

TRANSFORMATION OF DIGITAL BUSINESS BY APPLYING BENCHMARKING

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Abstract: In regards to the understanding of the term of global digital evolution digital growth of developed countries usually has little to tell about the digital future of the developing countries. The above-mentioned has certainly big implications on business, entrepreneurs, as well as innovators interested in growth outside the frame of their own markets. The development of information communication technology (ICT) and its application in all aspects of the economy is the base for the establishment of the competitiveness and the ensuring of the future economical and social development. The development and the implementation of the information communication technology significantly influence the businesses worldwide as well as the daily activities of individuals. Countries in which the information communication technology is being used in a large scale economically and socially precede comparing to the ones that are using it less. Because of that benchmarking in this area plays a crucial role. It provides necessary flexibility for the monitoring of the quickly changeable area such as the information society.

Key words: rapid prototyping, hologram, invention, presentation.

INTRODUCTION

A better connected world is emerging. According to Huawei's forecasts, by the year 2025 there will be over 100 billion connections in the world and the global scale of the IoT market will have a value of US \$ 2 trillion. Rapid cloud computing and a broad spectrum of data and analytics combined with many significant changes in technology have created an Information Communication Technology (ICT) environment that has enabled IoT growth to become one of the key factors of the economic life of the countries, industries and individuals. In fact, many countries have been involved in the race using ICT to improve competitiveness on the global market. Transformation into a digital economy requires the participation of all key players in the economic field. The ability to connect is the key to bridging the gap between digital and physical economy. Digital economy is characterized by globalization, networking, mobility, integration, digital products and services, electronic business and others. Digital economy is an important segment of modern business. The model of global organization and strong competition requires a new organization access concept that will result with an increase in specialized and customer-related technology. In fact, business globalization has influenced the increase in distance between the market participants. Moreover it resulted with an increase of costs in the entire business. Achieving greater efficiency and competitiveness means implementation of a process approach in business by using information technology.

Many companies believe that the best way to secure and maintain the competitive advantage is through the increasing the revenues and lowering the costs. However, Duppen and Inniss (2010) believe that the key factor for forming competitive advantage is innovation. While on the one hand innovation is a key factor in winning business competition, on the other hand, innovation has special characteristics (insecurity, controversy, demolition, etc) that companies are hard-wearing (Tether, 2002). Namely, organizations/companies were not created to deal with tasks that were not structured. The goal of innovation management is to reduce the risk in the process (resources) and results (product) so that innovation itself can be implemented efficiently and efficiently (Brown and Eisenhardt, 1995).

Price Waterhouse Coopers (2006) in their research have mentioned that the annual growth of digital contents industry (film, television, VoD services, radio, Internet, advertising services, video games, business information, magazines, newspapers) has expected to grow by 6,4% annually. Along with the development of the digital industry, a digital economy is developing, enabling a modern way of doing business where information technology, and especially the Internet, is extensively used.

When it comes to efficient business operations in a modern global market, it is also necessary to adequately plan business activities. Today, large companies in the world have built-in systems that enable them to plan and organize their business activities and processes, and based on database information, make adequate business decisions. The key segment that provides good business process support is the company business information system that is constantly upgraded with the help of innovation and innovation management in order to meet customer requirements and enable easier and more efficient business processes. Innovation capability is the ability to manage innovation process starting from identification of needs and issues, research, development, and commercialization of an innovation through diffusion to the adoption by its users (Rogers, 1995). Hansen and Birkinshaw (2007) described the capability of innovation as the innovation value chain consisting of three phases that are

integrated with one another. The first is the development of ideas that can be done by parties that are within the company or from outside parties. The second is the conversion of an idea where ideas are selected and developed into a product or process. The third is the diffusion in which the products or services that have been developed are marketed. Innovation development and innovation management are of particular importance for the development of information technology. Table 1 shows the factors influencing the ability/the innovation process.

