

Marketing effectiveness of search engine optimisation: Digital solutions for business competitiveness

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Abstract. In the context of digital business transformation and growing competition in the field of internet marketing, the issue of strategic search engine optimisation has become increasingly relevant. Websites had turned into key channels of communication between a company and its consumers, and their effective promotion in search engines directly affects a company's profitability. The aim of the study was to identify the optimal digital tools for conducting competitive analysis within a specific market niche, as well as to evaluate their effectiveness in the process of developing a search engine optimisation (SEO) strategy for the enterprise. The study used methods of structural and functional analysis, comparative evaluation and content analysis of specialised SEO platforms. The article discussed tools, methods, and approaches to analysing the competitive environment in the digital space, which allowed building an effective SEO strategy to ensure a stable presence of the company in the online environment. A comprehensive review of the functional characteristics of tools such as Serpstat, Ahrefs, SimilarWeb, Netpeak Spider, and SE Ranking was conducted. The results of the study revealed that different tools have unique advantages: some in deep technical analysis, others in traffic assessment, user behaviour, or content management. Serpstat, Ahrefs, and SE Ranking demonstrated the highest functional versatility. At the same time, Netpeak Spider proved to be the most effective for technical auditing, and SimilarWeb for audience and traffic analysis. Their combined use made it possible to form a multi-level SEO strategy that took into account both technical and behavioural factors. The practical value lies in the ability to adapt the research results to the needs of businesses of any size, from small businesses to the corporate sector, in order to increase visibility, traffic, and competitiveness in the online space

Keywords: SEO strategy; competitive analysis; digital tools; search engine optimisation; online space; traffic

Introduction

In the context of the global spread of information and communication technologies in all spheres of human activity, websites have become relevant as an effective tool for business promotion and communication. The rapid transition of enterprises to the digital environment has led to increased competition, which, in turn, requires a systematic approach to studying the online space within the relevant market niche. This allows for a quick response to changes and ensures the stable positioning of the corporate website at the top of search results. To achieve this goal, companies need to pay increased attention to competitive analysis and search engine optimisation of web resources with the involvement of specialised marketers and SEO optimisers. Forming an effective SEO strategy in a dynamic

digital market is impossible without the comprehensive use of specialised analytics services. Each of them has its own advantages, allowing businesses to build a flexible, relevant and targeted promotion model adapted to the conditions of a specific market niche.

Researcher Yu.S. Pavlenko (2022) focused on the main aspects of search engine optimisation and web analytics tools. In the lecture notes, the author examined in detail modern traffic analysis technologies, key SEO principles, and practical approaches to improving the effectiveness of online promotion. Yu.S. Pavlenko (2022) emphasised the importance of integrating SEO tools with web analytics systems to achieve stable results in the digital environment. Special attention was paid to analysing user behaviour and

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adapting content to their needs. Researchers I.Z. Hnylyak-evych-Protts & S.V. Zinkova (2022) analysed methods for evaluating the effectiveness of website optimisation using traffic and conversion technologies. The authors identified the relationship between quality traffic and conversion rates, emphasising that only attracting the target audience ensures the effectiveness of SEO efforts. The article also discussed tools for analysing user actions and their practical application in the process of improving web resources. The results obtained allow for increasing the effectiveness of promotion by adapting the content and technical characteristics of the site. N.R. Ivanechko *et al.* (2021) investigated the process of forming a semantic core in the context of SEO optimisation. They focused on keyword selection algorithms, the logic of their structuring, and impact on the visibility of the site in search engines. The results of the study showed that a well-formed semantic core ensures a more accurate match between content and user queries, which, in turn, contributes to traffic growth. The researchers also emphasised the importance of regularly updating the core in line with changes in search behaviour.

Analyst K. Philip (2022) outlined a sequence of actions for conducting a conversion rate optimisation audit of a website. The author emphasised the importance of detailed analysis of the user journey, identifying conversion barriers and implementing microtests to improve performance. The publication also provided practical examples of optimising forms, navigation and calls to action (CTA). According to K. Philip (2022), a comprehensive audit makes it possible to find hidden problems that hinder the achievement of business goals, even with high traffic. Researcher C. Morris (2021) presented six creative ways to use traffic evaluators in the context of SEO. The article noted that these tools help identify competitors' weaknesses, assess potential niches for development, and improve the effectiveness of promotion strategies. C. Morris (2021) also emphasised the role of evaluators in identifying seasonal changes in audience behaviour and adjusting content plans. The author emphasised that integrating data from different sources allows for the creation of a more in-depth analytical model of user demand.

The relevance of the issue is also confirmed by publications in the field of digital marketing. According to V. Bondarenko & O. Omelianenko (2024), the advantage of SEO as a component of a digital strategy lies in its long-term effect, high profitability, and ability to form lasting relationships with the audience without the need for constant financial expenditure on advertising. Their study also outlined key challenges, including the difficulty of measuring immediate effects, dependence on changes in search algorithms, and high competition for positions in search results. This is consistent with the need for systematic monitoring of the competitive environment, which was explored in this article. In the context of the development of the digital economy, the issue of the effective use of search engine optimisation in the process of doing business in the Internet space requires in-depth analysis. It remains rele-

vant to summarise the tools and means that contribute to increasing the effectiveness of promoting goods and services, as well as strengthening brand recognition in order to increase the competitiveness of the enterprise in the face of growing competition. Therefore, the aim of this article was to identify key services for conducting competitive analysis of websites within a separate market niche and to evaluate the effectiveness of their application in marketing activities.

