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SEO EVALUATION FOR TRAVEL AGENCIES' WEBSITES

VREDNOVANJE OPTIMIZIRANOSTI WEB SJEDIŠTA TURISTI KIH AGENCIJA

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Abstract: *Search engines have a respective role in bringing targeted visitors to a website, so trying to appear on search engine result page is worth the effort. In this paper 200 websites of travel agencies from Croatia, Germany, Italy and Spain were analyzed by several popular metrics (Alexa rank, Google's PageRank, mozRank, mozTrust, Domain Authority and Page Authority) and by one online SEO tool. Results for Spanish and Croatian agencies were slightly higher, while German agencies had lower results in most metrics.*

Key words: *search engine optimization (SEO), Alexa rank, Google PageRank, travel agencies marketing, mozRank*

Sažetak: *Tražilice imaju značajnu ulogu u dovođenju ciljanih posjetitelja web sjedištu, pa su nastojanja za pojavljivanjem na stranici s rezultatima pretraživanja vrijedna truda. U ovom radu analizirano je 200 web sjedišta turističkih agencija iz Hrvatske, Njemačke, Italije i Španjolske pomoću nekoliko popularnih metrika (Alexa rank, Googleov PageRank, mozRank, mozTrust, Domain Authority i Page Authority) te jednog online SEO alata. Španjolske i hrvatske agencije pokazale su bolje rezultate, dok su njemačke agencije imale slabije rezultate za većinu metrika.*

Cljučne riječi: *optimizacija za tražilice, Alexa Rank, Googleov PageRank, marketing turističkih agencija, mozRank*



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1. Introduction

Usage of internet as a highly important communication and distribution channel in travel industry is unavoidable. Internet advertising has many forms: e-mail advertising, banners, mobile advertising, social media marketing, affiliate, search engine marketing, and so on. Search engine marketing (SEM) that focuses on methods and techniques to increase website visibility on search engines, has a special significance in internet advertising. Some of most important reasons are [1]:

- At least 73% of online travel buyers used search engines leading up to online purchase.
- More than 80% percent of internet sessions in EU-25 (25 countries members of EU) begin with search engine usage.
- Search engines bring more than 50% visitors to websites.
- The sales generated by visitors from search engines represent the biggest sales channel for websites.

The most popular search engine in Europe is Google. Google's search engine market share is 92.9%, while Bing and Yahoo! together have 4% according to [2]. Understandably, SEM in Europe is mostly focused on Google.

SEM can be divided in two groups: search engine optimization (SEO) and search engine advertising (SEA). Both SEO and SEA have the same goal – to achieve better website visibility on search engine result page (SERP) which leads to more website traffic – but their approaches are different. SEA is based on paying for being listed on SERP above, beside or beneath a list of organic (non-paying) results (usually ten results on one SERP); SEO, on the other hand, strives to appear in organic results. The advantages of SEA are promptness and campaign flexibility – it can be established in less than an hour, and can have user defined text, custom landing page, an advertisement can be shown only for specific keywords and few other options can be specified. SEO as the greatest advantage has a fact that individual visits from search engines are free of charge (although SEO process generates expenses). Disadvantage of SEA is when campaign completes, web page disappears from SERP. Negative side of SEO is a fact that SEO is long-term process (months can pass until positive results can be seen) with uncertain result (there is no guarantee for top ten SERP appearance of optimized web page).

2. SEO

Achieving organic high position on SERP for wanted keywords is a key of SEO. Many elements determine ranking on SERP, and search engines don't reveal specifically those elements, as they are business secret. Technical correctness, website popularity and user experience are a few of general ranking segments. When optimizes web page, SEO expert has task to make a page both human and machine friendly.

Single page optimization includes:

- using appropriate title tags – not too short, but also not too long (recommendation of [3] is between 60 and 80 characters),
- using meta description that are a sort of web content abstracts; it should be about 150 characters long [4],
- adding ALT tags to images,
- using heading tags which help creating easy to follow structure of a page,
- URL containing meaningful keywords,
- original content.

In addition to single page optimization, website should have:

- XML sitemap which helps search engine in crawling process,
- robots.txt file which instructs search engine to exclude specific files and directories from crawling,
- valid HTML/XHTML for easier reading by machines,
- 404 error page to inform a user that page he was looking doesn't exist,
- responsive design which adapts page layout to different devices (mobile phones, tablets, notebooks...),
- fast load time for better user experience,
- more content – more articles (or other content) increases value of the website.

