

## Use of Web 2.0 and Social Networks by Regional Cities in the Czech Republic and in Poland

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**Abstract.** The aim of the undertaken research is a comparative analysis of the use of websites and Facebook in communication activities of regional cities in the Czech Republic and Poland. Just as the popularity of social networks is growing, their use by the public administration increases as well with the development of information and communication technologies. Citizens and businesses can communicate with the government and local authorities through e-mail, they can browse their websites, where required forms can be found, downloaded or directly filled in and sent electronically or communicate through social networks. The key part brings results from the research that was run at the fourth quarter 2018 at the University of Hradec Králové and at Wrocław University of Economics. Analyzed areas relate to the use of websites and social software applications, specifically Facebook for communication purposes between municipalities and citizens. All analyzed cities have established the official website of the city and have a profile on Facebook. Not all of them have profile on YouTube. Similar usage by regional cities recorded Twitter and Instagram. Pinterest is almost not used. On Facebook are mostly presented photos, videos, culture and social events and sport.

**Keywords:** Communication, Municipality, Social Network, Website.

### 1 Introduction

Marketing of municipalities is a process that influences the spirit and form of the community. It will find its application in such aspects of the life of cities that are connected, both with the offer of material goods and services, as well as with suitable tools for presenting various events in the village. It also acts as a good way to promote ideas, among other things. It makes it possible to find problematic circuits and remove them further. In addition, it gives community representatives the opportunity to build on the positive aspects of a particular municipality. [11]

The use and mission of marketing depends on local government that plays a key role in deciding on the use of marketing tools. This is the area of community development, state administration, services, investment in the municipality, community tourism,

citizens' awareness, etc. Marketing of the municipality can affect many different products from the life sphere of the municipality that it offers. In the independent competence in municipal territorial district, and in accordance with the local conditions and local customs, the municipality also attends to the fostering of conditions for the development of social care and to the satisfaction of the needs of its citizens. This includes, in particular, meeting the needs for housing, the protection and development of health care, transport and communications, information, education and training, general cultural development, and the protection of public order.”

According to the Act no. 106/1999 Coll., on Free Access to Information [24], § 2 in the Czech Republic, the municipality has an obligation to provide information relating to their competence. That is the information that under this Act they are required to disclose and others intended for publishing, e.g. under the law on personal data protection, building act, etc. and in Poland in Act on Access to Public Information (JoL 01.112.1198) [26]. Publishing of information allows to interested citizens in areas related to events, photos, municipal property, municipal budget, strategic plan development, promotion and funding of public goods, what is happening in the municipality, companies engaged in the community, voluntary associations, and other areas. Published and understandable information can improve communication between people and municipality. Citizens can get information what is the municipality and public administration doing. Notice-boards before municipality authorities basically inform about opening hours, present the minutes of the meetings of the municipality authorities, building permits, tenders and other official information. Websites of the larger municipalities also generally contain information and guidance solutions to life situations, links to useful websites, for example Public Administration Portal, the Ministry of Regional Development and the Ministry of the Interior of the Czech Republic and ePUAP (electronic administration platform) or BIP (public information platform) in Poland are as well as important for the citizens of the municipality as well as important for municipalities.

Changes in the global information society affect all areas of communication, of publishing, delivery, display and search. Social networks are now one of the contact point for citizens, effective marketing tool for promotion, PR, direct marketing, openness town halls and others. Information attracts attention, emotions, stimulate debate and encourage people to share it with the help of texts and graphics. Social networks are more and more used for communication between municipalities and citizens. They contain information about current events in the municipality, invitations to cultural, social, sports or other actions. Some municipalities use them for information about the weather, interesting places, to entice tourists, etc. Also for this reason we have focused in the article on the use of the Internet and especially social networks to inform citizens in the Czech and Poland municipalities.

