving data is dependable on the type of data and “the 7 V’s” as main characteristics of big data, it is evident that there are many sources that can be used in process of data extraction. Watson [16, 2014] gives following examples of potential sources of big data:

- *Web log files* used to improve understanding of clients’ buying behaviours and to influence their consumption by dynamically recommending products,
- *Social media data* analysis that can be used for understanding what people think about new product introductions,
- *Data generated from machines* can be used together with pricing plans in order to motivate certain customer behaviour,
- *Geospatial* (e.g., GPS) data that can be used in order to receive offers from nearby services,
- *Image, voice, and audio* analysis for applications in domain of security systems.

Although big data offer variety of opportunities for application in the marketing domain, big data itself is not enough. Rogers and Sexton [12, 2012] point out that in order to leverage the opportunities of big data, marketers need to improve their ability to:

- Collect meaningful customer data from a variety of sources, including real-time data,
- Link that data to metrics developed for measuring marketing ROI,
- Share data across the organization, linking datasets together at the customer level,
- Utilize this shared data to effectively target and personalize marketing efforts to customers.

## **4 THE APPLICATION OF BIG DATA IN MARKETING IN BANKS**

According to Oracle research [9, 2015] “banks and financial services companies seek to differentiate themselves by developing and delivering unique products and services for their customers. However, in this very competitive industry, successful products are often copied and the customer’s barrier to exit is very low.” Oracle research [9, 2015] also suggests that financial institutions are nowadays transient nodes for the customer who is the centre of attention, in sense that he chooses his business relationships with a number of institutions that offer financial services depending on what he assess as the most profitable combination in terms of what he gets from that relationship. Consumers also expect to have full transparency about the products and services being offered and thus for banks and financial services companies to keep customers for the long term, they must get closer to them and anticipate customer needs and be able to proactively position their products [9, 2015].

According to Deutsche Bank research [6, 2015] “gaining a more complete understanding of a consumer’s interests and preferences is necessary to ensure that banks can continue to address

customer satisfaction and for building more extensive and richer predictive models. Big Data technologies provide the ability to collect and integrate and augment transactional and unstructured data from within and outside of the firm and hence play a pivotal role in enabling customer centricity in this new reality”.

Deutsche Bank research [6, 2015] findings suggest that the drivers of big data technology adoption in financial industry are:

- Explosive data growth,
- Regulation,
- Fraud detection and security,
- Customer insight and marketing analytics.

According to Capgemini Consulting [2, 2014] big data analytics can help banks maximize value from customer data in three segments, namely:

- Acquiring customers (improving credit risk estimation and maximizing lead generation potential),
- Growing share of wallet (driving efficiency of marketing programs and increasing sales through predictive analysis),
- Retaining customers (limiting customer attrition and improving customer satisfaction).

Oracle research [9, 2015] amongst others points out following solutions expected to arise from big data project in financial institutions:

- Increased customer wallet share (gaining insight into the life cycle of a customer),
- Customer intimacy (better understanding of the customer enables positioning the right product at the right time for the right price),
- Reputational risk management (protecting the brand by understanding customer sentiment towards the bank, its board members or employees).

In continuation to the big data sources previously defined by Watson [16, 2014], there are some other specific data sources that banks may use, such as call centres, tellers or branch personnel in order to understand the paths that customers follow through the bank, and how those paths affect attrition or the purchase of particular financial services [3, 2013]. The Deutsche Bank research [6, 2015] states that external sources of data are social networks, customer call records, customer emails, claims data (albeit in an unstructured format) and that they provide them with psychographic information about the consumer, aside from utilising internal systems information. The same research also gives an example of use of geotargeted advertising in financial industry as an excellent application of data arising from various sources [6, 2015].

De Fortuny, Martens and Provost [4, 2013] observe that “big data thinking opens our view to non-traditional data for predictive analytics—datasets in which each data point may incorporate

less information, but when taken in aggregate may provide much more”. In that context it is acceptable to assume that some prerequisites need to be satisfied in order to gain the most value from big data. Rogers and Sexton [12, 2012] state that in order to effectively harness the capabilities of new digital tools, marketers need to:

- Set clear business objectives for any digital marketing effort,
- Develop a variety of metrics for new digital tools (audience metrics, engagement metrics, financial metrics),
- Develop models that link channel-specific digital metrics (like retweets or Facebook interactions) to universal metrics, including key performance indicators (KPIs),
- Continuously innovate new measurement models as new digital tools and marketing rapidly evolve.

