FACEBOOK ADVERTISING AND ITS EFFICIENCY ON THE SLOVAK MARKET

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Introduction

At the beginning of the 21st century web has changed into the new form. Web experts identified the trend of user generated content on the web and started to call it web 2.0. Typical examples of web 2.0 terms are blogs, wikis, virtual worlds and currently very popular social networking sites. The web social networks are virtual places where millions of people meet, chat, share their photos, videos, opinions on all possible topics. Web social networks are becoming integrated into mobile devices (smartphones, tablets, etc.), what makes them even more accessible practically anywhere. The most popular web social networks are MySpace, LinkedIn, MySpace, Twitter and the most populated and popular – Facebook.

Because of its biggest number of users we decided to deal with it in more details in our research [5].

Facebook mostly speaks to younger people and to have an active Facebook account is almost a social standard of this age categories. In general, the intention to use online social networks is strongly determined by social presence as stated by Cheung, Chiu and Lee (2011). That is the main reason why Facebook has estimated 600 millions of active user accounts. Fifty percent of active users log on to Facebook every day and an average user has about 130 friends in his social network and all of them can catch his presented opinion. The following table shows more statistics on Facebook [1], [10].

Tab. 1: **Statistics on Facebook and its Average User Characteristics**

Facebook Statistics:		Average Facebook user characteristics:	
Active users	600 million	Friends	130
Daily active users	300 million	Minutes on Facebook per month	1,400
Objects (pages, groups, events)	900 million	Groups, pages, events	80
Active applications	550,000	Pieces of content created per month	90
Mobile users	150 million	Pieces of content shared per month	60

Source: Facebook.com, estimated data, [10]

Considering these numbers, it is easy to realize an enormous commercial potential of this virtual place where so many people spend so much time actively. This is the main reason, why Facebook's market value is currently estimated at 90 billion USD (April 2011), although its shares are not traded publicly yet. Many authors (e.g. Cooke, Buckley, Keller) are very optimistic in case of Facebook's usage for marketing purposes [4], [14].

Facebook and web social networks in general are considered a powerful tool for companies to keep in touch with customers and acquire feedback from them. They can also maintain contact with their customers through the fan groups or promote their events. Not only companies, but even products can be promoted or have their fan groups there. On the other hand bad reputation of a company spreads through Facebook even faster. The

same fact is true also for politicians, who discover the power of Facebook campaigns supporting or opposing them [15].

Thanks to the network of its fans a company or a product can get free attention. Also a company can communicate its marketing campaign virtually for free with relatively large number of (current or potential) customers by this approach. Many firms use special groups or events on Facebook to attract customers to special (often time limited) campaigns. Naturally, a Facebook fan page or group should contain campaign specific information excluding pricelists or technical data. This information is located on a company's web page [1].

It is complicated to measure the accurate efficiency of this type of marketing communication because it is hard to precisely identify its effects. However this communication is for free and it can draw significant attention to the company. The increased awareness leads to potentially higher sales and market share in future, but measuring its particular effect precisely is virtually impossible. Users' interaction with companies (or brands) through their fan pages or groups provides valuable information and feedback to the company for free. However not all customers' demands and preferences can be satisfied, because of their often contending character [6]. Facebook groups or fan sites do not replace product or company website, but they can be useful for drawing attention to special events, time restricted campaigns, etc. Many firms often try to attract users to their groups with (often misleading) name or content, not related to company's activities, (groups like "I will not pay for Facebook by 7th August 2010" and many others). After that they use these groups to reach users by their commercial messages. This is considered unethical and it can frustrate users and have rather negative effect on a company image [20].

On the other hand firms often monitor their reputation on Facebook, mostly by assistance of specialized monitoring firms. These firms acquire statistics, analytical and monitoring data of Facebook groups and provide them to the marketing and PR departments in those firms. The company gains valuable information on its perception by Facebook users due to this monitoring [16]. A very important effect can be achieved in case, when some of potential customer's friends likes or recommends a product on his Facebook wall. As a consequence the potential customer can be pushed to a positive buying decision and it basically increases popularity of a product or a company. All the mentioned effects are practically immeasurable precisely. Still companies have to consider every single one of them, while using Facebook for their marketing purposes.