## **2 Methodology and Goal**

Primary and secondary sources were used in the processing of the article. Primary sources were obtained within the survey, which was conducted by teachers and students

at the Faculty of Informatics and Management on the University of Hradec Králové and at the Wrocław University of Economics. The investigation was done in October 2018. A teams of selected students and teachers were searching in selected social networks for communities which were created to meet the needs of municipalities and their citizens. Researches focused on the presented information about municipalities on several social networks. Results of utilization of the most often use social network Facebook by regional cities in both countries will be presented in the article. In the Czech Republic is 12 regional cities plus capital city Prague. In Poland is 17 regional cities plus capital city Warsaw.

Section 4 § 1 of the Municipalities Act [25] states 25 statutory towns and 12 regional cities in the Czech Republic and 17 regional cities in Poland are stated by [27] from which the survey, reflect. Therefore, the results will be referenced to a given sample of respondents (regional cities).

As for the primary sources they comprised websites and social networks of selected cities. Secondary sources comprised from official statistics from Eurostat [8, 9], Statista [16, 17] or statcounter [18, 19], technical literature, information gathered from professional journals, discussions or participation at professional seminars or conferences. Then it was necessary to select, categorize and update available relevant information from the collected published material.

The main objective will be mapping and analyzing of the use of social networks by regional cities in the Czech Republic and in Poland. The main objective will be achieved by analyzing the current state of use of the websites and social networks of individual regional cities. In order to achieve the main objective, it will be necessary to analyze electronic communication of cities with their citizens. The sub-goal is to determine the types of social networks that use the largest cities of the Czech Republic and Poland and to identify the activity of towns on the Facebook social network.

The quantitative research was used to analyze the use of social networks Facebook, YouTube, Instagram, Twitter and Pinterest. The advantage of that is in particular the rapid data collection and evaluation of results. We will also use the methodology of observation, description and measurement of data. MS Office Excel was used for the collected data that were needed to analyze the situation of the use of social network's by the regional municipalities. Data were for better clarity processed into individual graphs presented in the article.

### **3 Literature Review**

In the next part will be defined regional city in the Czech Republic and in Poland, web 2.0 and social networks and use of social networks in EU-28, in the Czech Republic and in Poland.

#### **3.1 Municipality and Regional Cities**

According to Act No. 128/2000 Coll., on municipalities [26] in the Czech Republic as amended, the municipality is the basic territorial self-governing community of citizens

and forms a territorial unit that is defined by the boundary of the territory of the municipality. Municipality has the right to decide independently in matters of public administration given that the municipality is a territorial community of citizens. The Freedom of Information Act imposes on municipalities the obligation to have websites created on which basic information is at least published in the Czech Republic. The basic information that is published also includes the annual report for the previous calendar year about its activity in the field of information provision "(Section 5, paragraph 1, No. 106/1999 Coll., On Free Access to Information, as amended [24]).

In Poland by the Law dated 8 March 1990 a territorial self-government as a basic organizational form of the local society was reactivated. A city with county status, fulfills responsibilities ensuing from the Act of Gmina Self-Government dated 8 March 1999 (JoL 2001.142.1591 with later amendments) and the Act of Powiat Self-Government regarding all basic tasks concerning local affairs. [27] There is obligation to create BIP (public information webpage) for each municipality in Poland (Art.8.1 Act on Access to Public Information (JoL 01.112.1198) [25]).