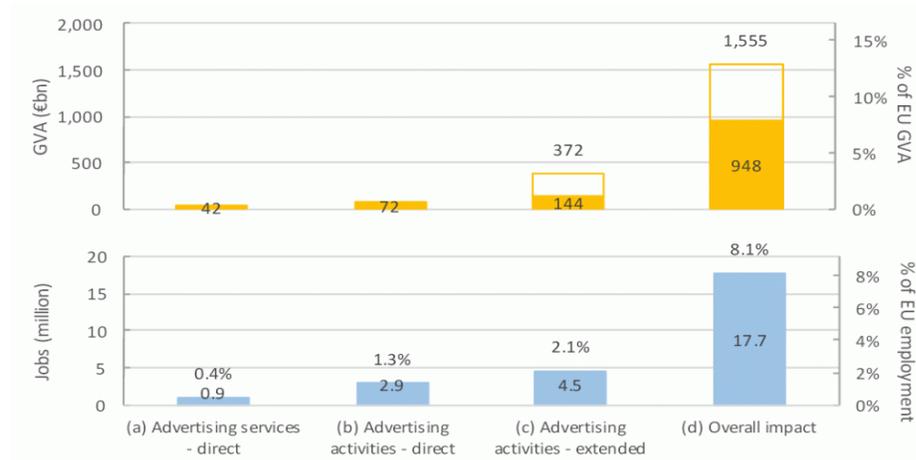
Table 1: Factors that affect ability/the innovation process

Author	Factores that affect ability/the innovation process
(Lawson i Samson, 2001)	Vision and strategy, basic competencies, organizational inteligenge, creativity and idea management, organization structure and system, technology management.
(Ibrahim et. al, 2009)	Knowledge and competencies: organizational support, organization structure, resources, infrastructure, strategies and regulation, leadership.
(Ibarra et. al, 2009)	Actors, physical resources, culture, structure and system.

Online advertising today is one of the major drivers of the European digital economy, promoting the development of industry and economic growth through accelerated development and innovation. According to the IAB (Interactive Advertising Bureau) report in 2014, online advertising has exceeded advertising on TV stations. This research was conducted within the 10th annual AdEx benchmark study. According to Townsend's Feehan, Director of IAB Europe, the survey has confirmed the leading position of digital advertising in Europe. "Given the growing contribution of digital advertising to the economy and its role in delivering digital content and services, we must continue to foster European innovation and empower our firms to compete worldwide," said Feehan. According to the above-mentioned report, in 2014, 46 billion EUR was invested in online advertising in Europe, out of which 30.4% (EUR 13.39 billion) went to European publishers' funds (Figure 1). From the aspect of gross value added of GVA (gross domestic product GDP, GDP = GVA plus taxes plus subsidies), the part that comes from online advertising in 28 European countries is 22 billion EUR. Digital marketing has the multiplying effect. On the one hand it contributes to the growth of the economy through cash flows within the digital distribution channels, and on the other hand, it contributes to the growth of digital experts employment. When these factors are included, the contribution of online advertising grows to 113 billion EUR. The contribution of online advertising to the economy is underestimated because the widespread advertising economic contribution is totally ignored. Firms are advertising in order to increase their sales which contributes to the development of the economy and is viewed beyond the

value chain of online advertising. If we include these indirect effects, the online advertising contribution amounts to 473 billion EUR, or 5% of the total economy, expressed in the gross value added of the GVA in 28 EU countries.

Figure 1: Online advertising contribution in EU (Source: IAB_IHS Euro (2015))



Online advertising contributes to the growth of investments in the digital sector of Europe. According to the same report, in 2014, 54% of all online video revenue was generated from advertising. For the publishing industry, this is by far the most important source of funding for newspaper content, with 75% of revenue coming from online advertising. Also, in 2015, revenue from paid apps was replaced by advertising as the main source of revenue.

2. DIGITAL TRANSFORMATION OF BENCHMARKING SERVICES

Benchmarking involves examining the competitiveness of an enterprise by comparing it with the competition in the world; This is a tool to achieve the process of business improvement, it is a part of a quality management system, it is „fashion insanity“, it is a significant strategic tool for top management, and it has a wide application in the world. It is a systematic and continuous process where measures are measured and compared with best practice in order to identify the potential for improvement. There are four basic types of benchmarking: internal, competitive, functional or industrial and process or generic benchmarking. Prior deciding to implement benchmarking organization should first decide which area they want to benchmark. As companies in every industry are digitally transforming, managers set new standards for organizational agility, time to place new products and services, and the quality of customer and partner experience. Digital benchmarking can tell the managers exactly where they are compared to the proven patterns for success as well as the competition. Since most companies are pursuing digital transformation, they are in a position to change their business through the use of new technologies, creating new growth-promoting digital assets. Those companies that are the fastest in this process, going furthest to achieving competitive advantage, will have the clearest picture of what is needed to win the market, and what forms and processes need to be set up and followed in order to achieve success in digital business or how It would reveal what is standing on the path of progress. Since the 80es of the last century, internal and external benchmarking has become standard business practice