Materials and Methods

To achieve the research objective, a set of general scientific and applied methods was used, including structural and functional analysis, comparative evaluation, and content analysis of SEO tools. The structural-functional analysis method was used to study the logic of the structure and functioning of modern web resources, as well as the principles of website ranking in search engines. This method made it possible to identify the key functional components of digital platforms for SEO and analyse their role in shaping the visibility of a resource in organic search results. This approach was used to study the architecture of competing sites, typical technical characteristics, content structure, internal linking principles, and behavioural factors.

The comparative evaluation method was used to analyse the functional capabilities of five leading SEO services: Serpstat (n.d.), Ahrefs (n.d.), SimilarWeb (n.d.), Netpeak Spider (n.d.) and SE Ranking (Ultimate Online SEO tools, n.d.). The choice of these particular SEO services was determined not only by their leading position in the market, but also by a number of practical criteria. These platforms have different functionalities: each service specialises in a separate aspect of SEO – technical audit, traffic analysis, link profile building or semantic analysis, which allows for a comprehensive coverage of all stages of optimisation. As part of this method, a comparative table was developed covering more than ten key parameters, including technical audit, backlink analysis, position monitoring, semantic analysis, and other functions. This approach made it possible to reasonably identify the advantages and limitations of each tool depending on the tasks at hand.

Content analysis of SEO platforms was used to study interfaces, the logic of user interaction with system functionality, data collection and processing mechanisms, and to assess the level of process automation. Attention was paid to the traffic monitoring module, feedback tools, API integration capabilities, and reporting generation. This method made it possible to examine both official technical descriptions and the practical use of functions. The study also made active use of electronic resources to collect supporting data. The Internet Archive service (n.d.) helped to establish the age of websites and track changes in their structure over time. Google Search Settings (n.d.) tools were used to correctly configure regional search results when identifying competitors. An article related to internet marketing (The failure rate..., n.d.) was used to study behavioural metrics, bounce rates, and practical recommendations for reducing them. SimilarWeb (n.d.) and Google

Analytics (non-public internal data) services were used to assess the popularity of resources, traffic volumes, and traffic sources. Additionally, Serpstat (n.d.), Ahrefs (n.d.) and SE Ranking (Ultimate Online SEO tools, n.d.) were used to audit websites, identify errors and compile a semantic core.

As for the sequence of the study, market monitoring was first carried out to identify competing websites within the selected niche. The next stage was a technical and content audit of these resources, which included an analysis of external and internal factors affecting their visibility in search engines. A functional analysis of digital platforms was carried out with the development of own evaluation model based on the principles of multi-criteria analysis. The functional analysis consisted of studying the structure and capabilities of SEO platforms in terms of performing typical search optimisation tasks. The set of tools available on each platform, their logic, integration capabilities, data update frequency, interface convenience and reporting quality were evaluated. Modules for semantic analysis, technical audit, position monitoring, competitor analysis, and backlink profile building were studied, as were additional features such as API, white-label reports, and localisation. The evaluation model was built on the principle of multi-criteria analysis. A list of key features that are essential for SEO analytics was compiled: technical audit, link analysis, position monitoring, keyword management, interface usability, speed, integration with other services, reporting availability, process automation, and cost. Each criterion was given a weighting on a scale of importance, which was consistent with the practical needs of the business. Based on this structure, each tool was evaluated, and the results were recorded in a comparative table. The platforms were compared using the same parameters to ensure objectivity.

Results and Discussion

Given the current level of application of information and communication technologies in the field of entrepreneurship, which usually includes the presence of a corporate web resource, constant monitoring of competitors' websites within the company's market becomes an important component. This allows to maintain own market position. For this reason, businesses should focus on promoting own websites, which can be achieved through in-depth marketing analysis and the involvement of search engine optimisation specialists. SEO involves improving the website in terms of both search engines and user convenience by implementing internal (everything related to the website itself) and external (increasing the trust of search engines) methods. The main goal of SEO is to increase website traffic, which contributes to both monetisation for information platforms and customer acquisition for commercial ones (Pavlenko, 2022).

Before starting optimisation work, it is advisable to perform a market niche analysis. This step helps to form an understanding of the competitive landscape, which in turn allows for the identification of a website's weaknesses and the adoption of useful solutions that competitors have implemented. Competitor sites are usually classified

into three main types. Direct competitors are companies that sell similar goods or services, target the same audience, and operate within the same region. Indirect competitors are companies that work in a related field but offer a different range of products or services. Market leaders constitute a separate category – these are large-scale websites or aggregators with which smaller projects are not always able to compete directly. Competitors are searched for using search engines (SE) based on relevant queries. Most often, the first 10 positions in the search results are analysed. When searching by keywords, it is worth activating “incognito” mode to avoid personalised results. It is also advisable to set the region in the Search Settings (n.d.). If the top positions include competitors' landing pages, it is advisable to consider the entire website, not just a specific page.