## 5 CONCLUSION

In this paper authors have presented an overview of available research on the usage of big data in the domain of marketing. An attempt has been made to point out the value of big data application in banking due to the fact that banks nowadays operate in highly competitive, strictly regulatory proscribed and client centric market and big data may contribute to banks' position by adding extra value, especially in sense of gaining more insight into client's habits, creating more intimate relationship with client, managing reputational risk and reducing costs. Having on mind continuous developments in the field of big data research there is a variety of topics to be covered in future research with special emphasis on developing metrics and measurement models that contribute to the field of marketing by measuring ratio of value of investment made in application of big data technologies and benefits received.

## REFERENCES

- [1] Bakshi, K. (2012). Considerations for Big Data: Architecture and Approach. *Aerospace Conference IEEE*, Big Sky Montana
- [2] Capgemini Consulting. *Big Data Alchemy: How can Banks Masimize the Value of their Customer Data?* (2014)
- [3] Davenport, T.H., Dyche, J. (2013). *Big Data in Big Companies*. International Institute for Analytics.
- [4] De Fortuny, E.J., Martens, D., Provost, F. (2013). Predictive modelling with big data: Is bigger really better? *Big Data*. pp. 215-226
- [5] Desouza, K., Smith, K.L. (2014). Big Data for Social Innovation. [*Stanford Social Innovation Review, Summer 2014*, pp. 39-43
- [6] Deutsche Bank: *Big Data: How it can become a differentiator* (2015)

- [7] Gandomi, A., Haider, M. (2015). Beyond the hype: Big data concepts, methods and analytics. *International Journal of Information Management*, 35, pp. 137-144
- [8] McKinsey Global Institute: *Big data: The next frontier for innovation, competition, and productivity* (2011)
- [9] Oracle Enterprise: *Big Data in Financial Services and Banking* (2015)
- [10] Power, D. (2013). *Decision Support, Analytics, and Business Intelligence*. New York, NY: Business Expert Press.
- [11] Provost, F., Fawcett, T. (2013). Data science and its relationship to big data and data-driven decision making. *Big Data*, 1 (1), pp. 51-59
- [12] Rogers, D., Sexton, D. (2012). Marketing ROI in the Era of Big Data. *The 2012 BRITENYAMA Marketing in Transition Study*.
- [13] Ruediger, A., Grant-Thompson, S., Harrington, W., Singer, M. (1997). What leading banks are learning about big databases and marketing. *The McKinsey Quarterly*, 3, pp. 187-192
- [14] Syed, A. R., Gillela, K., Venugopal, C. (2013). The Future Revolution on Big Data. *International Journal of Advanced Research in Computer and Communication Engineering*, 2 (6), pp. 2446-2451
- [15] TDWI Best practices report: *Big data analytics* (2011)
- [16] Watson (2014). Tutorial: Big Data Analytics: Concepts, Technologies and Applications. *Communications of the Association for Information Systems*, Vol. 34, Article 65. Available at: <http://aisel.aisnet.org/cais/vol34/iss1/65>

## THE ROLE OF SEGMENTATION IN E-MAIL MARKETING

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### ABSTRACT

*E-mail marketing is considered the fastest growing form of communication technology in history, while the globalization and the accelerated development of technology have managed to bring Internet and e-mail services to a broad range of the world population. The latest trends show that the importance of e-mail marketing will grow even further with a significant usage of personalization in promotional campaigns. Thus, a quality segmentation of existing and potential customers is highlighted as a necessary element of today's marketing activities. Segmentation represents a process of dividing the market on different groups (segments) of customers considering some of their common characteristics. Many studies have shown that well segmented campaigns generate greater return on investment and achieve better open rates, click through rates and conversion rates. As two popular analytical segmentation techniques, RFM method and customer lifetime value (CLV) are presented in this paper. RFM method is a three-dimensional way of ranking customers according to the time since their last purchase, frequency and total value of their last purchases. Customer lifetime value (CLV) is the net present value of all future profits generated by the existing or potential customers of the company. The goal of this paper is to present the theoretical assumptions of the role of segmentation in e-mail marketing and to show the results of the research about the use of customer segmentation in e-mail marketing at Croatian companies.*

**KEYWORDS:** personalization, segmentation, marketing, e-mail, direct marketing

### 1 INTRODUCTION

According to Vasudevan (2010) e-mail marketing is considered as "the promotion of products and services via e-mail." It is pointed out that e-mail marketing is a form of direct marketing that uses e-mail as means of communication with an audience for commercial purposes. Every e-mail message sent to a potential or existing customer can be considered as e-mail marketing. According to Chaffey (2009) some of the forms of e-mail marketing are:

- Conversion e-mail - the user visits a web-site, expresses interest in a product or service by registering and providing their e-mail address without buying anything. Then it is possible to send an e-mail message to that address to convince the user to try the product or service for which they showed an interest.
- Regular e-newsletter - sent periodically (on a monthly or a quarterly basis, etc.) and with different content for different publics and segments.
- House-list campaign - periodic e-mail messages sent with different objectives, e. g. encouraging trial of a service, repeated purchases or reactivation of customers who no longer use a service.
- Event-triggered - they are not regular and are sent out perhaps every 3 or 6 months containing news about a new product or service.
- E-mail sequence - various software can send out series of e-mail messages in intervals determined by a marketing expert.

Considering the nature and the availability of today's Internet communication, relatively low costs are considered the primary advantage of e-mail marketing (especially compared to other forms of direct marketing). Several authors, including Chaffey (2009), Ružić et al. (2014), Dobrinić et al. (2005), Vasudevan (2010), Bawm and Nath (2014) state low costs as the primary advantage of e-mail marketing. Including the speed and the above mentioned low costs, the advantages and the disadvantages of e-mail marketing according to Chaffey (2009) are shown in the Table 1.

Table 1. Advantages and disadvantages of e-mail marketing

<b>ADVANTAGES OF E-MAIL MARKETING</b>	<b>DISADVANTAGES OF E-MAIL MARKETING</b>
1. Direct response encourages immediate customer action.	1. Problems with sending e-mail messages because of different Internet providers, corporate firewalls and different web-mail systems.
2. Rapid development of the marketing campaign.	2. Difficulties with showing creativity within different e-mail readers.
3. Simpler personalization.	3. Decline of answers.
4. Ability of testing.	4. The difference between the communication preferences of recipients.
5. Ability of integration and combination with other marketing forms.	5. The need for additional work resources.

Source: adapted from Chaffey D. et al. (2009), Internet Marketing: Strategy, Implementation and Practice, 4th edition, Pearson Educated Limited

Just like any other marketing or business activity, e-mail campaigns should be monitored and evaluated and acted upon to improve their future results. Every organization defines itself which metrics it will focus on, but there is one common guideline for every organization - metrics used to monitor e-mail campaigns must match the business goals of the campaigns they are part of. Therefore, enterprises should define their key performance indicators (KPIs). In order to increase the relevance of those indicators, it is necessary to combine them in a systematic model for monitoring e-mail campaigns performance. The key performance indicators are divided into generic and specific ones. According to Charlesworth (2009), Chaffey et al. (2009), Ružić et al. (2014) and Kolowich (2016), the generic key performance indicators of an e-mail campaign are:

- Delivery rate
- Open rate
- Click through rate (CTR)
- Conversion rate
- Viral rate
- Comparison of e-mail campaigns

Charlesworth (2009) also mentions the specific key performance indicators of e-mail campaigns: the number of units sold, the number of orders placed, the average order amount, total profits, the number of downloads, response rate of opened messages and clicks on the ad inside the message, and the mailing list growth rate.

## **2 SEGMENTING CUSTOMERS IN E-MAIL CAMPAIGNS**

"Marketing segmentation is the process of aggregating individuals and businesses along similar characteristics that pertain to the use, consumption, or benefits of a product or service." (Strauss, El-Ansary, Frost, 2003) The procedure of segmentation is present in all marketing activities, mostly with a goal to increase the effectiveness of marketing campaign, that is, to reduce the cost of actions conducted towards customers who are not interested in particular offers, products or services. Segmentation has its application also in the e-mail marketing by determining and decomposing market segments and sending and acting towards them with more personalized messages. Although current technology allows e-mail marketers to send bulk e-mail messages, this so called generic segmentation can lead to irrelevant e-mail campaign and in the worst case to marking the sent message as spam (Bawm, Nath, 2014). Analyzing different authors it can be concluded that segmentation represents the procedure of dividing the market on different homogenous groups of users (segments) according to their common preferences, patterns of behavior and other characteristics which are the foundation of further process of targeting and choosing the right strategy for each segment. In that context, the most notable methods of segmentation are the RFM analysis and determining the customer lifetime value. Kotler, Keller and Martinović (2012) define four main variables of segmentation: geographical,

demographical, psychographical and behavioral, while Ružić, Biloš and Turkalj (2014) mention also the segmentation according to user status, segmentation according to usefulness and segmentation of industrial markets (B2C).

