The Phenomenon of Ad-blocking in the Light of Research Involving Individual Internet Users

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Abstract

This paper concerns a phenomenon with significant economic effects known as ad-blocking that has been rapidly growing for several years. The paper analyzes the causes and the scale of this phenomenon and its economic effects. In addition to the analysis of reports on ad-blocking, the survey conducted on a targeted group of individual Internet users was an important part of this project. It enabled to discover their motivations for using ad-block type solutions, the scale of their use on various devices, and the conditions on which they would be willing to give up their use. This made it possible to formulate some preliminary recommendations on the necessary directions of action.

Keywords: ad-filtering, on-line advertising, advertising model, electronic economy.

Introduction

Dynamically developing digital technologies cause profound changes in virtually all areas of the contemporary economy and its organizations (Wielki, 2015), and advertising was one of the first to experience this (Wielki, 2007). Since the advent of the first Internet banner in 1993, the digital advertising market has grown at an extremely fast pace (Jupiter, 2016). Its value was expected to reach $66 billion at the end of 2016 in the United States alone (IAB, 2016). The global value of revenue from digital advertising was estimated at $160 billion at the end of last year and to reach $285 billion in 2020 according to Jupiter Research estimates. This increase is primarily at the cost of traditional media, and ads related to mobile devices and so-called wearables will be the main contributor to its rapid growth in the coming years. In their case, spending on advertising will grow at a rate of 22% per year (Jupiter, 2016a).

Simultaneously with the dynamic growth of the organizations' spending on various forms of digital advertising, there has been a rapid growth of the phenomenon of blocking of advertising by targeted recipients, termed ad-blocking, over the past few years. It was already noticeable at the beginning of the second decade of this millennium, but its rapid growth became a fact in 2013 and intensified in subsequent years (Ryan et al., 2017). This phenomenon is beginning to raise the concerns of both advertisers and the entire advertising industry, hitting every entity in the digital advertising ecosystem and causing a rapid increase in economic costs in billions of dollars (Cookson, 2015; eMarketer, 2015; eMarketer, 2016; Manjoo, 2015; PageFair and Adobe, 2015; Searls, 2015).

Hence, given the importance of ad-blocking in the context of its impact on digital economy and its development, the main goal of this publication is to analyze the causes, scale, and dynamics of this phenomenon. In this context two basic research questions have been formulated:

- What are the main reasons for using ad-block solutions by individual Internet users?
- What are the conditions under which individual Internet users would be willing to stop using ad-block solutions?

The paper is based on data from reports on ad-blocking and own research conducted on individual Internet users.

Ad-Blocking: The Notion, Scale, Causes of Development, and Economic Consequences

The concept of ad-blocking and the historical aspects of the development of the phenomenon

Ad-blocking, also referred to as ad-filtering is, in the simplest terms, the blocking of Web advertisements. Various types of software are used to remove or alter the content of advertisements appearing on webpages and websites or in mobile applications. There are a variety of solutions used for this purpose (such as ad-blocking extensions, browsers, VPNs or DNS) that act as a firewall between the web browser and any known ad servers. In most cases, advertisements are blocked by end users using open-source web browser extensions (PageFair and Adobe, 2015).

As already mentioned, the phenomenon of ad-blocking began to be clearly visible in 2013. Figure 1 shows the dynamics of its growth. And so, the number of desktop devices blocking ads was 54 million in January 2013, and it already increased to 236 million in January 2017.

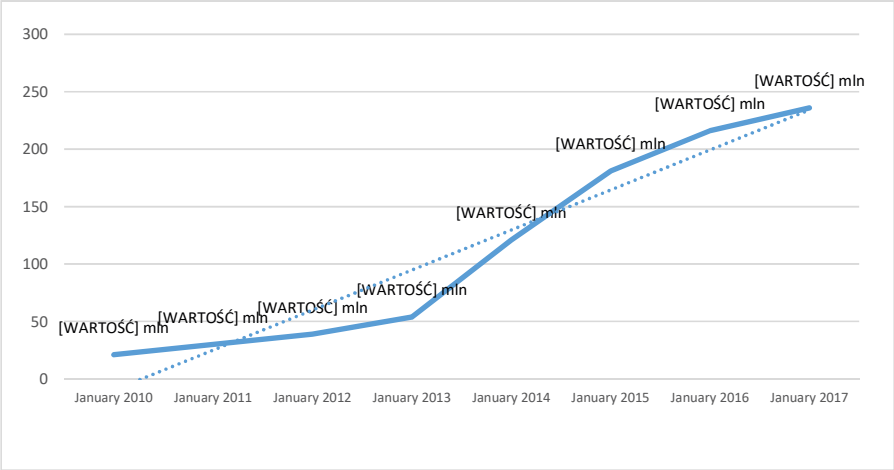

Fig. 1: Increase in the number of desktop devices blocking ads in 2010-2017

(source: PageFair, 2017)

At the same time, the number of mobile devices which block ads has also grown very rapidly. It was 145 million devices in January 2015, and 380 million two years later (PageFair, 2017– see Fig. 2).