Another usage of Facebook's potential for marketing purposes is direct advertising on it. Although the huge potential of Facebook advertising does not necessarily mean that traditional online banner advertising is over [17]. It should be considered as an additional way of advertising to banners and contextual ads according to some experts' opinion. Gertz [11] stated that Facebook is fascinating but unpredictable and it is necessary to pay attention, not only to the new trends of web advertising but also to traditional and tested solutions. The older forms of online marketing should be still used and Facebook is the only other and powerful medium, which can be used to advertise and communicate with users and potential customers. Gertz further considers current web banners not "out of fashion" and more mature with good targeting possibilities. Banners have become more interactive, with better quality of graphic or video presentation, what makes them more appealing [4], [23]. Some interactive banners are short games in fact and it is drawing attention to them even more. Generally, quality of presentation increased practically in full-area of banners advertising in comparison with times few years ago [4], [11], [14]. Video advertising on web is also a very common form of online marketing. Users can meet it in various forms, such as Rich media banners (interactive or multimedia banners inc. video), text advertisements or small pop-up banners on video screen showed during playback [24]. Another model of a video advertising is playing a commercial video before demanded video itself or a viral video with commercial content that is spreading around the Web as fast as a virus. Viral video becomes very popular among users because of interesting, entertaining, shocking or surprising content and social networks enabling video sharing are an ideal place for its spreading [1]. A product or a company gets more attention at lower expenses in this case. In addition viral

commercials on the web can affect even those users, who do not watch television and therefore are not reachable by TV commercials. However viral videos do not have commercial content in many cases [1], [4], [19].

Many voices question the ethics of advertising at the place where users have private conversations. This is similar to the criticism of Google selling ads at search results few years ago. Contextual advertising is now a very common form of online advertising and firms often optimize their web pages for search engines to get a higher position in search results [25]. Using Google search, people are searching for some concrete term and top search results (i.e. adverts sold by Google, Google AdWords) related to this term can be still very useful for the user [15]. Opposing to this fact, Facebook is selling commercial space, where people make connections, meet, have private conversations and not necessarily look for some products or services [17]. Probably that is not an ideal situation for addressing them with an advertisement. But the virtual place, where hundreds of million users are present, cannot be unused for advertising or marketing generally.

A very interesting question is also the efficiency of online advertising and especially Facebook advertising. Larger companies often have specialized marketing and advertising departments, which continually evaluate their advertising efficiency by various (mostly statistical) methods and therefore have a much better base for the decisions about advertising campaigns. Yet small and medium enterprises (SMEs) would definitely welcome a simple way of comparing various online advertising forms to choose the right one for their next advertising campaign. An ideal measure should reflect the efficiency of advertising in one number to facilitate comparison of advertising forms and campaigns with each other. To propose such a measure and test its expressing power on real data is the main aim of this paper.

1. Advertising on Facebook

In the area of a paid advertising on Facebook, measuring of its efficiency is possible and highly important. On Facebook there are commonly used the web advertisements. The significant difference to common web pages is that Facebook users manifest their preferences, hobbies and sympathies. All such information is very valuable for marketers to target their marketing campaigns to the specific customer groups or even individuals. Thanks to this information shared on FB, precise advertising targeting is possible, therefore no more tracking cookies are necessary to track browsing habits (i.e. interests) of users, because users are expressing them on the social network publicly [18].

Facebook has been used as an advertising platform soon after its start, through application Facebook Ads. Advertisements on Facebook are subject to an auction, where advertisers compete among themselves for an audition through bidding the price of click on their ad (pay per click) or the price of displaying their ad to selected target group (pay per impression). Advertisers get suggested bid range which currently is winning the auction among similar adverts. The advertiser sets maximum bid (per click or per thousand impressions), but Facebook charges only the amount required for an advert to win an auction. This price may be lower than the maximum bid set by advertiser, making a marketing campaign more efficient. Advertisers have also control of their daily budget – the maximum amount that can be spent on campaign per day. If a daily budget is spent, the advertisement will automatically stop showing until next day of a current campaign [9].