Both academic researches and practices pointed out the importance of applying the segmentation strategy, so Hiziroglu (2013) states that segmentation strategy is “an important method to achieve more targeted communication with customers“. According to Green and Krieger (1991) marketing segmentation is based on several basic presumptions:

- Market segmentation presupposes customer heterogeneity.
- Heterogeneity of preferences for products or services is linked with 1) personal variables (e. g. demographic and psychographic characteristics, loyalty towards a certain brand etc.) and 2) situational variables (e. g. gift purchasing vs. buying for yourself) and their interactions.
- Companies can react to the heterogeneity of preferences by modifying the characteristics of existing products or services, distribution and promotion.
- Companies are undertaking actions mentioned above if they estimate that it will bring them greater net benefit.

According to Hughes (2006) segments are groups of customers with similar interest in products or services that are based on their demographic characteristics and lifestyle; while Kotler, Keller and Martinović (2012) state that the market segment consists of a group of consumers that share a common set of needs and desires. According to Hughes (2006) an ideal segment is the one which:

- has definable characteristics in terms of behavior and demographics (e.g. students, families with small children etc.),
- is large enough in terms of potential sales to justify a marketing strategy,
- encompasses customers who can be motivated to modify their behavior in ways that are profitable for the company,
- makes efficient analysis of available data,
- can be measured and monitored in performance.

The question is how many segments a company should have. According to Hughes (2006), a company should have as many segments as it can successfully manage and that for most of them ten segments are sufficient.

After reviewing and defining various potential segments, marketing experts should decide on the best approach towards each segment. This requires an optimal balance between market environment and company's expertise and resources. Then they decide about the strategy while Strauss, El-Ansary and Frost (2003) mention four different approaches:

- 1) Mass marketing - one marketing mix for the entire market.

- 2) Multisegment marketing - two or more segments and designed marketing mix strategies tailored to each segment.
- 3) Marketing niche - one segment and one or more marketing mixes developed to meet the needs of that segment.
- 4) Micromarketing – a part of or entire marketing mix adapted to a very small number of people (in an extreme case, marketed to a single person).

After selecting the segmentation strategy, the company must ensure an adequate infrastructure for the implementation of the segmentation plan. After selecting the right strategy and ensuring sufficient infrastructure, the next step is the development of the action plan which represents a guide for the development and implementation of the segmentation strategy and shows how to get from one point to another. According to Hughes (2006), the action plan includes:

- a roadmap showing what will happen and when it will happen,
- a budget for the infrastructure and for the marketing segment plans,
- standard application of segmentation - how to maintain consistency and control while providing flexibility and localized power,
- an organigram showing responsibilities for each segment,
- specific goals to be achieved with milestones for measurement of success.

As the e-mail marketing function is correlated with the goals of the company, such as increasing the revenues, cost reduction or market positioning, companies are looking for different ways to increase their own effectiveness and the effectiveness of their e-mail marketing campaigns. In this context, the segmentation is a powerful mechanism. In the context of e-mail marketing, we talk about the mailing list segmentation, or the segmentation of the lists of subscribers who gave permission to be included on that lists. The goal of segmentation in e-mail marketing is to identify groups of customers with biggest tendency of forming online relationship (Chaffey, 2003). Then each segment is accessed with the chosen marketing strategy. According to Chaffey (2003), some simple analytical tools like category analysis and determination of the customer lifetime value with the RFM method are used to identify segment.

Bawm and Nath (2014) present a model for effective e-mail marketing consisting of two main components: 1) Collecting subscribers' activities data, and 2) Subscriber segmentation. Before the start of the segmentation process, every subscriber is marked as a general subscriber, and their basic data is stored in the database. These raw data will be used for further segmentation. During the segmentation, subscriber's activities are tracked according to two key variables: the open rate and the click rate of the e-mail messages. After finishing the first component, the grouping and segmenting the data starts. Segmentation is executed according to the similarities of subscribers' activities throughout the marketing campaigns rather than according to their gender, location or response rate. To segment subscribers based on their interests and activities, Modified K-Means Clustering Algorithm is used (Nath et al., 2010). Subscribers' open rate, click through rate, purchase rating and impression on products are used for clustering

subscribers. This research is conducted with the assistance of an Internet marketing expert who owns a list of several thousands of subscribers. At the end of the experiment, the overall percentage of activities such as open rate and click rate increased by as much as 10 % and using relevant clustering the researchers were able to increase ROI by 43 % with the highest result of 77,80 % in June, which is very significant.