Website popularity is measured by a number and a quality of backlinks (links from other websites). It is better to have small number of links from high quality websites than large number of links from poor quality websites [5]. Many links from spammy forums and blogs can not have positive effect on SEO. Purchasing links could be punished by search engines if they somehow find out such an activity. Backlinks can be, besides other ways, obtained:

- by link exchange with similar niche websites,
- from social media (Facebook, Twitter, Google+, StumbleUpon, Delicious...),
- as a reward for providing some free of charge service,
- indirectly by interesting content that encourages visitors to share it with their friends.

Search engines try to generate the most relevant results to a user. They learn and evolve over time, meaning they change their search ranking algorithms. That is a reason why SEO experts have to reassess and change approach in SEO from time to time.

3. Website SEO metrics

Many SEO experts take into consideration various website metrics. The most popular metrics are Alexa rank which measures website traffic, and two metrics which measure amount and quality of backlinks: Google's PageRank and mozRank. There is also mozTrust (which measures link trust), and two metrics that include mozTrust

and mozRank as their part – they are Domain Authority and Page Authority. Application of SEO techniques usually improves rankings of fore mentioned metrics.

Alexa traffic rank measures popularity of websites [6]. Lower value is better (rank of #1 means the most popular website). Traffic is primarily measured by a toolbar installed in browser, and that is main constraint of this metric. Data analyzed by Alexa represents the behaviour of Alexa Toolbar users instead of global internet population [7]. Despite this restriction, Alexa ranking is the most important traffic metric. The rank does not provide information about precise amount of traffic [8].

PageRank is Google's search ranking algorithm. It is based on the following concept: if a page has important backlinks, then links of this page towards the other page are also to be considered as important links [9]. PageRank is assigned to a single page, and it can be an integer value in interval from 0 to 10. The scale is logarithmic, so it is much easier to raise PageRank from 1 to 2 then to raise PageRank from 6 to 7.

MozRank and mozTrust are metrics developed by Moz company. In SEO community mozRank is accepted sometimes as an alternative to the PageRank. It measures link popularity counting it on number and quality of backlinks [9]. Scale is logarithmic and interval is from 0 to 10 (as in PageRank), but values are decimal. MozTrust has the same scale and it measures link trust. It is done by calculating link distance between a page and a seeded trust source on the internet (such as university, government and media websites). These two metrics should not be compared directly, although page with large disparity (high mozRank, low mozTrust) usually has poor ranking on search engine [10].

Domain Authority is represented as an integer value from 1 to 100 on a logarithmic scale, and is calculated by combining more than 40 parameters (mozRank, mozTrust, linking root domains, total number on links, etc.) into a single score. Domain Authority represents a predictive ranking strength of entire domain regardless of its content, while Page Authority represents it for a single page [11].

4. Analysis and results

In this research 50 websites of travel agencies from each of four countries (Croatia, Germany, Italy and Spain) are randomly selected and analyzed by available online tools. Intention was to find out is there a significant difference in SEO level of travel agencies websites from specified countries. Metrics described in chapter 3 were used to determine SEO level. MozRank, MozTrust, Domain Authority and Page authority were obtained at <http://www.opensiteexplorer.org/>.

The first Alexa traffic rank, as a measure of popularity, was examined at official website (<http://www.alexa.com/>), and results are shown in Table 1. Unlike other metrics used in this research, lower value means better rank. It is noticeable that more than one third of all websites are not even listed in Alexa - in this category German

and Italian travel agency websites stand out (almost half of analyzed websites). Spanish agencies have the best result under four million, 20 of them are in this category. Analyzed websites generally have quite poor ranking, but having in mind Alexa rank limitations, it does not have great significance.

Travel agencies in:	Number of websites within specified ranges of Alexa rank				
	no value	20.000.000	10.000.000 to 19.999.999	4.000.000 to 9.999.999	3.999.999
Croatia	9	7	13	10	11
Germany	24	8	10	4	4
Italy	23	3	11	7	6
Spain	12	1	11	6	20

Table 1. Alexa rank results

Google's PageRank was examined at <http://checkpagerank.net/> page and results are shown in Table 2. Significantly small number of Croatian agencies have the lowest PageRank of 0 or 1 when compared to Italian, German and Spanish agencies. PageRank of 5 and above, which is hard to get, have five Spanish agencies, which is more than all agencies from other countries.