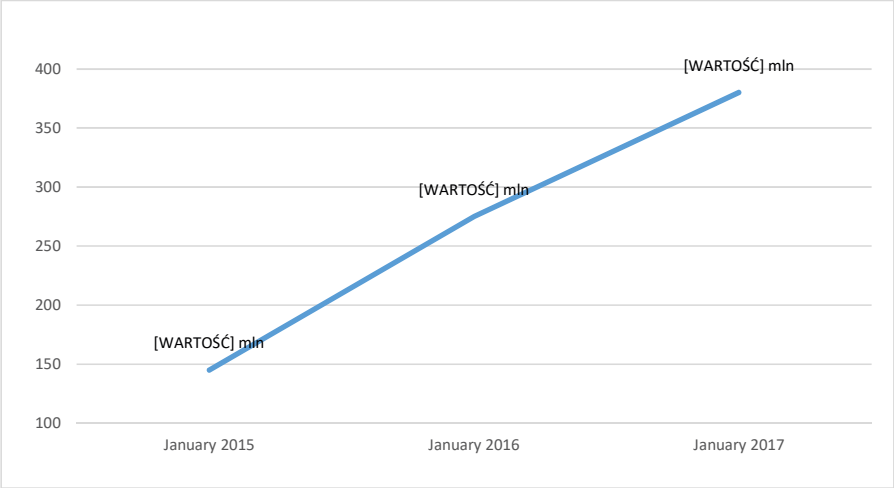

Fig. 2: The dynamics of growth in the number of mobile devices blocking ads in 2015-2017 (source: PageFair, 2017)

In the case of mobile devices, Asia-Pacific users definitely dominate, as 94% of global mobile adblock usage is in this region (PageFair, 2017. Data from November 2016 show that the majority of users are from three countries (Fig. 3).

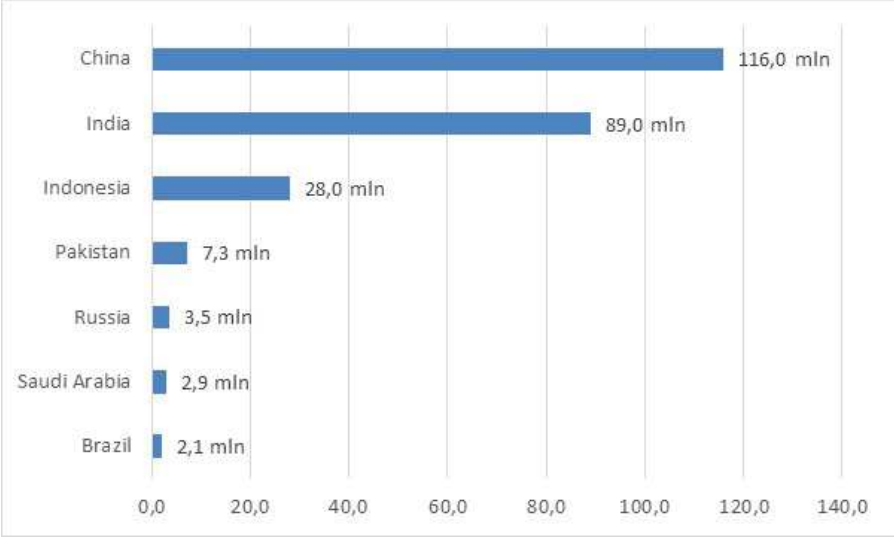

Fig. 3: Countries with the highest number of active mobile ad-blocking browser users in November 2016 (source: PageFair, 2016)

On the other hand, desktop adblock usage is dominated by Internet users in Europe and North America (68%). In Europe the majority are from Greece and Ireland (39%) and Poland (33%) (Fig. 4).

