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THE USE OF SOCIAL MEDIA IN CITY MARKETING COMMUNICATION WITH RESIDENTS AND TOURISTS – USER SEGMENTATION

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Abstract

Introduction. Transformations in the area of technology and communication allowing easy access to information resulted in Polish cities facing the challenge of changing their promotional activity. This activity has been largely transferred to social media. The article presents the definition of social media, their classification and the activity of large Polish cities in social media. The analysis of the collected material was carried out using classification trees. ***Material and methods.*** The CAWI method was used to conduct the research in four large cities (Warszawa, Wrocław, Gdańsk and Kraków). It covered 400 residents and 400 tourists. The analysis of the collected material was carried out using classification trees. ***Results.*** The application of classification trees allowed identifying the main factors influencing the frequency of using city profiles in social media by tourists and residents along with distinguishing three segments of residents and three segments of tourists using social media. The size of these segments was analysed, and thus the purpose of carrying out various activities by large tourist cities in social media. ***Conclusions.*** The importance of social media in marketing communication is recognized mostly by large cities. As a result, these cities change their marketing communication strategies because there are sufficiently numerous and relatively homogeneous segments of residents and tourists who receive the message addressed to them through social media. These activities are valued by their recipients since they allow them to interact.

Key words: social media, marketing communication, tourist city

Introduction

Transformations in the area of technology and communication allowing easy access to information resulted in Polish cities facing the challenge of changing their promotional activities. Currently, such activities involve the integration of marketing communication tools affecting individual target groups, especially residents and tourists. Apart from traditional instruments of marketing communication characteristic of territorial marketing, cities are increasingly focused on using modern tools which involve information and communication technologies (ICT).

At the beginning of the previous decade, a common hypothesis still prevailed that the Internet and thus social media are not capable of replacing traditional marketing instruments, but may only allow for their better use. However, the changes occurring within the recent few years, both social and technological, have quickly verified the above hypothesis. Currently, owing to the development of ICT, both tourists and residents receive an almost unlimited amount of information about a particular city. The dissemination of information has become a common practice, also due to the development of social media providing access to a wide range of tools. As in the case of the Internet itself, it should be expected that the organizations which, on the one hand, are the first to implement effectively the tools offered by social networking sites and, on the other, avoid the errors related to their inappropriate use, are going to benefit the most [1]. The purpose of the study is to distinguish the segments of tourists and residents using the profiles of large Polish tourist cities in social media and to identify factors influencing the frequency of visiting these profiles. The research hypothesis, which the authors aim at verifying in this study, is based on the statement that the segments of tourists and residents using city profiles in social media are large and homogeneous enough to facilitate effective city marketing communication with the use of these media.

Material and Methods

Definition of social media

Marketing communication is the process of transferring information between the communication source (city/region – territorial unit) and the recipient, i.e. the broadly understood environment, through a specific channel and means of communication [2]. It is implemented in a local government unit (LGU) and distributed by this unit in its market environment [3]. Current trends generate new forms of marketing communication characterized by a high level of information personalization. More and more frequently, the Internet is the medium of marketing communication, using which the local government authorities attempt to reach a selected target group with their offers or products [4]. The Internet, unlike traditional marketing communication tools, remains free from the limitations typical of one-way communication offering all users the possibility of publishing their comments.

Therefore, the new era of communication, referred to as Web 2.0, provides users with the possibility of permanent and asynchronous interaction and integration. The so-called publishers (website owners) increasingly often only prepare the website, whose users provide the content (e.g. text, photos, links to other websites), and create a community initiating cooperation with each other [5], thus constituting the core of its functioning.

Content marketing has become a modern approach to marketing defined as a process focused on creating and distributing valuable content [6]. Its purpose is to attract and hold the attention of a well-defined target group around a particular brand [7]. Social media represent one of the most popular channels of content marketing.

The concept of social media is defined in various ways. This term is explained by the Dictionary of the Polish Language [8]. It appears both in Polish literature in the publications of Kaznowski [9] and Wiktor [3] and extensively in foreign literature [11]. Kaplan and Haenlein define social media, inter alia, as a group of web-based applications with ideological and technological foundations of Web 2.0 in order to create and exchange the user-generated content (UGC) [12].

The source literature attempts to classify different types of social media. In a model based on the theories referring to media research and social processes, Kaplan and Haenlein [12] used two dimensions, namely – 1. social presence/media abundance and 2. self-presentation to divide social media into six types. These types include blogs and microblogs, collaborative projects, virtual social worlds, content communities, social networking sites, and virtual games [14].