Travel agencies in:	Number of websites within specified ranges of PageRank values				
	0 to 1	2	3	4	5
Croatia	3	13	26	7	1
Germany	20	20	7	2	1
Italy	16	13	12	7	2
Spain	18	10	13	4	5

Table 2. Google's PageRank results

Table 3 shows results for mozRank. Precisely half the German agencies have mozRank values lower than 2, which is very poor result. Eighteen Spanish agencies outstand with mozRank value of 5 or greater. For comparison purposes, an 'average' mozRank of a page on the Internet is around 3 [9].

Travel agencies in:	Number of websites within specified ranges of mozRank values				
	0 to 1,99	2 to 3,99	4 to 4,49	4,5 to 4,99	5
Croatia	1	6	18	12	13
Germany	25	2	5	11	7
Italy	1	8	19	12	10
Spain	3	13	6	10	18

Table 3. MozRank results

Similar to the case of mozRank, half the German agencies fall into mozTrust category under 4, while only 9 agencies in other countries are in the same category, as shown in Table 4. Seventeen Spanish agencies also stand out with mozRank of 5,5 or greater. The boundaries of categories in Table 3 and Table 4 are not equally defined. The reason is that 155 websites have greater mozTrust than mozRank (15 websites have lower mozTrust than mozRank, and 30 websites have exactly the same value of both metrics).

Travel agencies in:	Number of websites within specified ranges of mozTrust values				
	0 to 3,99	4 to 4,99	5 to 5,24	5,25 to 5,49	5,5
Croatia	1	4	20	14	11
Germany	25	3	5	10	7
Italy	2	10	16	12	10
Spain	6	13	4	10	17

Table 4. MozTrust results

Results for Domain Authority (Table 5) show slightly better standings of Spanish agencies for values of at least 30. German agencies have eye catching poor results for Page Authority (Table 6) – 24 out of 50 have Page Authority value under 20, while only 4 agencies in other countries fall into this category. Since Page Authority is calculated for a single page, it has to be mentioned that evaluation was made for the homepage of websites. In 167 cases Page Authority had greater value than Domain Authority, while in 33 cases Domain Authority had greater value.

Travel agencies in:	Number of websites within specified ranges of Domain Authority values				
	14	15 to 19	20 to 29	30 to 39	40
Croatia	9	17	17	7	0
Germany	17	16	12	3	2
Italy	16	18	10	2	4
Spain	11	10	17	6	6

Table 5. Domain Authority results

Travel agencies in:	Number of websites within specified ranges of Page Authority values				
	19	20 to 29	30 to 39	40 to 49	50
Croatia	1	22	23	4	0
Germany	24	6	16	3	1
Italy	0	24	21	2	3
Spain	3	18	21	4	4

Table 6. Page Authority results

Travel agencies in:	Number of websites within specified ranges of iwebchk results				
	30 to 49,9	50 to 54,9	55 to 59,9	60 to 69,9	70
Croatia	9	18	11	12	10
Germany	12	15	14	8	1
Italy	20	12	6	10	12
Spain	11	7	14	9	9

Table 7. Iwebchk results

In addition to above metrics, SEO website analysis was made using free online tool available at <http://iwebchk.com/>. This tool takes into consideration Google's PageRank, Alexa rank, presence of metatags, text to HTML ratio, usage of headings, usage of alt tags for pictures, W3C markup and CSS validation, number of indexed pages, number of backlinks, pagespeed, whether website has robots.txt file and XML sitemap, and some more elements. Based upon these elements, tool generates a score as a percentage between 0 and 100. Results for agencies (table 7) show that 20

Italian agencies have score lower than 50%. Only one German agency has score greater than 70.

At the end, Table 8 shows average values for agencies in different countries for each metric. Spanish agencies have the best results in four metrics (Alexa, Page Authority, Domain Authority and iwebchk) while Croatian agencies have the best results in three metrics (PageRank, mozRank and mozTrust). Italian agencies have the poorest result by iwebchk, while German agencies have the poorest results in all other metrics.