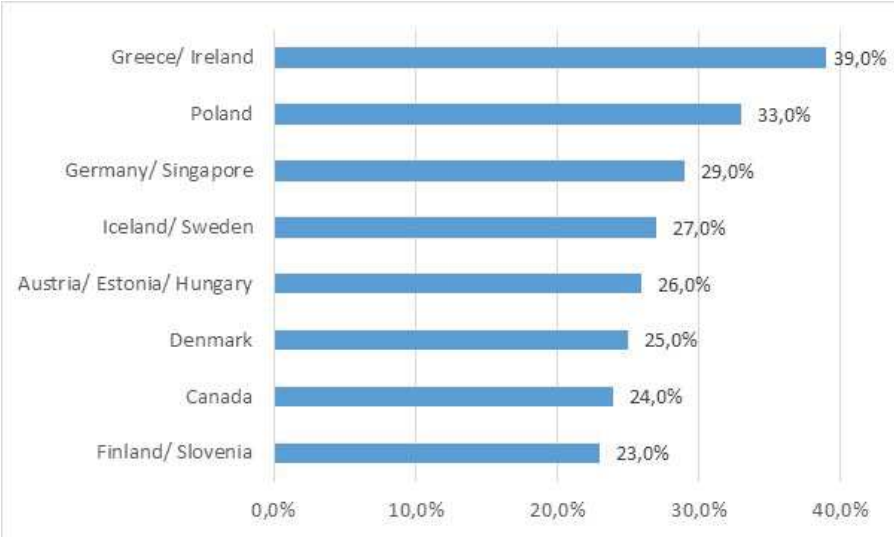

Fig. 4: Desktop adblock penetration per on-line capita % (source: PageFair, 2017)

The rate of growth of US ad-blocking users (% of Internet users) presents Fig. 5.

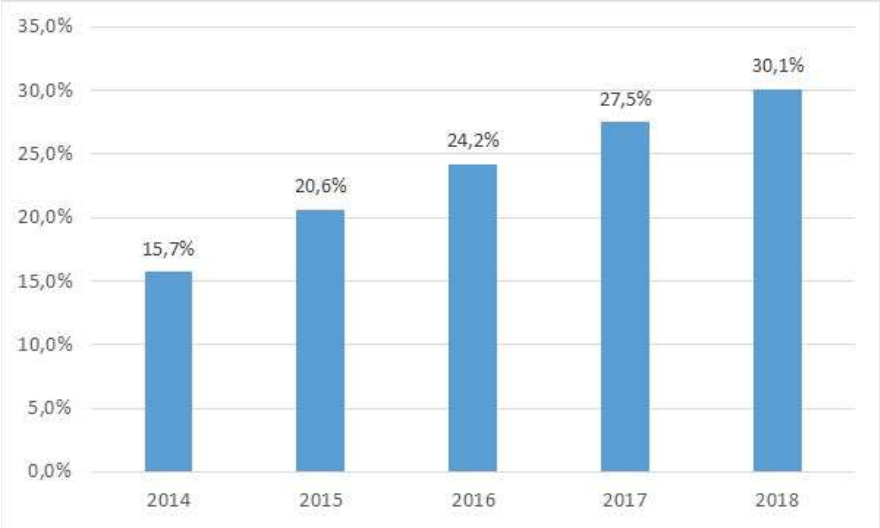

Fig. 5: US ad-blocking user penetration, 2014-2018 (source: eMarketer, 2017)

Main reasons for the growth of the ad-blocking phenomenon

There are a whole host of causes of the growth of ad-blocking in the world. Certain elements are common regardless of who did the study, however, some differences show up between them. According to the "2017 Global Adblock Report: The state of the blocked web" by PageFair, one of the most important factors that motivate users to use ad blocking solutions include (PageFair, 2017):

- Security (exposure to viruses and malware) – 30%.
- Interruption – 29%.

- Speed (slow website loading) – 16%.
- Too many ads on webpages – 14%.
- Privacy and tracking by unknown parties – 6%.

In contrast, the results of the survey among UK Internet users by AudienceProject in the third quarter of 2016 show the following reasons for blocking of ads by respondents (eMarketer, 2017):

- Websites are more manageable without banners – 31%.
- I want to avoid offensive or irrelevant messages – 31%.
- I don't want my behavior to be tracked – 23%.
- Websites load more slowly – 23%.
- I want to limit my data usage – 10%.