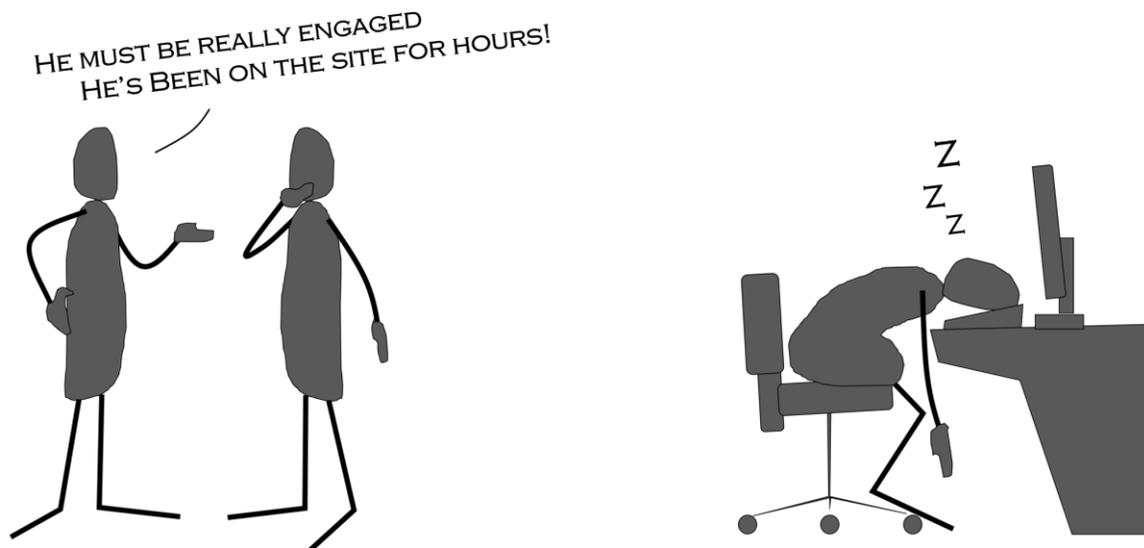
for all organizations but the emergence of the digital age has made a benchmarking process more difficult to meet.

Limitations of digital benchmarking. One of the basic limitations of digital benchmarking is that organizations do not have a reliable measuring system with whose assistance organizations would be able to implement benchmarking experience. Using increasing sales across the web as a benchmark is incorrect because general users in the last decade, globally, spend more money online. Namely, Internet, Internet banking and smart phones have influenced the overall today's consumption. Secondly, collecting visitors behaviour data from the websites is not a reliable benchmark also. Specifically, there are software such as Google Analytics and Adobe Site Catalyst that track and track visitor behavior, but because information solely exhibits visitor behavior, it is very difficult to distinguish and separate positively from a negative one.

For example, lengthy stay on specific pages may mean increased interest in the content of the site itself, but may also represent a user's inability to find the information required (Figure 2). Third, users have hundreds if not thousands of digital experiences per day. User digital experiences are constantly changing.

Understanding experiences. If organizations want to improve and improve their "digital characteristics" they must be able to understand user behavior and with the help of benchmarking to enhance this knowledge to win the market and win the competition. The key to internal benchmarking of digital experience is to ask people the right questions.

Figure 2: Tracking websites visitors behaviour (Source: Econsultancy, 2015)



- BEHAVIOURAL DATA -

If organizations on their websites cannot manage the measured parameters then it is impossible for them to estimate how their customers are evaluating a new element on their pages compared to elements on competing sites. The moment when the organizations begin to use internal benchmarking of their digital features the next step is external benchmarking or comparison with competitors. The traditional benchmarking method compared to others in the same industry is outdated. Those companies that use cross-industry benchmarking will prosper in the long term. Those companies that ask their clients the right questions will ensure that the organization is properly presented in the official data and will produce the best results by comparing the experience of an organization's clients with other clients inside and outside an industry.