Facebook has wide advertising targeting options, which can improve performance and effectiveness of a company's online advertising, because ads are displayed to the users who are most likely to be interested in advertised object, thanks to information shared on Facebook users' profiles. With such a precise targeting company can reach demanded customer group according to its advertising goals. Facebook Ads targeting tool shows the estimated number of users encompassed by firm's ads, so it is easy to widen or constrain a target group. For an advertisement any number of targeting filters can be set. [9]

Targeting filters for Facebook Ads can be divided into the following groups:

- *Location* – is based on user's IP address and profile information about location and target can be specified as country, province, city, or adjustable target radius around specified location.

- *Demographics* – based on age (specified age range or even birthday), gender, relationship status from user's profile or preferred language.
- *Education and work* – can be based on user's attendance of a specific school (college and university) or work at particular company, if the information is provided.
- *Interests and likes* – targets ads according to information from user profiles, status updates, attended groups and page connections (activities, preferences, favourites – information provided by users themselves). This targeting filter can improve appeal of an advertisement, while ads can be more personalized to a specific customer group.
- *Connections* – aimed at users (and/or their friends on Facebook) connected with group, page, application administrated or created by advertiser. This targeting option also gives possibility to exclude advertiser's connections to address users not connected to an advertised subject yet (to widen range of possible customers) [9].

Precise advertisement targeting to specific users groups is a significant advantage of advertising on Facebook (ads on web social networks respectively) comparable to advantages of contextual advertising on web search portals (like Google Ads). Thanks to information provided by users themselves, it has even more precise targeting options and therefore it can possibly be more efficient. On the other hand Facebook users are not searching for a particular item or a topic on Facebook unlike on search portals. Therefore it is much more complicated to attract their attention to an advertisement, even though it is related with their interests. It still can help increase engagement and product or service awareness, advertisement relevance and can lead to a better efficiency of company's marketing [3].

2. Online Advertising Efficiency

The ability to advertise on Facebook requires the need to measure effectiveness of this online advertising form. For measuring efficiency of online advertising there are used various methods, from simple metrics (like cost per click, cost per impression, click-through rate) to more complex statistical methods (e.g. data envelopment analysis, stochastic frontier modeling) using statistical software.

From complex methods of advertising effectiveness measuring we can mention data envelopment analysis. Data Envelopment Analysis (DEA) is a non-parametric, linear programming based technique designed to measure the relative performance of decision making units (DMUs) where the presence of multiple inputs and outputs poses difficulties for comparisons. DEA uses the ratio of weighted inputs and outputs to produce a single measure of productivity (relative efficiency). Efficient DMUs are those for which no other DMU generates as much or more of each output (with a specific level of inputs) or uses as little or less of each input (with a specific level of outputs). The efficient DMUs have an efficiency score of one (or 100 %), while the inefficient ones have efficiency score less than one but greater than zero in an input oriented DEA model, and more than one (or more than 100 %) in the output oriented model. The efficiency of each unit, therefore, is measured in comparison to all other units. Consequently DEA enables to compare the best performers [22].

Stochastic frontier modeling is a parametric approach of economic modeling which explicitly considers the stochastic properties of the data and distinguishes firm-specific effects and random shocks or statistical noise. But there are some problems with stochastic frontiers, for example the implementation requires the choice of an explicit functional form for the production function, which is not always appropriate, and its user imposes strong distributional assumptions on the error term. Nevertheless, the stochastic frontier production function is a significant contribution to the econometric modeling of production and the estimation of efficiency. It is usable also to express efficiency of advertising and can be used with DEA, because they do not always produce similar results. This happens because DEA is quite flexible but stochastic frontier modeling assumes an inflexible functional form [22].

The characteristics of DEA and stochastic frontier modeling shows, that they are powerful methods of efficiency measurement, but they are also significantly complicated for SMEs to administer them by themselves.