Social media, constituting one of the main distribution channels for content, can also be divided into paid media, earned media and owned media [15].

The growing importance of social media indicates the need of the city promotion strategy evolution, as it is difficult to find another communication tool offering such an enormous range. The changes taking place in the sphere of social media are characterized by high dynamics. Not only are the new websites created, but alterations in the functioning of the existing media are often implemented [16].

Despite the broad definition of social media and the existence of their numerous and various forms, they are most often identified with social networking sites. These services cover a mix of different tools and, therefore, they are difficult to categorize in a systematic manner, especially considering continuously emerging new social networking sites.

The use of social networking sites in Poland

In the context of the problem related to using social media in the promotional activity of cities, it should be noted that the main advantages of social networking sites include influencing the relationships with residents and tourists, developing the image of local government units in the web and gaining the involvement of other users. These websites created conditions for presenting content that is interactive, personalized and tailored to the activity of their users, which definitely changed the type of activities performed in the area of city marketing communication. Such a change results from the modernization of the offer provided by individual social networking sites and the ongoing increase in the number of their users. In July 2022, the total number of the Internet users in Poland amounted to 29.6 million people [17].

For years, Facebook has remained the most popular service with over 25 million active users [18]. A dynamic increase in active users is also observed in the case of new websites, e.g. TikTok, as their number went up by over 4 million over the last year alone (Tab. 1).

The activities in the area of city marketing communication in social media are manifested, among others, by running a profile on social networking sites and ordering paid promotional campaigns. Having an account on Facebook – the largest social networking site – seems to be an obvious necessity for a city [19]. The effects of the promotional activity carried out by cities in social media are visible through a systematic increase in the number of people following particular city profiles. The data presented below show that an increase in the number of people observing profiles of the largest cities in Poland occurred within the last three years, when both residents and potential tourists were locked in their homes.

The characteristics of Facebook make this website an important platform for city marketing communication. Facebook allows precise identification of the target audience for promotional activities, and therefore not only mass campaigns are possible, but also the ones targeted at a specific group of recipients. The research addressing the use and functionality of Facebook is shown in the studies by Wallace et al. [20], Barnard and Knapp [21], and also by Kabadaya and Price [22].

The Instagram service, widely described in the publication of Manikond et al. [23], is also of significant importance for the promotion of Polish cities. A special tool used within the framework of this portal is a "hashtag" referring to the name of a given city. In Poland, #warszawa was used most often (over 11 million times). In the case of other cities, the problem of using Polish characters remains, and so in the case of Kraków, #krakow was used 6.4 million times, whereas #kraków over 2.3 million times.

Twitter as a marketing communication channel was presented in the publication by Zafiropoulos et al. [24]. In the case of this tool, a large disproportion in its use is noticeable. The dominant position is occupied by the profile of Warszawa with over 300,000 followers. Wrocław is ranked as next (approx. 92,000 followers), while the other cities (Gdańsk, Kraków) reach approx. 30,000 followers (Tab. 2).

A platform that differs in its characteristics from the above mentioned websites is YouTube, widely described in the publication by Dehghani et al. [25]. Despite the fact that most cities

Table 1. The main social media platforms in Poland in March 2022

Domain	Actual users (million)*	Average time**
Facebook	26.0	17h 21m 56s
Instagram	15.9	4h 32m 20s
TikTok	14.5	15h 52m 03s
Twitter	13.0	55m 57s
LinkedIn	6.6	13m 22s

Source: authors' compilation based on wirtualnemedia.pl; * – the total number of active users on the website and in the mobile device application; ** – average time spent by a user on a social network in March 2022.

Table 2. The number of followers of official city profiles on Facebook, Instagram and Twitter

City	Number of followers in September (thousand)					
	Facebook		Instagram		Twitter	
	2019	2022	2019	2022	2019	2022
Warszawa	243	309	48	111	260	309
Wrocław	270	332	87	157	78	92
Gdańsk	237	269	78	130	20	26
Kraków	305	355	37	60	18	34

Source: authors' compilation.

Table 3. Official city profiles on YouTube – September 2022

	Warszawa	Gdańsk	Wrocław	Kraków
Number of subscriptions (thousand)	25.7	8.6	12.8	17.2
Number of visits (million)	18.6	8.1	10.9	12.1

Source: authors' compilation.