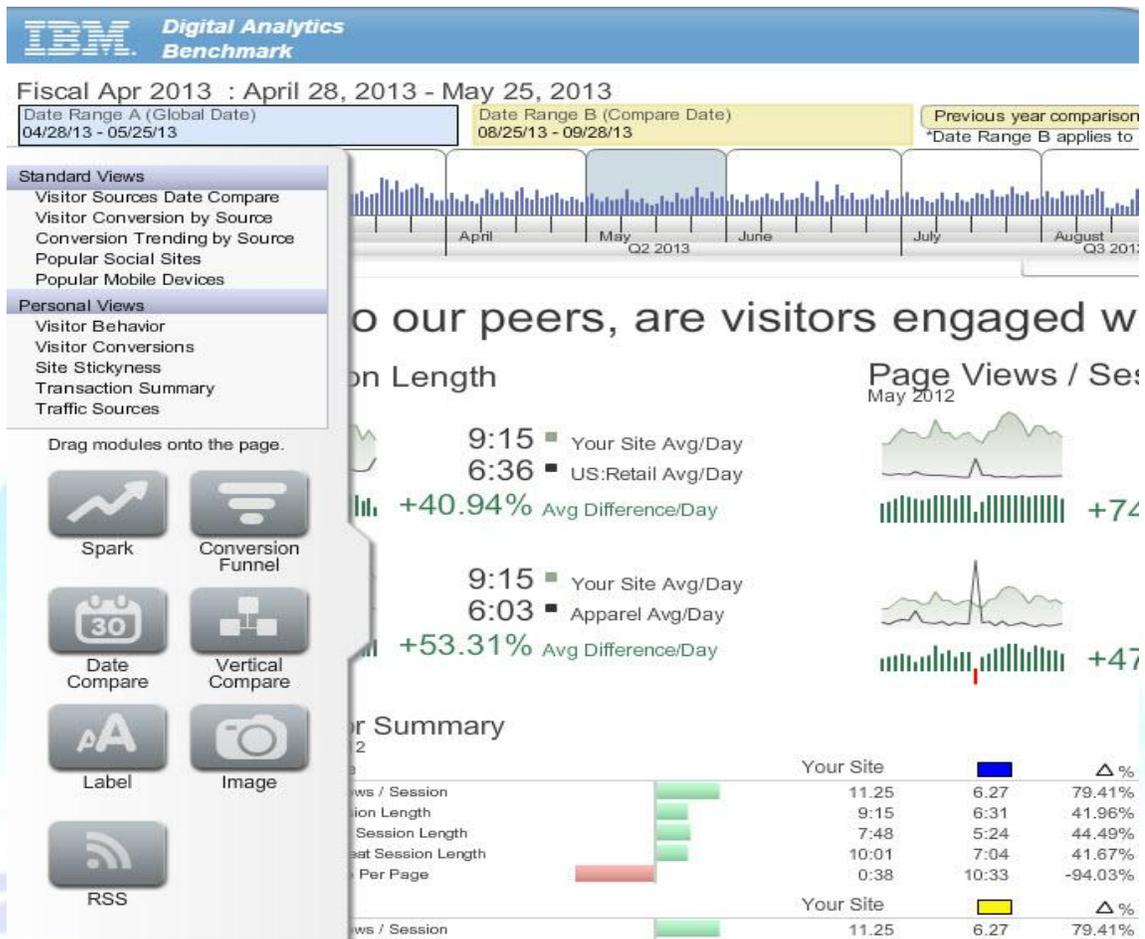
Innovations in Digital Marketing - The Digital Maturity Model 4.0 Over the past decade, businesspeople around the world have used Forester's tool for assessing electronic business and the digital market. (Forester's eBusiness and Digital Marketing Assessments). Digital Maturity Model 4.0 is a unique set of scoring criteria for multiple areas used by digital business managers to make benchmark activities that relates on how they use their competitive strategy to provide the ultimate customer satisfaction and to create operational agility.

The primary purpose of this model is to help organizations/companies to easily estimate their overall digital readiness. The Model also allows organizations to identify the benefits of their specific digital market or electronic business functions. The mentioned model implies three scenarios: the entire digital transformation in which organizations evaluate the fundamental aspects of digital transformation such as executive support for digital strategy, the impact of Internet technology etc; the focus of digital marketing related to the assessment of capabilities related to specific digital marketing functions and the focus of digital business related to the evaluation of digital support sales and services and their interactions and sophistication of technology.

3. IBM DIGITAL ANALYTICS BENCHMARK

The IBM Digital Analytics Benchmark measures each specific interaction on each individual visit to a site and collects and tracks the behavior of site visitors. With the help of estimates or data obtained through the aforementioned model, leaders make easier decisions that are essential to their business. This benchmark model offers industry trends based on an extensive set of over 370 key performance indicators for digital business. Some of these are: industry trends compared to a certain period, behavior of visitors to certain sites, summary of new visitors, conversions, transactions etc. With the help of this benchmark model, users can, for example, compare the efficiency of their digital business with other companies' business, check daily benchmark measures and compare them with benchmarks within your company etc. The IBM Digital Analytics Benchmark is shown in Figure 3.