### **3.2 Web 2.0 and Social Networks**

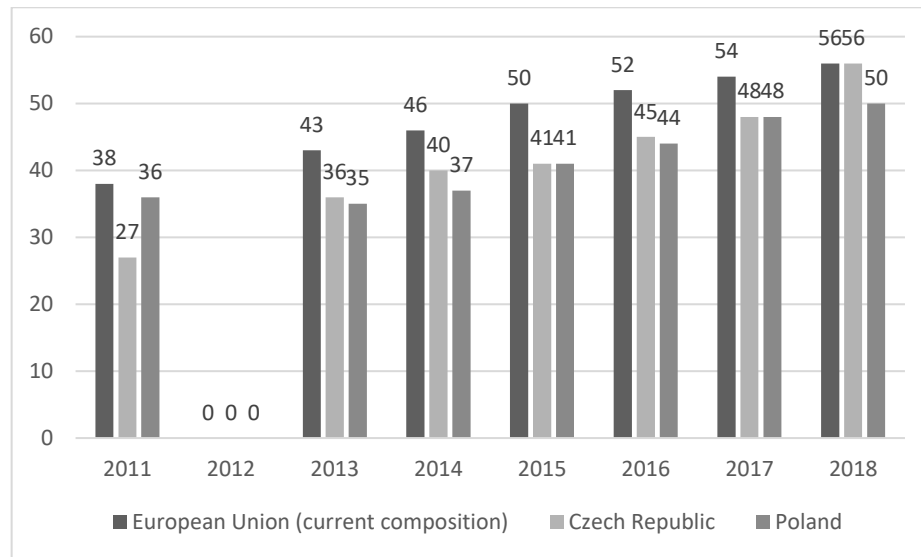
Clearly, the modern, most widespread and flexible communication tool is the site of a community that is somewhat low-cost. Websites allow direct information transfer, community image building, relationships, and advertising. The main functions of the municipalities' websites are the informative function (source of validated and up-to-date information concerning the administration of the municipality, events in the municipality, the running of the municipal office, etc.), interaction (on-line service in the form of electronic forms, clerks) and presentation (representation outside of the community).

Worldwide, in October 2018 was the global digital population, especially active internet users 4 176 (in millions) and 3 397 were active social media users. (Statista1)

Most famous social network sites worldwide as of October 2018, ranked by number of active users (in millions) are Facebook with 2 234, YouTube 1 900, WhatsApp 1 500, Facebook Messenger 1 300, WeChat 1 058, Instagram 1 000, ... Twitter 335 ... and Pinterest 250 [16]. It is clear from the data that social networks are very popular. This boom plays a very important role not only in the marketing of municipalities, as through social networks we can reach a large circle of potential citizens, tourists and customers in a very short time and with little money. Society in the Czech Republic is also good technological equipped. [20] Situation in Poland is on the similar level.

Social networks have global popularity. One of the most common online activities in the EU-28 in 2017 was participation in social networks. All statistics from Eurostat are % of individuals aged 16 to 74. Data refer to the last 3 months before the survey, for private purposes. Data for year 2012 are not in Eurostat presented. More than half (56%) of individuals aged 16-74 used the internet for social networks such as Facebook or Twitter. 91% of individuals aged 16-74 use social networks in Iceland, 82% in Norway, 79% in Denmark, 73% in Belgium and 70% in Sweden a United Kingdom. At the opposite end of the scale, there are three EU Member States with a maximum of 42%. The last is France with 42%, Italy with 46% and Slovenia with 49%. 50% has

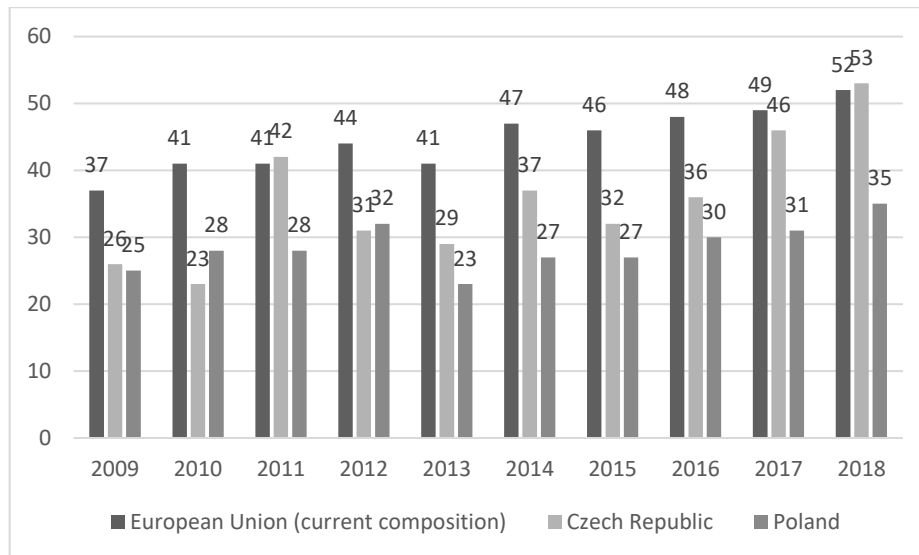
Poland and 51% Bulgaria. [8] Social networks were used mostly in EU-28 in all monitored years than in the Czech Republic or Poland. In both countries and in EU-28 was use of participating in social networks rising. The biggest rise was recorded in the Czech Republic in 2018 according to 2017. Instead of the last monitored year was usage of social networks in the Czech Republic and in Poland on the similar level.