For purposes of simple advertising efficiency measuring in conditions of average SME, more simple methods are suitable. Facebook has a variety of simple advertising performance

monitoring tools, which provide the advertiser a basic report in the form of a table, a data chart or a graph about:

- *Standard metrics* – impressions (the number of times the ad is shown), clicks (the number of times the advertisement is clicked), efficiency of impressions (average impressions per click – CTR), average cost per click (CPC), sum spent on particular campaign, etc.
- *Profile metrics* – interests, favourites, preferences of users clicking on a given advert.
- *Demographic metrics* – age, gender, location of users clicking on particular advert.
- *Conversion metrics* – allows to track traffic on company's website resulting from Facebook advertisement (unique Facebook generated tracking tag must be added to company's website code).

Small and medium sized enterprises often do not have capacities and abilities to evaluate efficiency by complex methods, but simple metrics provides only an incomplete overview of online advertising campaign showing only partial efficiency of an advert [7], [22].

2.1 Facebook Advertising Efficiency Measuring

Because of above stated reasons, we decided to design a composite index to measure the Facebook ads efficiency in a more complex way and to enable an easy comparison. First, we considered the following three measures to be part of the proposed composite index:

Click per impression (CTR – click through rate) expresses the number of clicks per one impression of advertisement. This rate can identify the quality of advert, i.e. the attractiveness of the advert to the target group in desired degree. CTR expresses marketing quality of the ad (clarity of ad statement, text appeal on users, attractiveness of design, placement, etc.). The higher value it has, the advert is more attractive and therefore users click through it more often. Facebook Ads reporting tools monitor this measure as a part of standard metrics, so the advertiser always has information about click per impression at his disposal [9].

Cost per click (CPC) shows average cost of one click on particular advert achieved during campaign. Because of the auction pricing of advertising space on Facebook, the cost of each click can differ in time and CPC is calculated as the weighted average of individual costs per click. Lower CPC means more efficient advertisement. This measure can show to the advertiser the costs of increasing traffic on firm's page (or application, event, group) and also it is showed by Facebook Ads reporting tools directly. An increased traffic means higher awareness of firm and it brings higher chance to sell the firm's product or service as well. An alternative to CPC is CPM (cost per mille), which measures costs per thousand impressions [9].

Return on Investment (ROI) represents revenue generated by Facebook advert specifically, in comparison with amount spent on given advertisement. A particular ad performs better, if it has higher return on investment. However measuring the ROI of online advertising is a complicated issue. The main problem of ROI usage is to determine the revenue generated by the ad itself, purged of other effects not directly connected to specific advertisement. Obviously there are many more revenue-influencing factors than advertising campaigns (e.g. attractiveness of product, price of product, product reputation etc.) [9]. Moreover, the Facebook advertising affects in-store sales (not only online sales) by increasing awareness of potential customers. The increase in sales during a single ad Facebook campaign does not necessarily mean that this increase is generated by that ad and vice-versa. To specify the effect of a campaign, it would be necessary to get feedback from every single customer about his buying decision, if it was rooted in the advertisement on Facebook or resulting from other firm's actions. Only then it is possible to measure effects on firm's sales precisely, it makes ROI hard to be used for purposes of measuring the efficiency of Facebook advertisement campaigns. Acquiring feedback from all customers is expensive, time consuming and ineffective in most cases. Therefore we decided not to include ROI to proposed composite index of Facebook advertising efficiency. The effect of Facebook advert on sales can be estimated by a firm on certain level of precision. This estimation of the measure of increased sales can be carried out also by comparing status of sales volume before Facebook campaign during and after it.