Table 4. The number of followers of city profiles on TikTok and LinkedIn – September 2022

	Warszawa	Gdańsk	Wrocław	Kraków
TikTok	-	17 000	530	-
LinkedIn	3 600	100	600	-

Source: authors' compilation.

launched their YouTube channels earlier than Facebook profiles, the number of subscriptions is definitely smaller compared to Facebook, with Warszawa having the largest number of subscribers (Tab. 3).

The presented spectrum of tools that can be used by cities is extensive, which means that they can reach social media users in a variety of ways. Currently, TikTok and LinkedIn websites are beginning to play an important role in marketing communication, reaching specific groups of recipients with their content, i.e. young people and business communities, as well as the Snapchat social network.

The consolidation of promotional activities requires developing a uniform system between individual social profiles. Cities integrate websites using uniform logos, promotional slogans or hashtags for this purpose. Warszawa promotes itself with the slogan "Fall in love with Warszawa", while Wrocław and Gdańsk do that through hashtags – #wroclove and #ilovegdn. When analysing promotional actions, attention should also be paid to their diverse activities related to organizing social profiles. Wrocław differentiates its profiles depending on the target group, and the names of individual websites – visitWroclaw, Wroclove and Krasnale.pl – refer to individual websites. The most popular profile is Wroclove – a profile addressed to residents. This profile is followed by 332,000 Facebook users and 157,000 Instagram users [26].

Results

The analysis focused on the motives underlying the use of social media by residents and tourists visiting the four largest cities in Poland (Warszawa, Gdańsk, Wrocław and Kraków) was carried out in December 2021 and covered the sample of 800 respondents (400 residents and 400 tourists) included in the research panel (volunteer opt-in panels) of the BioStat Research and Development Centre based in Rybnik. The research was performed using the CAWI (Computer-Assisted Web Interview) method using an interactive questionnaire form [30].

Four large Polish cities, playing an important tourist function and running their profiles in social media, were analysed. For each city, 100 city residents and 100 tourists visiting the city were examined.

In order to analyse which factors (variables) influence the frequency of browsing social networking sites of their city in the case of residents and cities as tourist destinations, decision trees were built [29]. The tree function from the package of the same name was used in the construction of the decision tree [28]. In its construction, this function applies the measure of heterogeneity proposed in the study [27]. The first stage consisted in developing the classification tree model for all explanatory variables. As most of the variables included in the study are measured on an ordinal scale, the as.factor command was used when building the tree using the tree function, which indicates that a given variable is measured on a non-metric, qualitative measurement scale.

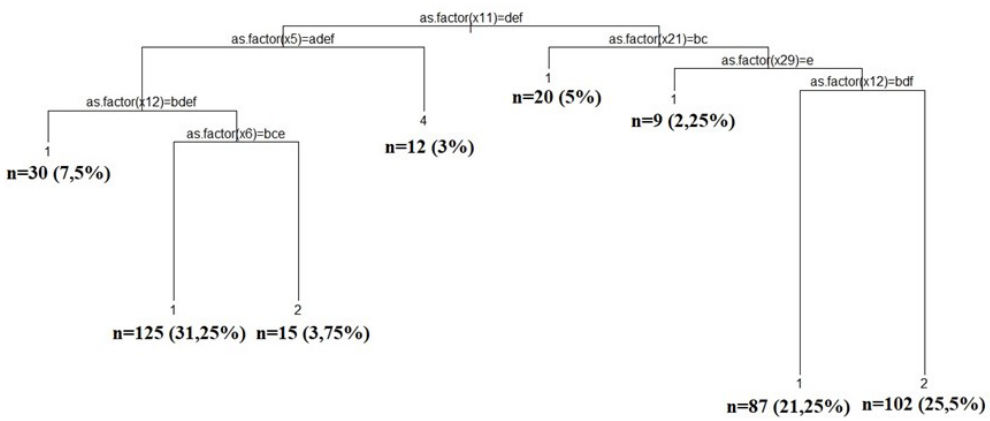
Ultimately, two decision tree models were constructed:

a) for the explanatory variable informing how often the resident uses social media provided by his/her city,
b) for the explanatory variable informing how often the tourist uses social media of the city being the destination of his/her trip.

Figure 1 shows the decision tree pruned to the depth of 8 leaves (nodes), indicating the frequency of using social media by city residents.