**Fig. 1.** Internet use: participating in social networks (creating user profile, posting messages or other contributions to Facebook, Twitter, etc.) from 2011 till 2018 in EU, Czech Republic and Poland, in % [8].

In November 2018 use Facebook 60.11%, YouTube 12.97%, Pinterest 12.39%, Twitter 4.82%, Tumblr 4.49% and Instagram with 2.18% in Poland. In the Czech Republic is a little bit other situation. 70.36% of individuals use Facebook, 12.86% use Pinterest, 5.86% YouTube, 4.78% Twitter, 2.04% Tumblr and 1.27% Instagram. [18, 19]

If we focus on Internet use obtaining information from public authority websites, it is clear that the EU average (28 countries) was higher than the EU average (28 countries) over all monitored periods in the Czech Republic and Poland. The breakthrough occurred in the last monitored year, when the information received from public authorities in the Czech Republic increased significantly and, on the contrary, slightly decreased in the EU28. None of the monitored areas showed steady growth, but rather a fluctuating trend. The information obtained from public authorities in Poland was very different. This was only twice higher than the Czech Republic in 2008 and 2010. The biggest differences between the Czech Republic and Poland were recorded in 2014, 2017 and 2018. [9]



**Fig. 2.** Internet use: obtaining information from public authorities websites (last 12 months) from 2008 till 2018 in EU, Czech Republic and Poland, in % [9].

### 3.3 Social Networks and Municipalities

Social media are a helpful force in the construction of internet public sphere and civil society. [7] Over the last few years, online social networks (OSNs), such as Facebook, Twitter and Tuenti, have experienced exponential growth in both profile registrations and social interactions. These networks allow people to share different information ranging from news, photos, videos, feelings, personal information or research activities. [1] Lappas, Triantafilidou et. al. [14] analyze the communication strategies used by Greek local governments through the utilization of Web 2.0 technologies, specifically Facebook, and the effectiveness of these strategies in relation to citizens' online engagement. Their results show that local governments in Greece are using Facebook in a predominantly top-down manner to promote events organized by the municipality and to push one-way information to citizens about their services and actions. Local authorities have, however, made significant progress in relation to posts that support transparency and accountability and that enhance or mobilize citizens' participation. Their evaluation of local government Facebook strategies indicates that marketing the municipality to external public, such as tourists, and providing information about services are effective strategies that drive citizens' online attitude expression (liking), engagement (commenting), and advocacy behavior (sharing). The obtained results by Haro-de-Rosario, Saez-Martin and del Carmen Caba-Perez [12] show that Facebook is preferred to Twitter as a means of participating in local government issues. Other factors that are relevant to citizen engagement are the level of online transparency, mood, the level of activity in social media and the interactivity offered by the local government website. Findings of Lameriras, Silva and Tavares [13]