2.2 Efficiency Index Proposition

To utilize simple efficiency comparison between ads or advertising forms, we decided to form a proposed composite efficiency index (CEI) from click through rate (CTR – clicks per impression) and cost per click rate (CPC). Its proposed composition is as follows:

$$CEI = \frac{clicks}{impression} \cdot \frac{clicks}{cost} \qquad (1)$$

This can be transformed to:

$$CEI = \frac{clicks^2}{impression \cdot cost} \qquad (2)$$

If we consider the following equation:

$$\frac{clicks}{cost} = CPC^{-1} \qquad (3)$$

Then we can transcript the first equation into the simplest form:

$$CEI = \frac{clicks\ through\ rate}{cost\ per\ click} = \frac{CTR}{CPC} \qquad (4)$$

It follows that the higher number of clicks per impression (CTR) means better quality of advertisement. The lower costs necessary for one click (CPC) also mean a more effective advertisement. The ratio of the number of clicks and costs (reverse value of cost per click) shows how many clicks the advertisement gets per one currency unit. Its higher value means better ad's performance. We composed these two basic indicators into the one simple coefficient (4), which in a single number reflects how the advertisement is performing (how many click-throughs at particular expensiveness). It gives us a good basis to compare various forms of online marketing or single advertisement campaigns with each other. So the proposed composite efficiency index (CEI) is constituted from a ratio of click-through rate and cost per click. The lowest efficiency represents zero-value of CEI. This situation is possible only when the ad gets zero clicks (no one will click on ad) and non-zero costs on this ad campaign, and therefore this ad is totally ineffective. The lower number of impressions necessary per a click and lower costs on a campaign (while achieving campaign goals) mean better efficiency. Although, it is not necessary to restrict number of impressions, if a campaign is paid per a click, not per impressions.

3. Facebook Advertising on the Slovak Market

To test an expressing power of our proposed composite index, we decided to test it on Slovak Facebook advertising market. We acquired these data from our own electronic survey. This survey was aimed to acquire numeric data on firms' campaigns on Facebook, their experience with online marketing in various forms and personal perception of efficiency and usefulness of these campaigns. The survey was realized by the electronic questionnaire. It was addressed to 117 companies operating on the Slovak market and advertising their products or services on Facebook. This sample represents over 90 % of all Slovak companies, whose advertisements were shown at sponsored advertising area on author's Facebook profile during one month (March 2011).

The following companies' expectations and preferences were revealed during the survey. Approximately two thirds of responding firms were retailers, the rest consisted from firms providing services. 77 percent of responding firms were from segment of small and medium enterprises, the rest of companies were large enterprises. The average number of company's Facebook advertising campaigns already accomplished was almost 3. This shows that Slovak companies have already some experience with Facebook advertising.

The most frequent goals of Facebook advertising campaigns were increasing company's website visit rate (78 %), sales boosting (68 %), improving client awareness about trademark or company (56 %) or launching a new product or a service (12 %). Over 44 percent of responding companies achieved their campaign goals and 45 percent only partially. Only 11 percent of respondents did not achieve their intended campaign goals at all. These results show firms' high expectations from Facebook advert campaigns, which are hard to achieve in the praxis. Companies with previous experience with Facebook ads had more realistic estimates and achieved their goals more frequently (in 86 % of campaigns).

We also investigated, if firms use Facebook to keep in touch with their clients and gather feedback from them through Facebook groups, profiles or fan pages. As high as 78 percent of firms stated that they communicate with their clients through the Facebook fan page, 32 percent through user group. Only 12 percent of firms have their own company profile used for these purposes. On the other hand, only 11 % of companies adduced that they do not use Facebook for such a communication.

The firms stated their opinion about key aspects of Facebook advertising efficiency and most of them (79 %) adduced the attractiveness of advertisements' text and picture. Over two thirds (67 %) of respondents consider precise targeting as a key aspect of campaign's efficiency, 58 percent stated qualities of products or services and over 56 percent good campaign timing. Moreover 11 percent of responding firms consider Facebook ads more efficient than other forms of online marketing and 55 percent adduced comparable efficiency as other forms of online marketing. The rest of respondents perceive Facebook ads as less effective than other online marketing forms.

Most of responding firms uses also the other forms of online marketing. Over 65 percent of them use contextual ads, 45 percent classic or interactive banners, 22 percent use commercial online videos. About 34 percent of respondents adduced that they do not use any other online marketing forms than Facebook advertisements.