In turn, the results of the research conducted among the users of adblock-type solutions in Poland conducted in April 2016 show the following reasons for their use (eMarketer, 2016a):

- I'm annoyed by ads on the Internet – 74%.
- I can't see the page content because of the ads – 55%.
- It takes too long for pages to load because of the ads – 23%.
- I wasn't interested in the products presented in the ads – 15%.
- Ad blockers provide more privacy on the Internet – 19%.

The economic impact of the ad-blocking phenomenon

There are a whole host of causes of the growth of ad-blocking in the world. Certain elements are common regardless of who did the study, however, some differences show up between them. According to the "2017 Global Adblock Report: The state of the blocked web" by PageFair, one of the most important factors that motivate users to use ad blocking solutions include (PageFair, 2017):

- Direct costs.
- Hidden costs.

The first type of costs is those associated with "blocking" of revenues from advertisements (reduction of publisher revenue from advertising). In the United States alone, these costs amounted to $3.5 billion in 2013, and $20.3 billion in 2016 with advertising spending of $42.8 billion (2013) and $68 billion (2015), respectively. At the same time, global ad blocking costs were $7.2 billion in 2013 and were forecast at $41.4 billion in 2016 (PageFair and Adobe, 2015).

As far as the second type of costs is concerned, they primarily apply to small and medium publishers, and the mechanism for their creation is as follows. Blocking of ads results in a decrease in revenue from advertising for all publishers. This in turn reduces the chances of them investing in the content presented on the website. As a result, they become less attractive to recipients. As a result, traffic on a website decreases, resulting in reduced advertising revenue (PageFair, 2017; Ryan et al., 2017).

The Phenomenon of Ad-Blocking in the Light of Author's Own Research

With knowledge based on the analysis of reports on ad blocking and general trends related to it, it was decided to conduct in-depth research on a targeted group of individual Internet users. By choosing it, the following premises were followed:

1. Age of users.
2. Education.
3. Country of origin.

As for the first criterion, it was decided to choose a sample of people in the 19-25 age range assuming that they intensively or very intensively use the Internet. At the same time, as data from reports shows, people using ad-block type solutions are of a higher education (a bachelor's degree or higher) (see PageFair, 2017). Hence, the first, second, and third degree students were selected for the tests.

At the same time, the country of origin of Internet users was an important criterion. It was important that they came from a country where ad blocking is widely spread among Internet users. In this context, users from Poland, as the population which is the third most intensively using ad-block type solutions, were quite an obvious choice (see Fig. 4).

The study was conducted in the period of 01.02.2017–19.05.2017. These were surveys using Google Forms. 178 students of the Opole University of Technology and the University of Opole took part in the study (the majority of participants were students of the former – 176 people). The largest group of people who completed the survey were the students of the first (50%) and the second year (39.9%) of first degree studies in economics (51.7%), management (36%), and administration (10.7%). The majority of the respondents were women (77%).

There were the following subjects of interest in the study:

1. Internet access tools used.
2. Intensity of using the Internet.
3. The level of ad-block type solutions deployment across devices.
4. Reasons for using ad-block type solutions.
5. The conditions under which respondents would be willing to stop using ad-block solutions.

As for the first aspect, laptops and smartphones are definitely the two most popular tools for accessing the Internet (Fig. 6).

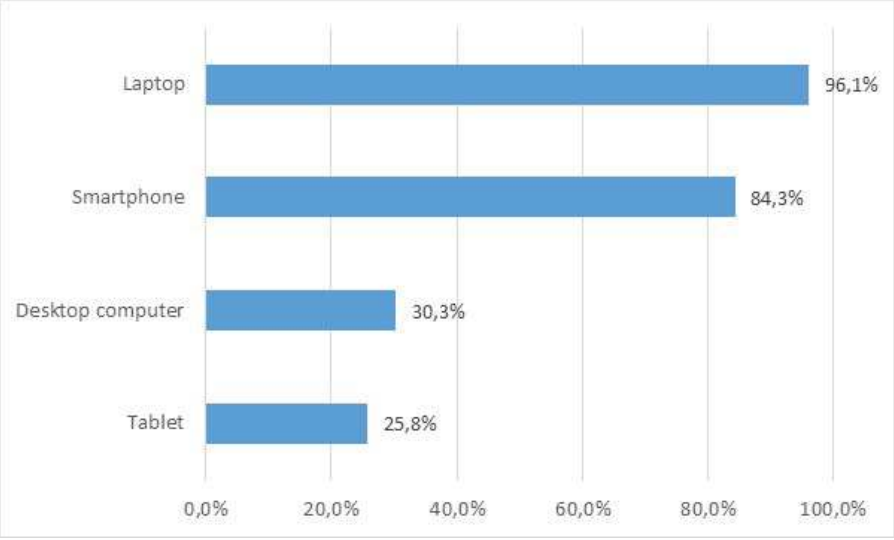

Fig. 6: Internet access tools used (source: own source)

The assumption regarding the time the respondents spent using the Internet proved to be accurate. The majority of the surveyed group uses the Internet intensely. It is over five hours in the case of nearly 40% of respondents and three to five hours in the case of 27% (see Fig. 7). At the same time, 54.5% of the respondents declare that they are connected to the Internet all the time (*always-on*).