indicate that in larger and wealthier municipalities local executives are more likely to display increased reliance on Facebook. Facebook post activity is also positively associated with higher transparency levels and mayoral turnover. The purpose of Miranda, Chamorro and Rubio study [15] is to analyse the presence on and use of the social network Facebook by the large councils in the USA, UK and Spain. This research adapts Facebook assessment index (FAI) to the field of local authorities. This index assesses three dimensions: popularity, content and interactivity. The results show that there is no relationship between the population of the municipality and the degree of use of Facebook by the council, but there are notable differences depending on the country. Gesuele [10] suggest that the political position, the gender of the Mayor, the geographical position, the financial autonomy of municipalities, and the citizens' wealth seem to predict the diffusion of Facebook use by Italian municipalities. The objective of the Bonson, Royo, Ratkai article [5] is to provide an initial assessment of Facebook use by Western European municipalities considering two aspects: citizens' engagement and municipalities' activity. Findings show that the use of Facebook by Western European local governments has become commonplace. The audiences of the official Facebook pages are rather high, but citizen engagement in general is low. It seems that channel activity is more a decision on the part of local governments than a consequence of citizen demand. YouTube seems to be according to Bonson and Bednarova [6] an interesting platform to not only disseminate different content, but also to foster local government dialogic communication, as it provides the ability to express citizens' opinions about the particular video through like/dislike buttons and the possibility to post comments on the shared videos. Hence, when this is adopted alongside a relevant online communication strategy, it can significantly foster municipality e-participation. Additionally, considering the added layer of richness of video messages, YouTube might be an ideal avenue for fostering dialogue with citizen.

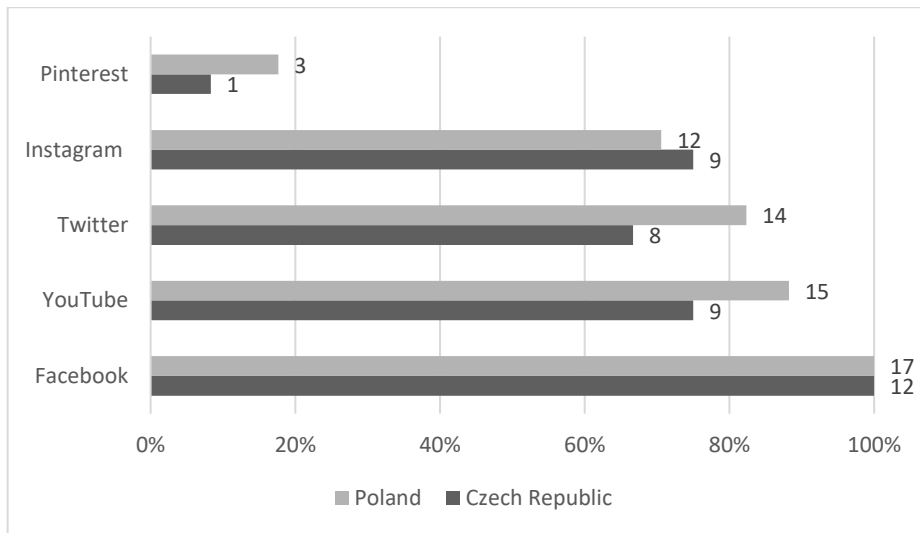
In 2016 Svobodova, Hedvicakova [22] and Svobodova, Dittrichova [23] focused on use of internet and social networks in the connection with municipalities. Svobodová analysed in next research [21] use of social networks and webpages used by regional municipalities in the Czech Republic. Bednarska-Olejniczak and Olejniczak focused on participatory budgeting in the connection with smart city 3.0 concept [2], finance and marketing issues [3] and changes in the attitudes of Y generation members [4].

## **4 Results**

Used social networks by regional cities in the Czech Republic and in Poland will be analyzed and compared in the chapter. Into comparison were included the most often used social networks such as Facebook, YouTube, Twitter, Instagram and Pinterest.

Facebook is used by all analyzed cities in the Czech Republic and in Poland (see fig. 3). YouTube is the second most often used social network in both countries. Twitter is the number three in Poland and four in the Czech Republic. There is no significant difference in usage of YouTube, Twitter and Instagram in the Czech Republic and in Poland. In Poland use regional cities more social networks than in the Czech Republic.