The responding firms also answered the question, if they prefer advertising on Facebook over other online advertising forms. Slightly over one third of respondents prefer it. They adduce as the main reasons following reasons for this preference: easy and precise targeting, simple campaign managing and often a lower price in comparison to the other possibilities. Almost two thirds use advertising on Facebook as a complement to any other web advertising and do not prefer it. Slovak advertising market on Facebook has its specifics because most of active users are younger than average of local population and therefore it is a more valuable communication and marketing channel for companies providing products for this target group (e.g. online games, sporting goods etc.). In comparison with more traditional forms of advertising (like prints, TV and radio commercials, billboards etc.), Facebook advertising is perceived even more positively. Over 83 % of responding firms adduced that they prefer Facebook advertising to traditional advertising. This can be caused by the fact that the responding firms were aiming their production mostly at online customers. As the main reasons for their preference they stated perceived lower prices, broader reach of customers, easy campaign management and better possibilities of customers' feedback.

Respondents expect from Facebook advertising (or advertising on web social networks) the following positive effects in general:
- Increased number of clicks;
- Higher market share;
- Increase in sales revenue;
- Higher customer retention;
- Positive change in awareness of brand;
- Desired change in buying intents.

In this survey we also acquired numerical data about companies' advertisements and advertising campaigns.

3.1 Efficiency Measurement and Comparison by Proposed Index

The main reason for committing this survey was to acquire numerical data about Facebook advertising campaigns of Slovak companies. The main acquired average data are presented in the following Tab. 2.

This table shows the basic summary of our survey numerical output. Very interesting is the high number of impressions of a single ad campaign (3,053,748 impressions), suggesting that Facebook ads can have a very wide reach of potential customers and firms used pay per click payment model and therefore any number of impressions was for free. Also multiple impressions to a single user are counted by companies' Facebook Ads statistics. On the other hand it also means that the responding firms did not use very accurate targeting of their campaigns in many cases. With average number of clicks at 1,523 it represented average quite low click-through rate at 0.0005. The companies spent around average of 452 EUR on their single campaign in average and recorded estimated 22.63 % increase in sales of an advertised product. This represents quite a huge increase in sales, but it is caused by high number of small and medium enterprises (SMEs) among responding companies. By

Tab. 2:	Average Data About Facebook Advertising Campaigns of Slovak Companies

Average data from Slovak market survey	
Average number of impressions	3,053,748
Average number of clicks	1,523
Average campaign costs	452
Average estimated increase in sales	22.63 %
Average cost per click	0.29678
Average click through rate	0.00050
Average composite efficiency index	**0.00168**

Source: Own survey on Facebook advertisements usage in Slovakia

SMEs relatively small total increase in sales can represent high percentual change, because of small scale of their production. Average from recorded costs per click was at level of 0.29678 EUR, which shows low expensiveness of Facebook advertising. These low costs of ads on Slovak Facebook ads market show that competition between advertisers has not pushed prices very high, yet. Also a relatively small number of responding firms (117) included in our survey implies from low scale of a market and its lag behind the expansion on the world's Facebook advertising market. Finally we expressed our composite efficiency index, which was at average value of 0.00168.

To get a better idea of Facebook ads efficiency we shall compare it to banner advertising and contextual advertising as the main types of online advertising. The following table Tab. 3 shows comparison by CPC, CTR and proposed composite efficiency index – CEI.

Tab. 3:	Basic Comparison of Online Advertising Forms' Efficiency

Efficiency Comparison	Facebook ads	Contextual ads	Banners
Estimated cost per click	0.30	1.05	0.87
Estimated click through rate	0.00050	0.0011	0.00102
Estimated composite efficiency index	**0.00168**	**0.00105**	**0.00117**

Source: Own survey, [8], [10], [12], [13].