Figure 3: IBM Digital Analytics Benchmark (Source: IBM Software Overview)



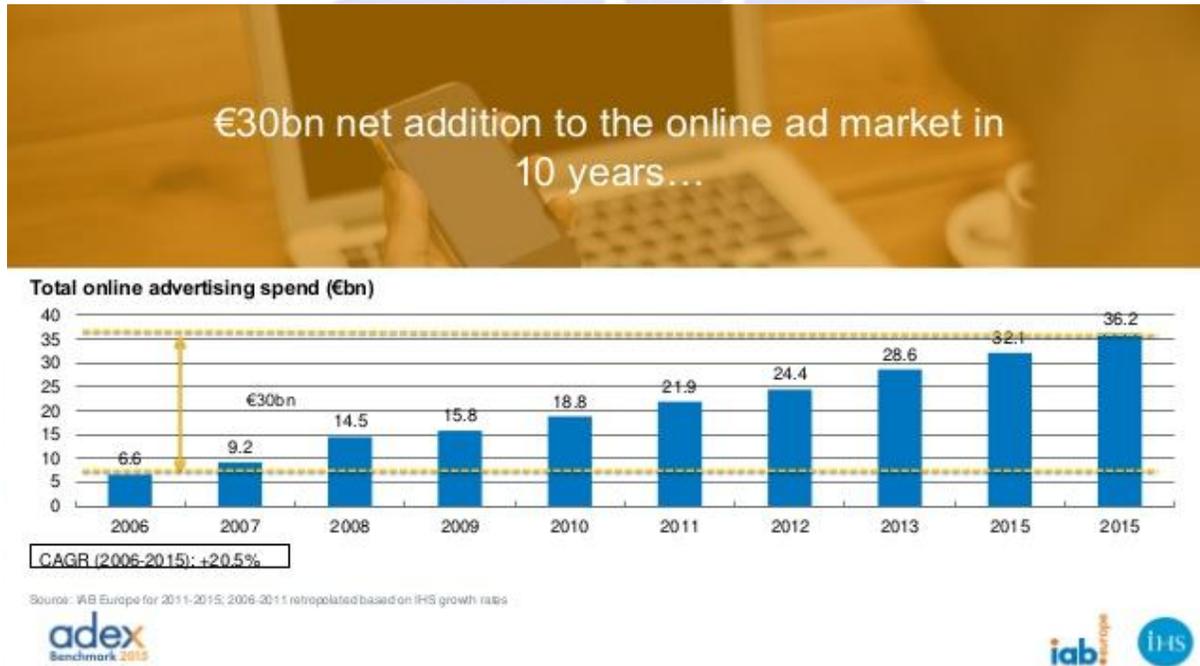
4. METHODS

According to the Finconsult data (Educational Consulting House), presented in 2014, the level of penetration (number of mobile subscribers per 100 inhabitants) of mobile telephony in Bosnia and Herzegovina (BiH) was 87.25%. The penetration of broadband subscribers compared to the total population in BiH was 12.60%. In the structure of broadband connections ADSL still leads by 57,29%. There are no accurate online shopping data in BiH, rough estimates show that around 15% of Internet users buy online more than once a year. Furthermore, there are no data on the benchmarking of digital content businesses in BiH. When it comes to benchmarking as a tool for examining the competitiveness of a company, it can be said that BiH was the first country in the Balkans where in 2011., the benchmarking of small and medium enterprises was implemented which monitored the competitiveness of some of the industry's branches. On that occasion reports were made for a total of 72 companies in BiH. However, there is no information on the benchmarking of the digital content companies. For this reason, this basic method used in this research will be the descriptive analysis of the AdEx Benchmark Report for 2015, which includes 27 EU markets.

5. DISCUSSION

Online advertising costs in Europe in 2015 amounted t 36.4 billion EUR, which is 13% more than in 2014, when they amounted to 32.1 billion EUR. Starting from the first IAB ADEX Benchmark Report in 2006, the European advertising market grew from 6.6 billion to 36.4 billion EUR, an increase of around 30 billion EUR over the past 10 years (Figure 4).