Segmentation of e-mail marketing lists achieves higher e-mail messages open rates and click through rates. In that context, Mail Chimp, one of the most popular e-mail marketing services, conducted a research in 2016 on a sample of 2 000 users who use list segmentation tools and send about 11 000 segmented campaigns to almost 9 million recipients. The results are shown in Table 2:

Table 2. Comparison of results of segmented and non-segmented campaigns

<b>Opens:</b>	13,07 % higher than non-segmented campaigns
<b>Unique Opens:</b>	9,68 % higher than non-segmented campaigns
<b>Clicks:</b>	51,92 % higher than non-segmented campaigns
<b>Bounces:</b>	1,70 % lower than non-segmented campaigns
<b>Abuse Reports:</b>	8,67 % lower than non-segmented campaigns
<b>Unsubs:</b>	8,28 % lower than non-segmented campaigns

Source: adapted from Mail Chimp (2016.) Effects of List Segmentation on Email Marketing Stats, available at: <https://mailchimp.com/resources/research/effects-of-list-segmentation-on-email-marketing-stats/> [1.8.2016.]

## 2.1. RFM ANALYSIS

RFM is a model developed by the direct marketing experts by monitoring purchases according to certain variables with a goal of classifying (or ranking) their best and worst customers. RFM model represents an acronym of English expressions that define customers' behavior - "recency", "frequency" and "monetary". Within that model, customers are ranked according to the recency of their last purchase, how often they purchase (frequency) these products or services and how much they spend on them. The model is based on the Pareto principle which states that 80 % of revenue comes from 20 % of (best) customers. According to Dobrinić, (ed.) (2011) the RFM analysis is the oldest analytical technique of customer behavior prediction and has been used for more than 50 years. This fact alone points out the importance and applicability of this model which some authors highlight as "the most powerful and simplest model to implement CRM." (Khajvand et al., 2010)

"RFM analysis is a three-dimensional way of classifying or ranking customers to determine the top 20 % or best customers. It is based on the 80/20 principle that 20 % of customers bring in

80 % of revenue" (Aggelis, Christodoulakis, 2005). The three-dimensionality marks ranking customers according to three attributes: recency - time since their last purchase; frequency - how often they purchase; and monetary - total value of their purchases. RFM analysis is also applicable in e-mail marketing and is used as a model of customers' behavior prediction and as a segmentation technique as well. This is especially important for selecting the right target groups and sending them the right content. The following Table 3 shows how RFM attributes can be adapted in e-marketing and e-mail marketing:

Table 3. Examples of RFM attributes e-marketing and e-mail marketing

<b>Recency</b>	<b>Frequency</b>	<b>Monetary</b>
<ul style="list-style-type: none"> <li>- date of the last purchase</li> <li>- date of the last visit to the web site</li> <li>- date of the last open e-mail message</li> </ul>	<ul style="list-style-type: none"> <li>- number of purchases in an interval</li> <li>- number of visits to the web site in an interval</li> <li>- number of messages opened</li> <li>- number of web sites logins</li> </ul>	<ul style="list-style-type: none"> <li>- total amount spent in an interval</li> <li>- total number of points awarded based on web site activity (commenting, reviewing, recommending, etc.)</li> </ul>

Source: adapted from Dobrinić D. (2011.) Marketing and databases, Faculty of Organization and Informatics Varaždin

Some authors, like Stone, Jacobs (2001), and Chuang, Shen (2008) recommend in their researches the WRFM - weighted RFM analysis. They suggest that, depending on the industry the company operates in, higher weight is assigned to the R, F or M attribute. Using the AHP method, relative weightiness of RFM attributes is determined. On the other hand, Cheng and Chen (2009) suggest the model that connects RFM attributes and k-means clustering algorithm (one of the popular clustering algorithms known as Forgy method) into RS theory not only to increase the classification precision but improve company's CRM as well. Additionally, the theory effectively corrects the deficiencies in data mining. Other researchers expand and develop the RFM model, and add additional attributes. Yeh et al. (2008) introduce an expanded RFM model called RFMTC model (Recency, Frequency, Monetary, Time since first purchase, Churn probability) which can estimate the probability that the customer will repeat the purchase and the expected value of the total number of purchases in the future. The findings have shown that the proposed model provides more predictive accuracy than RFM model. Also, because of the increased importance of e-mail communication, Coussement and Poel (2008) presented an extended RFM model by adding socio-demographic and other transactional variables (eRFM) and a model adding emotional variables to eRFM (eRFM-EMO model). The findings have shown that eRFM-EMO model has better results in predicting customers' behavior.