Estimated data on contextual ads have been acquired from Google statistics, Hochman consultants and from the company eTarget (Slovak leader in contextual advertising) and they are averaged. Data on banner advertising are from Google's DoubleClick Benchmarks Research report and they are estimated from EMEA countries' data, while data on the Slovak market are not stated in this report directly. This comparison shows, that the Facebook ads are (according to our results) significantly more efficient than a contextual advertising and a banner advertising on the Slovak market. Facebook ads have the lowest CTR, but also very low CPC which makes them more efficient.

However this comparison is only roughly accurate, because of small sample of responding companies in our survey (117). Also the characteristics of each single online advertising form can distort this comparison. For example banners' efficiency is very dependent on banner's placement, size and if the particular banner is a static picture or Rich media banner, etc. Also banners do not necessarily aim to increase online traffic on company's page or online sales, but it can still have a positive effect on brick-and-mortar shop sales. Contextual ads have the best overall click-through rate, but their prices increased in the last few years to unprecedented heights. This fact makes contextual advertising the most

expensive online advertising form and also decreases its efficiency.

Still we can say that Facebook ads are an efficient form of advertising with excellent targeting options and a wide range of potential addressed clients. It is suitable mostly for companies which have their clients online and using social networking abilities actively. Companies, which have some experience with Facebook ads, consider them efficient and use this advertising form repeatedly.

To get a better idea of Facebook advertising efficiency, it is suitable to compare it with other online advertising forms on numerical data (not only if it is perceived efficient by its users). According to Google's DoubleClick Benchmark Research report click-through rate (CTR) of static and video banner advertisements in EMEA countries was between 0.05 % and 0.18 % with average of 0.102 % (Slovak banner market was not part of this research directly, average was considered for the Slovak market). Data on average costs per click were estimated at 0.87 EUR according to this source. The final value of composite efficiency index for a general banner advertisement on the Slovak online advertising market is 0.00117 [12].

Average click-through rate of contextual advertisement was estimated at value 0.0011 and average costs per click on Slovak market were estimated to 1.05 EUR, both according to data from eTarget and Google, which are top contextual advertising providers on the Slovak market. Resultant composite efficiency index's value from these data is at value of 0.00105. For a better comparison overview *Tab. 3* contents also data on Facebook advertising from *Tab. 2* [8], [13].

By a simple comparison of CEIs of all three advertising forms we get a flash view of their estimated efficiency. The best result has Facebook advertising (the highest CEI=0.00168), mostly because of very low costs per click. Low costs per click are currently the biggest advantage of Facebook ads and are caused by lower popularity of Facebook advertising on the Slovak market. With increasing competition within this advertising sector, the increase of advertising costs is expected, as it happened in the area of contextual advertising in recent years. This will lead to decrease in its efficiency, but until that time Facebook advertising is very effective in Slovak conditions. However these results would probably differ significantly from more developed online marketing markets.

Results also show that Facebook advertisements have high efficiency and moreover Facebook provides higher number of impressions often. It can be caused by more frequent visits of their Facebook wall than any other website by average user (see *Tab. 1: Statistics on Facebook and its Average User Characteristics*). High number of impressions can have a significant effect on non-online sales of companies, simply by building brand awareness.

Discussion and Conclusion

Facebook is considered a good tool for keeping in touch with customers, acquiring feedback from them, reaching online customers and advertising with great possibilities of targeting. In terms of efficiency, we can often encounter the opinion of contextual advertising being (e.g. Google Ads, AdWords) more efficient than Facebook Ads. This is probably caused by the fact that users on Google are more serious about their intentions and are actually looking for purchasing something. Our survey on the Slovak online advertising market proved opposite results, but it does not deny this opinion undoubtedly, because of survey's low scale and localization only on the Slovak market. Important conclusion is the fact, that Facebook can be a powerful marketing tool for reaching customers, especially young online population. Our conclusions are partly Facebook-specific, but some of them (very good targeting options, easy feedback collection, great reach of young online customers etc.) are applicable on other web social networks in general.

We have provided a very simple comparison of Slovak online advertising market by one index thanks to proposed index (CEI). However there is still the possibility of measuring deeper qualities of ads (than CTR, CPC) and comparing them with possibly different outcome. Interesting results could be also obtained by similar surveys on other online advertising markets abroad and their comparison through final CEI values.