Travel agencies in:	Arithmetic averages						
	Alexa Rank	PageRank	MozRank	MozTrust	Domain Authority	Page Authority	Iwebchk
Croatia	10.354.20	2,8	4,5	5,2	20,5	30,5	54,4
Germany	13.728.81	1,8	2,4	2,7	18,6	18,4	54,4
Italy	10.065.48	2,2	4,4	5,1	19,6	31,2	53,2
Spain	6.906.345	2,3	4,4	4,7	24,6	31,6	57,7

Table 8. Average values for each metric

5. Conclusion

Travel is highly competitive industry, and the internet is one of the most important media to reach to a customer. As internet users often use search engines to find offers and other information about wanted travel, the need to be present on search engine result page is common these days. Google is dominant search engine for most European internet users, so main focus of search engine marketing is directed towards Google. Although SEO generates expenses with no guarantee of return of investment, companies apply search engine optimization techniques to increase visibility of their websites on SERP. This research tried to find out SEO standings for travel agencies in four countries: Germany and three Mediterranean countries (Croatia, Italy and Spain). Research made on 200 websites was focused on popular metrics (Alexa rank, PageRank, Domain Authority, Page Authority, mozRank and mozTrust) and one SEO tool (<http://iwebchk.com/>). Results were higher for Spanish and Croatian agencies, while German agencies had lower results, especially for Alexa rank, Page Authority, mozRank and mozTrust. At the same time, results of iwebchk tool were, in average, quite close for all countries, which is not unimportant since this tool takes into result SEO applied directly on website. Results also showed there is a lot of space for improvements for most of analyzed websites.

The main strength of this research is that it comprises of seven different metrics, that gives more extensive picture of SEO for analysed websites. On the other hand, almost all used metrics don't take into consideration user experience (number of pages per

visit, visit duration, bounce rate, etc.). Another weakness of this research could be a quite small sample size (50 websites per one country).

Further researches could be directed towards usage of web 2.0 and web 3.0 technologies on travel agency websites on larger number of websites and possible searching for correlation between travel agency yearly income and usage of SEO. Another research could try to find out correlation between SEO metrics and positioning on SERP for popular search terms.

6. References

- [1] Serra Cantallops, A.; Ramón Cardona, J. & Galbis Matarredonda M. (2013). The impact of search engines on the hotel distribution value chain, *REDMARKA - CIECID - Unidad de Investigación en Marketing Aplicado-Universidad de A Coruña*, Año VI, Número 11, V2, pp.19-54, ISSN 1852-2300
- [2] Top 5 Search Engines in Europe from Mar 2013 to Mar 2014, Available from http://gs.statcounter.com/#all-search_engine-eu-monthly-201303-201403-bar, Accessed: 2014-04-01
- [3] <title>: the most important element of a quality Web page, Available from <http://www.w3.org/QA/Tips/good-titles>, Accessed: 2014-03-21
- [4] Meta Description, Available from <http://moz.com/learn/seo/meta-description>, Accessed: 2014-03-21
- [5] Xiaojie, X; Yuan, F. & Jian W. (2013). The Basic Principle and Applications of the Search Engine Optimization, *Proceedings of the 2012 International Conference of Modern Computer Science and Applications Advances in Intelligent Systems and Computing*, Vol. 191, pp 63-69.
- [6] Permatasari, H.P.; Harlena, S.; Erlangga, D. & Chandra, R. (2013). Effect of Social Media on Website Popularity: Differences between Public and Private Universities in Indonesia, *World of Computer Science and Information Technology Journal*, Vol. 3, No. 2, pp. 32-37, ISSN: 2221-0741
- [7] Markscheffel, B. & Eine, B. (2012). The Top 10 Alternative Search Engines (ASE) within selected Categories ranked by Webometric Indicators, *Collnet Journal of Scientometrics and Information Management*, 6(1), pp. 71-85.
- [8] Luduena, G.A.; Meixner, H.; Kaczor, G. & Gros C. (2013). A large-scale study of the World Wide Web: network correlation functions with scale-invariant boundaries, *European Physical Journal B*, 86, 348
- [9] Geetha, S. & Sathiyakumari, K. (2012). Backlink Analysis Using Mozrank Algorithm of Blogs, *International Journal of Computer Science & Application*, Vol. 1, No. 9, pp. 30-45, ISSN-2278-1080
- [10] What is MozTrust?, Available from <http://moz.com/learn/seo/moztrust>, Accessed: 2014-03-22
- [11] What is Domain Authority?, Available from <http://moz.com/learn/seo/domain-authority>, Accessed: 2014-03-22