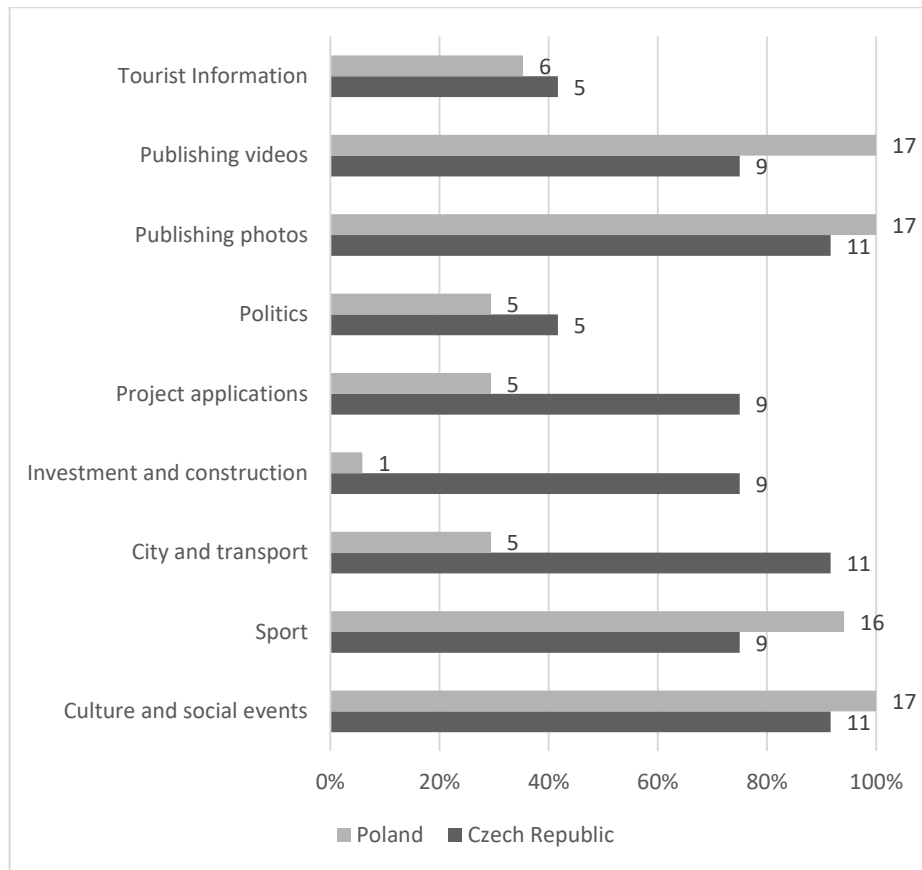
Pinterest is almost not used by regional cities in both countries. Results in the usage are not corresponding to statistics presented above. [18, 19]



**Fig. 3.** Use of social networks by regional cities in 2018 in the Czech Republic and Poland, in %.

Next question is focused on the topics presented on the Facebook. Into consideration were taken culture, sport, investment, projects and applications, municipality and transportation, policy. All topics are presented in the article (fig. 4). The publication of photos and videos on social networks is a big phenomenon not in the communication between municipalities and citizens but also only between people from their personal life. All regional cities in Poland present culture and social events, publishing videos and photos. All instead one present information about sport. They are not so active in presenting of city and transport, project applications, politics, tourist information and investment and construction. Czech regional cities are mostly presenting culture and social events, city and transport and they are publishing photos. 9 of 12 are publishing videos, information about sport, investment and construction, project applications. The less presented are surprisingly tourist information. In the Czech Republic regional cities on Facebook presents more topics than cities in Poland (in %).