The topic for further development of composite efficiency index is its enhancement with measures of revenues generation by advertising costs (like ROI). Although it is confronted with the

problem of precise specification of direct advertising effects on total revenues of company [22]. Moreover, it would complicate the usage of CEI, which is in opposite with call for the simplest efficiency measuring and evaluating available for SMEs.

For comparison with more sophisticated efficiency measurement methods, more precise and detailed data from advertiser are necessary. Although such a comparison would show true expressing power of proposed composite efficiency index, but it is beyond the scope of this paper.

This form of online advertising is increasing but the whole Facebook's future can be endangered by a few issues. The biggest issue of Facebook is privacy and security especially private information thefts, are threat to Facebook's future [1]. Many applications created and used on Facebook are malicious and designed to install harmful software to user's computer. Now developers of applications must have a verified account to provide new applications on Facebook. The Facebook project manager Niket Biswas stated, that this step will help connect those malicious applications with real user's account and take legal steps against this user. According to the opinion of many security experts this will not stop cybercriminals, because even the verified account can be faked. Some say that Facebook should be inspired by Apple App Store, where all software is validated by commission with strict rules, before its publication to users [21]. This will lead also to great restriction of application numbers but security of Facebook should increase dramatically. Many of users fear that their personal and private information from Facebook profile can be provided to third parties. Another reproach of users is that Facebook does not delete inactive user accounts and users have to find deep in options a command to delete it physically from Facebook's databases. The social network keeps information about its users often without their knowledge and it is not very keen to delete it on users' demand [20]. This information can be very valuable for targeted marketing of companies and Facebook is rumored to provide it to those companies at a significant price. Another security issue is user's information abuse by other users. Therefore the basic rule for Facebook safe usage should be: "Do not input any private or potentially sensitive information to Facebook."

Facebook shows that it can be an effective advertising medium or platform, but its future can be uncertain as well. Some experts (e.g. Lovink, Geertz and others) say that it could become saturated by users within next few years and then slowly abandoned and forgotten by its users. For example MySpace is recording a downfall in numbers of users in recent years, although thanks to their migration to Facebook [26]. But now the number of Facebook users is still growing and therefore its marketing and advertising potential is increasing, too.

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Abstract

FACEBOOK ADVERTISING AND ITS EFFICIENCY ON THE SLOVAK MARKET

Martin Vejačka

The main aim of this paper is to propose a measure of Facebook advertising efficiency. In general marketing role of Facebook is considered with special attention to the advertising. Advertising on Facebook is briefly introduced with possibilities of advertising targeting and its performance monitoring metrics. The current methods of efficiency measuring of online advertisement from the area of econometric modeling (specifically data envelopment analysis and stochastic frontier analysis) are mentioned and their suitability for use by small and medium enterprises is questioned. The composite efficiency index is proposed to measure online advertising efficiency and to give base for a comparison of online advertising campaigns. It is based on simple measures like click-through rate and costs per click, to assure its simple usage and easy result comparison in conditions of small and medium enterprises.

Proposed composite efficiency index is tested on sample data from the Slovak Facebook advertising market acquired by our own survey. The efficiency of Facebook advertising campaigns of Slovak companies, which supported our research and provided their data about particular advertising campaign, is measured by composite efficiency index and then compared with estimated data on other online forms of advertising in conditions of Slovak online advertising market. Results show higher Facebook advertising efficiency than efficiency of banner and contextual advertising in Slovakia. Also preferences and expectations about Facebook advertising are investigated by the survey. The highly positive attitude towards advertising on Facebook of Slovak companies was detected. Possible threats to the future of Facebook advertising and Facebook itself are indicated. In discussion are included topics for further research in this area. The main conclusion is the fact that Facebook can be powerful and effective marketing tool for reaching online population.

Key Words: social network, Facebook, web advertising, advertising efficiency, marketing potential.

JEL Classification: M31, M37.