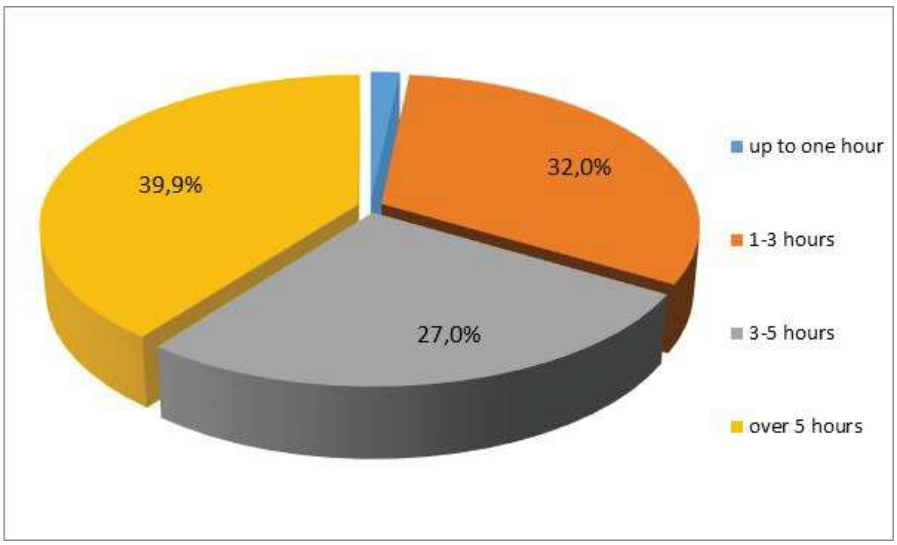

Fig .7: Intensity of using the Internet (source: own source)

Regarding the use of ad-block type solutions by respondents, it turned out that the majority (61.8%) uses them (see Fig. 8). This is almost double the average value for Internet users in Poland (33% – see Fig. 4).

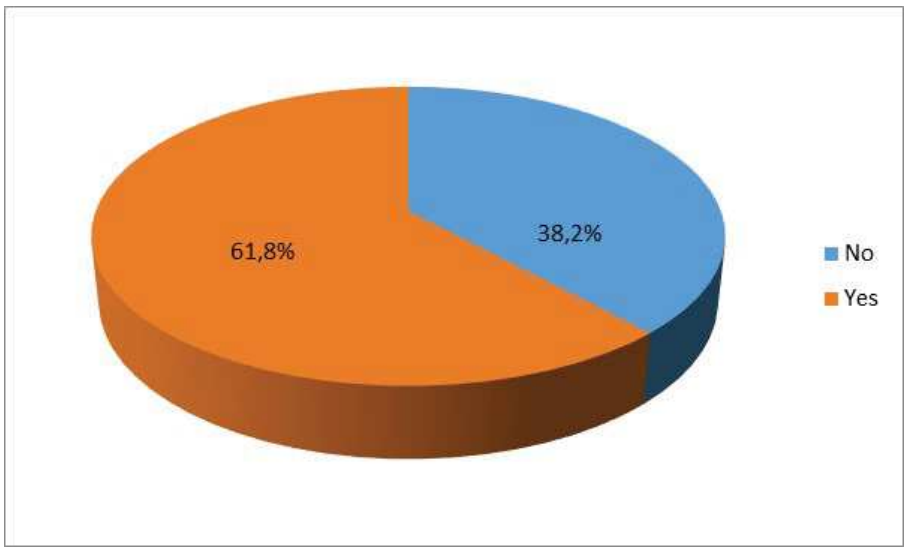

Fig. 8: Intensity of using the Internet (source: own source)

Another aspect of interest in the study was the question of which device(s) the respondents use ad-block type solutions on (see Fig. 9). It turned out that they are by far the most widespread in the case of laptops (90.3%). For smartphones, the second most popular Internet access tool, this percentage is low (less than 13%). However, this is not surprising in the context of the global trends shown above. We could even say that this is a relatively high level given the data regarding Poland shown in the report by PageFair (see PageFair, 2017).