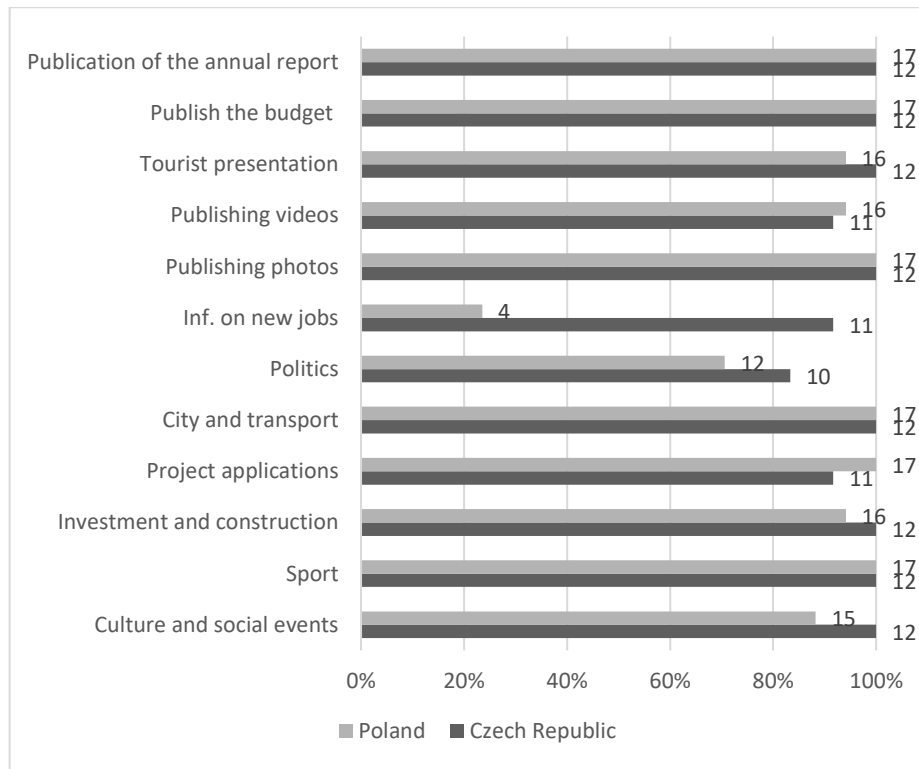




**Fig. 4.** Presented information on social network Facebook by regional cities in 2018 in the Czech Republic and in Poland, in %.

On the websites of regional cities are according to analyzed data presented more information than on Facebook (fig. 5). All cities present information about sport, city and transport, publish the budget and publish the annual report. Almost all instead one present project applications, tourist information and investment and construction. Only one less present culture and social events and publishing videos. The biggest difference is in the publishing of new jobs. In the Czech Republic cities use more cities this channel to looking for the new employee. All other compared issues are on the similar levels of usage.

While there is not enough information on Facebook pages of regional cities in Poland on the City and Transport, Politics, Project Applications and Investment and Construction pages, they more inform about those issues on their websites.



**Fig. 5.** Presented information on websites by regional cities in 2018 in the Czech Republic and in Poland, in %.

## 5 Conclusion and Discussion

An example of where to use marketing tools is the competitiveness of the municipality. The decisive factors of location include the quality of the environment, the possibility of using leisure time, the representation of the village externally, the civic amenities, the possibilities of education and many others. With the growing pressure of local people and economic operators on local governments, there is a growing need for marketing and thinking that leads to a proper and satisfactory solution.

The research and its results presented in the article was done in 2018 at the University of Hradec Králové and at Wroclaw University of Economics. The research sample consisted of 12 a 17 regional cities in the Czech Republic and in Poland. The capital cities were excluded. All municipalities use Facebook and all of them use another social web application such as Youtube, Twitter, Instagram or Pinterest. Czech and Poland regional cities has similar results as [12] that show that Facebook is preferred to Twitter as a means of communication. According to results [14] it is possible to recommend to use more Facebook for promoting tourist information that are more presented on the websites than on Facebook. All analysed municipalities

published the most information on Facebook about leisure time, esp. about culture, sports, publishing of photos and videos. Much more information is presented in the clear ways on their websites. All regional cities respect the law [24, 26] to publish the budgets and annual reports on their websites. There are no significant differences in usage of websites instead looking for new jobs between Czech and Poland regional cities. Facebook show bigger differences between both countries.

Even though not all the population in the Czech Republic and in Poland uses the Internet and social applications, it is desirable for the municipalities to have well-designed websites and introduce also social web applications since time cannot be stopped. The question for discussion might be 'how fast and in what direction websites of individual cities will develop'. The next question can be aimed at managers of cities 'how to stimulate them for greater involvement in utilization of these modern ways of communication'. Next planned step in research is according to [15] to analyse Facebook assessment index (FAI).

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