## **2.2. CUSTOMER LIFETIME VALUE (CLV)**

Alongside the already mentioned RFM analysis, customer lifetime value (CLV) represents one of the most popular and most widely used segmentation techniques. Using this technique, customer's future purchases can be predicted, which is one of the most important reasons CLV is used so often. Many authors define this technique and they all agree in several defining points. Hughes (2016) points out that CLV is the net present value of all future profits generated by a specific number of new or existing customers throughout a specific number of years. Customer lifetime value is the current value of all future profits generated by company's customers and clients (Khajvand et al., 2010). According to the same author, the calculation of CLV is widely applicable, and several authors developed models for its application, such as performance measurement, customer targeting, allocation of marketing resources, product offer, and customer segmentation. The CLV determination can help marketers to determine the effects of adopting a marketing strategy and in making a more informed pricing policy. (Berger and Nasr, 1998)

## **3 RESEARCHING THE SEGMENTATION IN E-MAIL MARKETING**

### **3.1. INTRODUCTION AND METHODOLOGY**

The goal of the research was to complete the findings of the way the sales/promotional activities via direct marketing, especially e-mail, are done in Republic of Croatia, whereby the validity and purposefulness of using segmentation from the aspect of enhancing response (action) rates was considered.

The methodology of the research is based on a survey and the analysis of its results. The sample used in this research consists of 74 companies with CEOs or heads of marketing departments responding. E-mail addresses of the surveyed entities were collected using the Kompas platform database. E-mail messages that contained the URL leading to the survey were designed with Google Forms and were sent to 1,876 e-mail addresses on a weekly basis. The survey was sent in six campaigns via Mail Chimp, an e-mail marketing system for sending bulk e-messages.

### **3.2. RESEARCH RESULTS**

Analyzing the obtained results from 74 respondents, we can conclude that the most usual respondent is a small enterprise (45,90 %) operating in the ICT sector (22,97 %) on both B2C and B2B markets. E-message is the primary form of sale/communication with their customers for 58,10 % respondents.

Furthermore, the most common reason for using e-mail is the sale of products and services and informing customers (83,90 %), followed by customer relationship development (79,00 %) with use of e-mail, as a form of sales communication, for more than 5 years (77,40 %). While using e-mail, respondents mostly use their own mailing lists (79,90 %) and they generate them mostly directly from their customers (28,25 %) and through their own contacts (15,22 %). Respondents' opinion of the support to forming a legal customers' information database market in Republic of Croatia is divided, with 37,10 % of respondents supporting and 30,60 % not supporting the formation of the database market, and 32,30% abstained from responding.

74,20 % of respondents have formed databases of their customers inside their company, with most databases up to 1,000 names (39,10 %), followed by the database size 1,000 to 3,000 names (28,30 %). The information included in the databases is most frequently name and surname, or the name of the business subjects, followed by the type of the purchased product or service (69,60 %), type of the customer (60,90 %), number of all purchases (43,50 %), and the amount of all previous purchases (41,30 %).

Most respondents (73,90 %) use that information for market segmentation, while the primary purpose of the market segmentation is targeted selection (76,50 %) and different treatments of customers (64,70 %). The most commonly used variable/criterion for segmentation is the customers' interest (79,40 %), followed by geographical criteria, the amount of purchases in a specific time period and the value of purchases in a specific time period with 26,50 %. The success of the segmentation process is best evidenced by the fact that 32,40 % of the respondents increased their response/reaction rate of their customers in e-mail marketing activities by up to 2 %; 29,40 % by 2-5% and by more than 5%, by some other percentage rate 5,90% of respondents, while 2,90% of respondents did not have an increase in the rate.

From all the respondents that use segmentation in their operations, only 11,80 % of them use it to track their customers' lifetime value, while 23,50 % of them use it sometimes for some customers. From the respondents who don't use segmentation to track customers' lifetime value, only 13,00 % of them plan to use it in the future, while 43,50 % of them abstain from responding. 8,80 % of the respondents completely agree with the statement "E-mail marketing campaigns based on tracking of customers' lifetime value contribute to a greater response/reaction rate of customers.", while 2,90 % of the respondents completely disagree. It should be pointed out that  $\bar{x} = 3,12$ ;  $\sigma = 0,96$ , and  $V = 30,89$  %. According to these results we can conclude that, regarding the deviation in the results, the differences between respondents are obvious because the absolute and relative measures of variation are somewhat more significant. The most frequent response is  $M_o = 3$ .