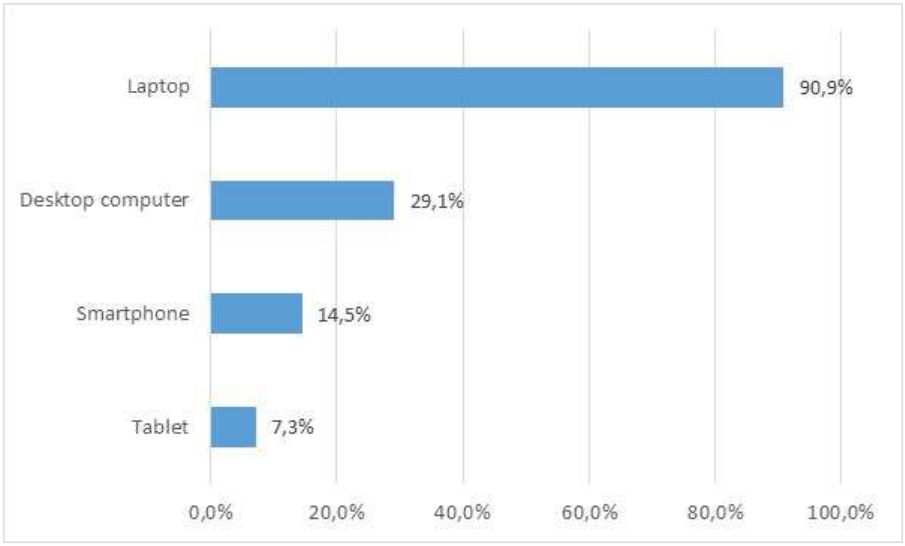

Fig. 9: Devices on which ad-block type solutions are used (source: own source)

It is remarkably important to know the motivations of Internet users to block ads in the context of the growth of ad-blocking (Fig. 10)

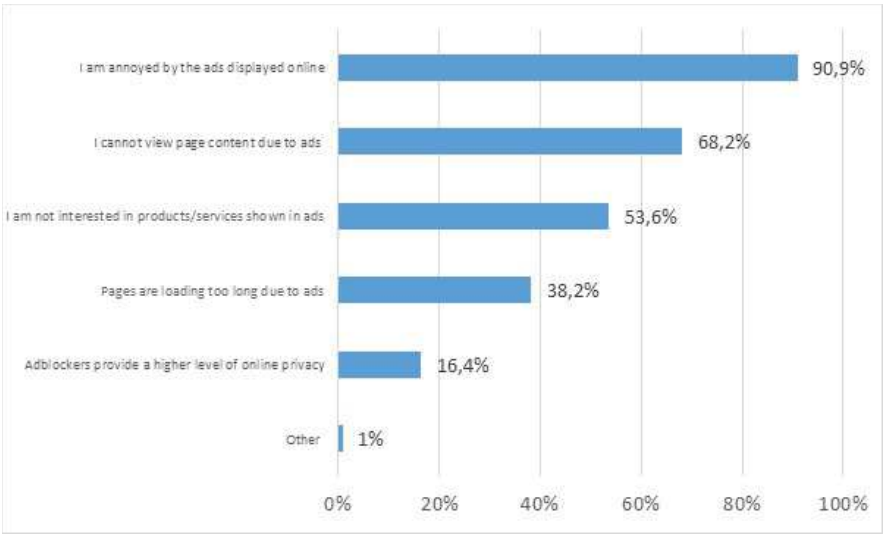

Fig. 10: User motivations in the context of using of ad-block type solutions (source: own source)

Definitely, the most important issue in this context has been the fact that online ads are annoying to Internet users (90.9%). Also, a significant percentage of the respondents (68.2%) indicated hindering the access to the content by the displayed ads. Both of these issues are undoubtedly directly related to aggressiveness of online advertising indicated by the Internet users in various studies. The third indicated issue (53.6%) concerns the lack of interest of Internet users in advertised products or services, which clearly indicates the lack of proper personalization of the presented advertising content. At the same time, it should be pointed out that the issue of online privacy was relatively minor (16.4%).