The full decision tree has 30 terminal nodes (its size makes the analysis very difficult), and the classification error for the full tree is 38.75%. The average standard deviation value amounted to 1.995.

The pruned decision tree has 8 terminal nodes and 6 variables determining the inclusion of objects into classes. The following variables represent the most important features identi-



Source: authors' compilation using R package.

Figure 1. The pruned (reduced) decision tree for the variable indicating the frequency of using social media by city residents

fying the residents' frequency of visiting social media in their city:

a) marking the resident's location in social media (x11),
b) interactivity as a noticeable benefit resulting from using social media (x5),
c) low cost of using social media as an advantage (x21),
d) posting short entries in social media (x12),
e) individual message as a benefit of using social media in the resident's city (x6),
f) relevance of the published information in social media as an important activity (x29).

The conducted research allows identifying three main largest segments of social media users among city residents:

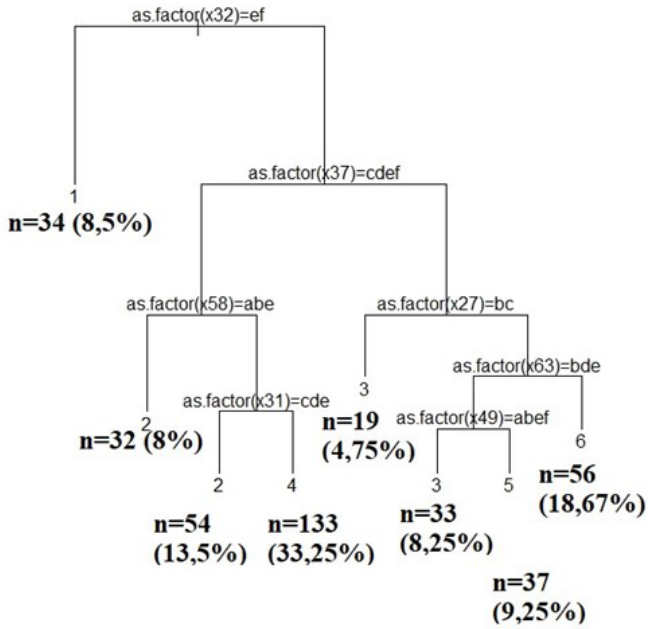
1) Segment I – people very often marking their place of residence in social media (x11), emphasizing the importance of interactivity as a feature of social media (x5), making short entries (e.g. comments) in social media (x12), indicating the individual message as an advantage of using their city social media (x6). These residents visit their city social profiles on a daily basis (category 1). This segment accounts for 31.25% of the respondents (n = 125).
2) Segment II – people very rarely marking their location in social media (x11), stating that low costs of using social media are of average, high or very high importance to them (x21), but do not assess the significance of the information published by their city at a very good level (x29). They indicate making very rare short entries in social media (x12). These residents visit their city social media very often (category 1). This segment accounts for 21.25% of the respondents (n = 87).
3) Segment III – people presenting the characteristics of segment II, with the difference that they make short entries more often than very rarely and visit social media of their city several times per week (category 2). This segment accounts for 22.5% of the respondents (n = 102).

When analysing the variables which turned out important in explaining the residents' frequency of using social media in their city, it is worth pointing out that these variables are directly related to the use of social media and the individual assessment of their impact on residents. Here, we are not dealing with the variables of a demographic and social nature (e.g. age or gender). This means that social media remain relevant to all demographic and social groups.

The full (unpruned) classification tree indicating which variables determine using the city social media by tourists includes 18 terminal nodes and the average deviation value is 1.645, with the classification error amounting to 23.45%. Due to the considerable size of the original tree, it was decided to prune the tree at the level of 8 terminal nodes (see Fig. 2).

The following variables represent the most important features:

a) LinkedIn as a social networking site used by the analysed respondent (x32).
b) Making long posts as the activity undertaken in social media (x37).
c) Personal message as a benefit of using social media for tourism purposes (x58).
d) Instagram as a social networking site used by the respondent (x27).
e) Snapchat as a social networking site used by the respondent (x31).
f) Assessment of the activity in the form of the city notice board (x63).
g) Assessment of the frequency of publishing posts (x49).



Source: authors' compilation using R package.