Figure 4: Growth of advertising market in EU (Source: AdEx Benchmark Report for the year 2015.)



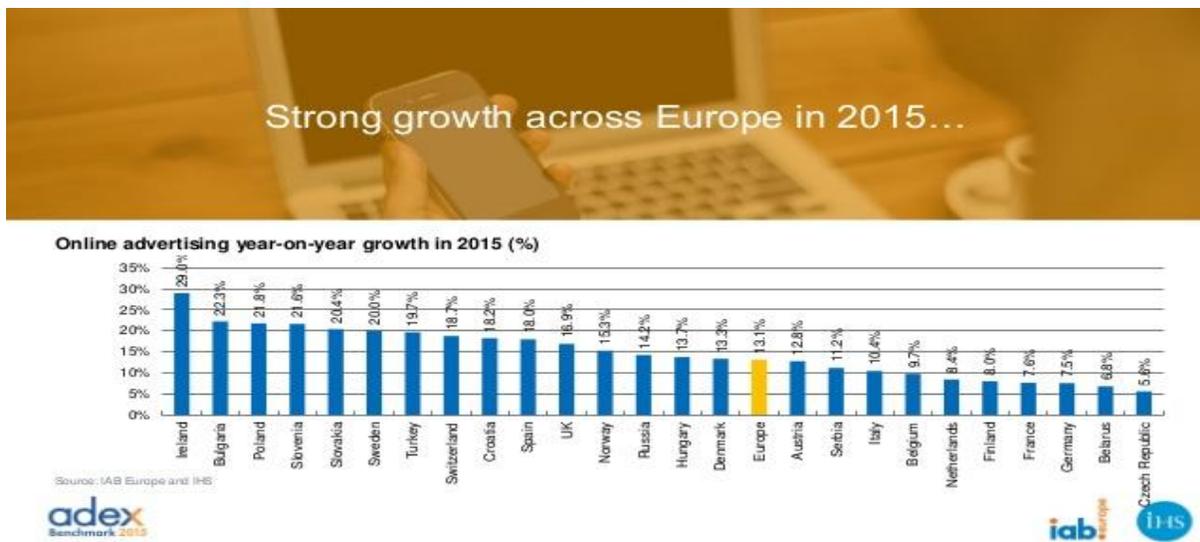
Britain's advertising markets (11.8 billion), Germany (5.8 billion) and France (4.2 billion) were the three largest markets in the EU in 2015 and they accounted for 60.1 percent of the EU advertising market (Figure 5).

All European markets recorded a positive growth in 2015 (25 out of 27 markets recorded growth, 18 markets recorded double-digit growth). The highest growth was recorded in Ireland, Bulgaria and Poland. Advertising growth is associated with maturing markets (Figure 5). The following 10 countries recorded year after year growth: 1. Ireland (29%), 2. Bulgaria (22.3%), 3. Poland (21.8%), 4. Slovenia (21.6%), Slovakia (20.4%), 6. Sweden (20%), 7. Turkey (19.7%), 8. Switzerland (18.7%), 9. Croatia (18.2%), 10. Spain (18%). The interesting fact was that the two neighboring countries of BiH (Croatia and Slovenia) recorded the year after year growth.

Figure 5: Top 10 advertising markets in Europe in 2014. and 2015. (Source: AdEx Benchmark Report for the year 2015.)



Figure 6: The growth of advertising markets (Source: AdEx Benchmark Report for the year 2015.)



5. CONCLUSION

As an important segment of the digital economy, benchmarking of digital content companies is presented in this paper. In regards to that the advantages and the limitations of digital benchmarking were presented in this paper as well. An important part of the digital economy is online advertising service. Since this is the branch that has grown over € 30 billion in the EU over the last 10 years and since as such it is a very important part of the digital economy. For the exact same reason it was presented in this paper. To be more specific the results of the AdEx benchmark report for the year of 2015 were presented in the research part of this paper.

It is very important to mention that Croatia is on the list of 10 countries that recorded growth in this market year after year. When it comes to BiH, there is currently no data on the size of the digital market, and there is also no benchmarking data on digital content companies in BiH. Generally, the development of information communication technologies in BiH is not at an enviable level. The main obstacles to the development of information communication technologies in BiH are: low level of digital literacy and skills, lack of institutional support, lack of effective competition in the broadband market (still high prices of Internet access and supporting equipment), lack of broadband infrastructure, insufficient public investment, the increase of the high-tech related crime.

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