At the same time, knowing the reasons for blocking ads, it was also important to gain knowledge about in what services available online they are particularly annoying for respondents taking part in the study. It turned out that this was primarily the case for browsing Web content (68.2%). Also social media were highly ranked (66.4%). This is not particularly surprising since the respondents belong to a group of people who are particularly engaged in these media. However, a relatively low rank in online games or streaming is surprising (Fig. 11).

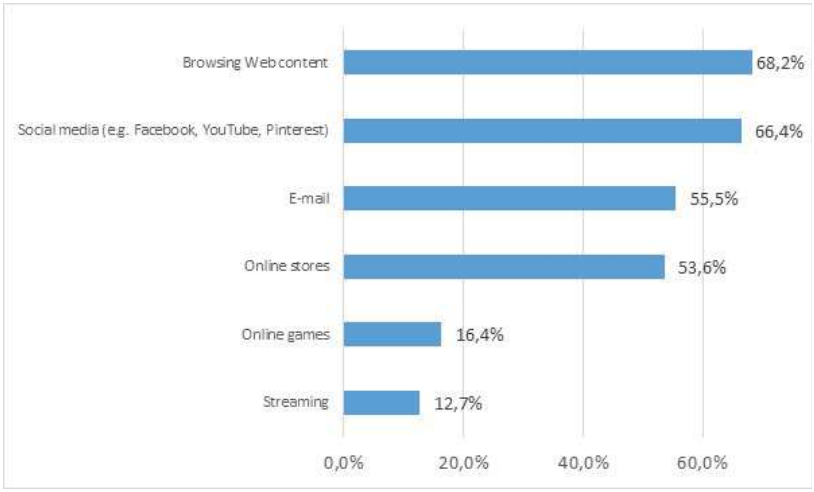

Fig. 11: On-line services where ads are particularly annoying (source: own source)

In the context of the results on the degree of use of ad-block type solutions by the respondents taking part in the survey, it was vitally important to know the situations in which they would be willing to give up their use (Fig. 12). The most important issues are lower invasiveness of online advertising (60.9%) and decrease in the number of Internet advertisements (54.5%). The following situations are also a strong incentive to uninstall ad-block type solutions: when payments are required for getting access to specific content (43.6%) and where blocking restricts access to certain content (37.3%).

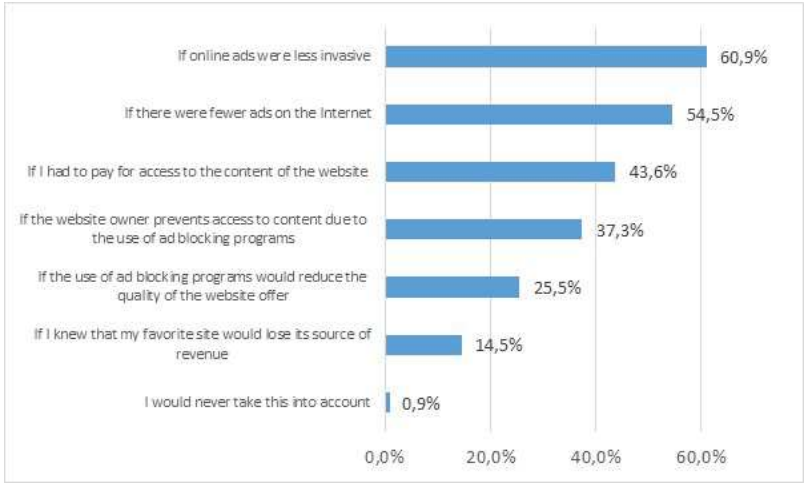

Fig. 12: Situations where it would be possible to uninstall ad-block type solutions

(Source: own source)

Respondents were also asked about their behavior when disabling ad-blocking programs was required to access certain content (Fig. 13). When analyzing the answer to this question, it seems surprising that only 32.7% of respondents in such a group are looking for alternative sites offering similar content or services. The vast majority (71.8%) decides to disable blocking programs.