47,50 % of the respondents do not create profiles of their good/bad customers based on the segmentation, while only 9,10 % of them plan to create them in the future. 20,60 % of the respondents completely agree with the statement "Customer profiling enhances the success of

e-mail marketing campaigns", while no one completely disagrees.  $\bar{x} = 3,88$ ;  $\sigma = 0,72$ , and  $V = 18,49$  %. Relative deviation ( $V$ ) indicates a noticeable homogeneity of the respondents. The most frequent answer is  $Mo = 4$ .

27,00 % of the respondents completely agree with the statement "Customer segmentation can increase the response rate (reaction/action) of customers in an e-mail marketing campaign.", while 1,40 % of the respondents completely disagree. With this statement  $\bar{x} = 3,91$ ;  $\sigma = 0,87$ , and  $V = 22,34$  % which also indicates that the respondents are approximately equal in their responses and that they do not significantly differ. The most frequent response is  $Mo = 4$ .

As the reasons why they do not conduct segmentation, 41,50 % respondents marked a relatively small market they operate on, 39,00 % of them marked incomplete databases, and 31,70 % of them marked insufficient logistical support.

Only 9,50 % of the respondents are familiar with the RFM technique which is used to identify profitable customers; it is not used by any of the respondents and only 4,10 % of the respondents plan to use it in the future. From the respondents that use the RFM technique, 70,00 % find it a very useful analytical technique. From all the respondents, 14,90 % have formed opt-out lists (spam or Robinson's lists) with the addresses of the customers that do not accept the direct sales communication form.

### **3.3. RESEARCH CONCLUSION**

Analyzing the results we can conclude that using e-mail as a form of sale communication is in line with the business trends worldwide and that the e-mail is extremely present in the respondents' business processes. Most of the respondents have formed customers' databases which they use for market segmentation and customer targeting so that they can treat their customers differently. The respondents have stated that the use of such segmentation has increased their customers' response rate in e-mail marketing activities. However, according to analyzed results, it can be concluded that the respondents are not sufficiently familiar with the analytical techniques like customer lifetime value (CLV) and RFM method. Although the respondents are quite homogenous and agree that those analytical techniques are useful and that they contribute to a better efficiency of the marketing campaigns, they do not plan to use them in the future.

### **3.4. LIMITATIONS AND FUTURE RESEARCHES**

The basic problem which the researchers have encountered is a relatively small response rate of the companies, although the e-mail message with the survey link was sent to more than 1,800 addresses only 74 completed surveys were received. Using the Kompas database enabled allowed the selection of the companies and the responsible persons which have received a

personalized e-mail with the survey. In that sense, this research can be considered relevant although the number of received answers does not suggest it. The author's intension was to perceive the perception of the application of the concept of the marketing management of the information and the level of the application, both the generic and personalized segmentation in e-mail campaigns. Future researches, relying on the results of this research, should be directed to the conclusions of the validity of using generic in relation to using personalized segmentation.

## REFERENCES

- [1] Aggelis V., Christodoulakis D. (2005.) Customer Clustering Using RFM Analysis, Proceedings of the 9th WSEAS International Conference on Computers, Article No. 2
- [2] Bawm Z. L., Nath R. P. D. (2014.) A Conceptual Model for Effective Email Marketing, 17<sup>th</sup> International Conference on Computer and Information Technology (ICCIT), pg. 250-256
- [3] Berger P. D., Nasr N. J. (1998) Customer lifetime value: Marketing models and application, Journal of Interactive Marketing, vol. 12., Number 1., pg. 17-30
- [4] Chaffey D. (2003.) Total Email Marketing, 1st edition, Butterworth-Heinemann
- [5] Chaffey D. et al. (2009.) Internet Marketing: Strategy, Implementation and Practice, 4th edition, Pearson Education Limited
- [6] Charlesworth A. (2009.) Internet Marketing: A Practical Approach, 1st edition, Butterworth-Heinemann
- [7] Cheng C.H., Chen Y.S. (2009.) Classifying the Segmentation of Customer Value Via RFM Model and RS Theory, Expert Systems with Applications, pg. 4176-4184
- [8] Chuang H.M., Shen C.C. (2009.) A Study on the Application of Data Mining Techniques to Enhance Customer Lifetime Value Based on the Department Store Industry, The 7th International Conference on Machine Learning and Cybernetics, pg. 168-173
- [9] Coussement K., Poel D. V. (2008). Improving customer attrition prediction by integrating emotions from client/company interaction emails and evaluating multiple classifiers, Expert System with Applications, 36(3): pg. 6127-6134
- [10] Dobrinić D. et al. (2005.) Izravni marketing, TIVA Varaždin
- [11] Dobrinić, D., ed. (2011.) Marketing and databases, Faculty of organization and informatics Varaždin
- [12] Green P. E., Krieger A. M, (1991.) Segmenting Markets with Conjoint Analysis, Journal of Marketing, Vol. 55, pg. 20-13
- [13] Hiziroglu A. (2013.) A Neuro-fuzzy Two-stage Clustering Approach to Customer Segmentation, Journal of Marketing Analytics 1, pg. 202-221
- [14] Hughes A. M. (2006.) Strategic Database Marketing, 3rd edition, McGraw-Hill
- [15] Hughes A. M. (2016.) How Lifetime Value is Used to Evaluate Email Customer Marketing Strategy, Database Marketing Institute, available at:

- <http://www.dbmarketing.com/2010/03/how-lifetime-value-is-used-to-evaluate-email-customer-marketing-strategy/> [02.08.2016.]
- [16] Khajvand M. et al. (2010.) Estimating Customer Lifetime Value Based on RFM Analysis of Customer Purchase Behaviour: Case Study, *Procedia Computer Science*, Vol. 3, 57-63
- [17] Kolowich L. (2016) Email Analytics: The 6 Email Marketing Metrics & KPIs You Should Be Tracking, HubSpot.com, available at: <http://blog.hubspot.com/marketing/metrics-email-marketers-should-be-tracking> [12.07.2016.]
- [18] Kotler P., Keller K. L., Martinović M. (2012.) *Marketing Management*, 14th edition, MATE Zagreb
- [19] Mail Chimp (2016.) Effects of List Segmentation on Email Marketing Stats, Mail Chimp, available at: <https://mailchimp.com/resources/research/effects-of-list-segmentation-on-email-marketing-stats/> [1.8.2016.]
- [20] Nath R. P. D., Lee H., Chowdhury N. K., Chang J. (2010) Modified K-means clustering for travel time prediction based on historical traffic data, *Knowledge-Based and Intelligent Information and Engineering Systems*, Springer Berlin Heidelberg, pg. 511-521
- [21] Ružić D., Biloš A., Turkalj D. (2014.) *E-marketing*, 3rd edition, University of Josipa Juraja Strossmayera in Osijek, Faculty of economics in Osijek
- [22] Stone B., Jacobs R. (2001.) *Successful Direct Marketing Methods*, 7th edition, McGraw-Hill
- [23] Strauss J., El-Ansary A., Frost R. (2003.) *E-marketing*, 3rd edition, Prentice Hall
- [24] Vasudevan R. (2010.) E-mail Marketing, *Journal of Contemporary Research in Management*, Vol. 5, No. 3, October-December, 2010, pg. 37-42
- [25] Yeh I. C., Yang K. J., Ting T. M. (2008.) Knowledge discovery on RFM model using Bernoulli sequence, *Expert System with Applications*, 36: pg. 5866-5871



CRODMA is a free trade association, which brings together, includes and connects individuals and legal entities engaged in direct and interactive marketing, with the aim of promoting more efficient and more effective management in all areas of Republic of Croatia using the principles, ethics, concepts, knowledge, skills, tools and techniques of direct and interactive marketing. The Association is active in professional and organizational sense independently and in line with the Statute.

## **MISSION**

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CRODMA's mission is to support the development and status of direct and interactive marketing as a business strategy.

The mission will be achieved by supporting: development of a legislative framework that will enable prosperity of activities of direct and interactive marketing and market equality of CRODMA members, promotion of activities of direct and interactive marketing to the public (political, economic and general) as a successful business strategy in the prevailing market conditions and education of members and communication of achievements so that the direct and interactive marketing would be properly considered in the domestic and international, primarily European market.

## **VISION**

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To become a factor in the development and acceptance of the marketing philosophy as the dominant philosophy of business in Croatia.

CRODMA is focused on the popularization and development of direct and interactive marketing with its members' influence, contacts and activities related to the presentation of ideas and success of direct and interactive marketing for the business, political and general public.