Figure 2. The most important features determining the use of social media by tourists

On the basis of the conducted research, it is also possible to distinguish 3 main segments of social media users among tourists visiting large cities. In this case, the main variable, i.e. the so-called determining one, is the activity on LinkedIn (x32). The vast majority of people who have a profile on this website also share profiles on other websites and it is these other profiles that they use much more often. Thus, the identified segments can be characterized as follows:

1) Segment IV – people using many social networking sites (x32), who often publish long entries on the Internet (x37), believing that an individual message in the media (x58) is important for them, and additionally using Snapchat (x31) once a week or more often. These people visit the city profile they plan to travel to several times per week (category 2). This segment accounts for 13.5% of the respondents (n = 54).
2) Segment V – people presenting the characteristics of segment IV, with the difference that they visit the city profile they plan to travel to several times per month (category 4). This segment accounts for 33.25% of the respondents (n = 133).
3) Segment VI – people using many social networking sites (x32), who frequently publish long entries on the Internet (x37) and also often use Instagram (x27) and rate the city notice boards as average. These people visit the profile of the city they plan to travel to less often than once a month (category 6). This segment accounts for 18.67% of the respondents (n = 56).

In the case of tourists, the dominating variables are those related to using the Internet (social networking sites, the respondent's actions or the assessment of online activities). Similar to the analysis covering the residents, it also lacks socio-demographic features.

Summarizing the results of the conducted research, it should be stated that the residents use their city profiles in social media because they provide the possibility of interactivity – commenting on the posted entries, marking the place of residence as well as entering one's own posts. In addition, these

media are characterized by low usage costs, and the information posted there is very important for the resident. This means that the activities carried out in city social media are very important and have a development perspective. They are already important for 78% of the respondents grouped in three segments. In turn, tourists visiting the four analysed large Polish cities use their profiles in social media mainly because they consider the information posted there to be the most up-to-date. Moreover, they use notice boards and appreciate the possibility of publishing their own opinions. LinkedIn, Instagram and Snapchat profiles are also important for them. Already today, the three identified segments cover 65.5% of the surveyed tourists.

Discussion

The conducted empirical research allowed distinguishing three segments of residents using profiles of their cities in social media and identifying the most important factors influencing the frequency of using these media by the residents of large Polish cities as well as tourists visiting the studied metropolises (Warszawa, Gdańsk, Wrocław and Kraków). The results of the conducted research allow for a positive verification of the formulated research hypothesis. Namely, the identified main factors influencing the frequency of using social media by both residents and tourists as well as the distinguished segments of tourists and residents sufficiently large in size allow considering the city profiles provided in these social media an important channel of city marketing communication with their residents and tourists visiting these cities. In the future, it will facilitate changing the hierarchy of importance regarding marketing communication channels used by the local government units and regions, primarily the tourist ones. It should be expected that with such intense activity of residents and tourists in social media and high frequency of using such marketing communication channels as the one identified in the research, city profiles in social media should become one of the most important instruments for the promotion and marketing communication of cities with their environment.

It should also be highlighted that the authors have not come across any studies that would directly address the discussed subject matter. The frequently conducted research covers the issue of Smart Cities and how they communicate via social media with residents and tourists, but this research is mainly focused on the types of social networks used by smart cities, the quantity of followers, the number of likes, comments and the activity of administrators, moderators and users, the topics of entered posts, as in the case of publication [31]. The problem of using social media is very rarely discussed. The publications addressing the activity of Destination Management Organizations (DMOs) [13] and National Tourism Organizations (NTOs) in this area are more frequent [10].

Conclusions

Summing up the presented considerations, it should be noted that the role of social media in marketing communication with the environment is noticed not only by enterprises, but also, to an increasing extent, by cities. This has been the case for over ten years, as evidenced by the profiles on social media. These activities are usually carried out by large urban centres. Small towns show little activity in social media. Probably because running a professional profile in social media is not as cheap as it is commonly believed. Attention should also be paid to the limitations related to the results of the conducted research. Firstly, the findings refer only to four large Polish cities. Secondly, the analysed cities perform a tourist function and were arbitrarily selected for the study, based on the practical experience of the authors. Thirdly, due to the limited financial resources, it was not possible to examine a larger research sample. The one adopted for the study is the minimum sample meeting the size criteria of the desired research sample. This research should also be approached as the first part of a larger research project being conducted by the authors. The second stage of the research includes the identification of activities in the area of marketing communication carried out by large tourist cities in Poland in social media and the assessment of their effectiveness. This part of the research is still ongoing.

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