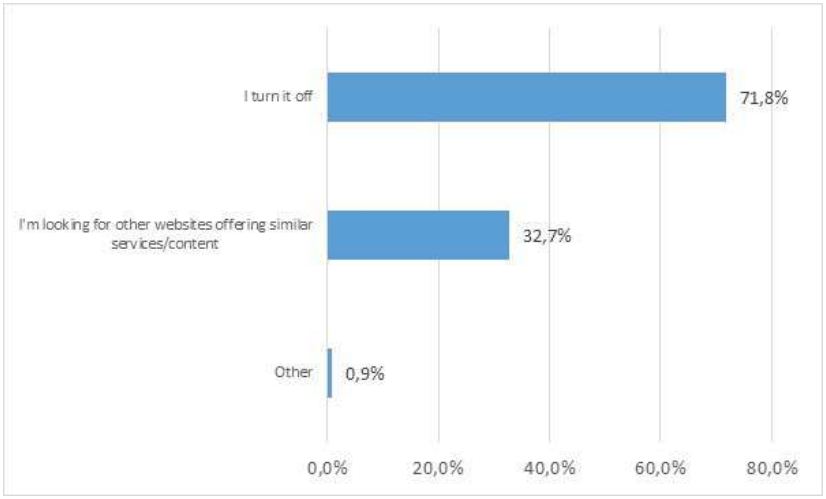

Fig. 13: User behavior when posed with the requirement to disable ad-blocking as a condition of accessing the content (source: own source)

Strategies of Organizations' Reactions to Ad-Blocking Phenomenon

As the presented analyses of secondary data and results of conducted own research show, ad-blocking phenomenon is the real challenge for organizations functioning in the ecosystem of digital advertising. On the other hand trends related to mobile devices indicate that the problem will escalate in the following years. Organizations take miscellaneous actions to counteract or reduce the phenomenon scale and its effects. Generally four strategies, observable in the market, can be distinguished. First three are reactive strategies, while the fourth is proactive.

Taking under the consideration the first strategy, it bases on persuading the users to cease using blocking solutions. This strategy is based on using by publishers different kind of technological solutions which allow them to discover whether consumer is using ad-block application. Then messages are sent to the users with argumentation that is meant to convince consumers to stop using ad-blocking solutions. Matter of effectiveness of such attitude is difficult to measure due to small number of available data (eMarketer, 2017).

The second strategy is to set up ad-block walls in the situation of using by consumers ad-blocking solutions. The effectiveness of this approach is shown by results of available research. It occurs that consumers when encounter the ad-block walls usually look for alternative content sources. Almost 74% of US ad-blocking users, surveyed in November 2016, left web pages when encountered ad-block walls. It is interesting that this kind of behavior was rare among younger consumers (eMarketer, 2017). This fact is confirmed by presented above results of own research.

The third of used strategies is based on presenting ads that cannot be blocked by the ad-block companies. Such strategy started to be used by many publishers including Facebook (ARF et al., 2017).

The last strategy is based on developing systemic solutions that considered both publishers and consumers interests. The result is creation of new model of functioning in digital advertising

ecosystem in which method, form and scale of advertising would be accepted by users. Coalition for Better Ads initiative, that associates the most significant entities in the market of on-line advertising, has made an attempt toward that direction. Within this association preliminary standards of new type of on-line ads have been created, which are being tested on more than 25 000 consumers (Coalition, 2017).

Conclusion

Ad-blocking phenomenon is rapidly becoming an increasingly challenging and economical problem in terms of the functioning and development of the electronic economy and business models used in it. This mainly applies to those where user access to specific on-line content depends on displaying of advertising material (the so-called ad-supported content delivered on-line). The problem becomes more significant when online advertising provides publishers more revenue than the access fees when using a paywalls based business model (Ryan et al., 2017). At the same time, the phenomenon of ad-blocking is rapidly expanding onto mobile devices where the dynamics of its growth is even greater than in the case of desktop devices. In fact it becomes the new form of the impact of elements of electronic space on organizations (see Wielki, 2007)).

In this situation, where publishers and other entities involved in digital advertising bear real and increasing economic costs, it is extremely important that stakeholders develop solutions which limit the scale of the ad-blocking phenomenon as much as possible. At present, publishers generally use three reactive strategies and the most common solution is to block access to content when users use ad-block type solutions.

Undoubtedly, besides this type of immediate activity, there is a real need to work out systemic solutions that take into account the interests of both publishers and consumers of digital advertising. The result should be the creation of a new digital advertising ecosystem based on ad-supported content delivered on-line, where the manner, form, and scale of displaying the advertisements will be acceptable to users. This particularly applies to the number of advertisements, their aggressiveness and the relevancy to individual interests of the recipients and the initiative undertaken by Coalition for Better Ads is such type of attempt.

At the same time, it is necessary to continuously monitor the ad-blocking phenomenon and further research on the subject as a very important issue for the e-economy. This also applies to the studies, whose results are shown in this article, which will continue in a broader scope and scale.

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