A landing page is a separate page of a website or online store to which a user is directed from an advertisement. It is the starting point of a potential customer's interaction with the resource, so it should be as convenient, understandable and attractive as possible. If a company provides consulting services in several areas and runs ads on Google or Facebook, the page the banner leads to will be the target page. It is visited by those who are interested in the offer. When analysing competitors' web resources, it is important to clearly separate organic search results from advertising blocks, as this allows to get a more objective picture of the site's real position in search engines. During such an analysis, it is useful to pay attention to several key aspects. It is important to evaluate the site's interface, or usability, which directly impacts user behaviour. One should also take a detailed look at the website's architecture, its structure, sections, and content. It is useful to determine a site's interface with archival tools, such as the Wayback Machine (Internet Archive), which allows one to track the history of changes. An analysis of backlinks can be performed, for example, using the Ahrefs service (n.d.), which provides extended information on inbound links and domain authority. It is also advisable to check the number of indexed pages in search engines using the “site”: operator. Additionally, one should study website traffic metrics and other data using services like Serpstat, SimilarWeb, or Google Analytics.

When performing such an analysis, one should also pay attention to the bounce rate, which directly influences a site's ranking in search results. Google defines the bounce rate as the percentage of visits during which a user viewed only one page. This helps to understand how effective the interaction with the site is. If a site was created with the goal of keeping users on several pages, a high rate is a signal for refinement. But if the resource has a one-page format, this metric is not problematic. However, even a low rate can be a sign of certain issues. Specifically, rates of 0% or 100% often indicate spam traffic or errors in analytics settings. Such distortions can occur due to duplicate analytics scripts on the site or incorrect event tracking, which disrupts the accuracy of data collection. A bounce rate of up to 20% is considered optimal. A metric of 35% is considered average and requires additional attention. If the value exceeds

50%, it is a reason for a comprehensive analysis of the site's functionality with subsequent optimisation. To reduce the bounce rate, a number of marketing and technical measures should be applied. For example, the calculation method can be adapted to account for the time spent on a page, which is relevant when users are reading content without interacting with other site elements. It is also important to create high-quality landing pages that form a positive first impression, load quickly, are user-friendly, logically structured, and responsive on different devices. It is also advisable to turn off ads for keywords or on platforms that do not provide targeted traffic. The relevance and usefulness of content that accurately meets user queries significantly reduces the likelihood of an immediate exit from the site. In addition, it is important to motivate the user to explore additional content, for example, through "similar materials" or "recommended articles" blocks. An additional tool for improving the user experience is conducting short surveys, such as integrating content rating buttons, which allows for the identification of weaknesses on a page and their prompt resolution (The failure rate..., n.d.). Thus, effective (competitive analysis) is carried out with the help of specialised services and allows for site optimisation, ensuring a stable presence in search results.

Among the popular platforms for SEO analytics and competitive analysis, Serpstat (n.d.) ranks first as a comprehensive tool that provides wide opportunities to improve a website's visibility in search engines. Its functionality covers several key areas. The tool allows for detailed keyword analysis, which includes selecting relevant queries, and evaluating their frequency and competitiveness, which is the basis for forming an effective semantic core. Additionally, it offers competitor analysis, where users can research other sites, study their keywords, most successful pages, and promotion approaches, which helps in creating a customised SEO strategy. A separate Serpstat module is designed for position tracking – here user can observe the dynamics of changes in the ranking of a web resource for various queries, which allows for a quick response to a decrease in visibility. The platform also offers backlink analysis, which helps evaluate both the quantitative and qualitative characteristics of backlinks. One of the important functions is a technical site audit, which identifies errors that can prevent a resource from being effectively indexed by search engines. Serpstat supports content planning, allowing for the creation of optimised texts based on popular queries. Due to the brand monitoring function, users can track mentions of their project on the Internet, which is important for reputation management. Equally valuable is the domain comparison analysis function, which helps identify the competitive advantages and weaknesses of other market players. Serpstat presents all collected data in the form of analytical reports, which allows for effective control of SEO activities. The platform supports API integration, which ensures convenient interaction with other services.

A similar functional flexibility is demonstrated by Ahrefs (n.d.), one of the most well-known SEO analytics

tools, which is actively used by both marketers and technical optimisation specialists. Its keyword analysis is based on a large database that covers millions of queries, with detailed information on search volume, difficulty level, cost per click (CPC), and relevant variations. The competitive analysis module allows for the study of competitor promotion strategies: their traffic, landing pages, and keywords that ensure high rankings in the SERP. Among the main advantages of Ahrefs are site position tracking in search results, which helps to quickly adapt the SEO strategy to changes in Google's algorithms. The service pays more attention to backlink analysis – it provides in-depth feedback with information about the quality, source, and topic of backlinks for both the user's site and competitors. The technical audit function allows for the discovery of critical errors on a site that can affect its ranking. Additionally, Ahrefs provides content planning tools, specifically the Content Explorer function, which makes it possible to study the most effective publications in a chosen topic. There is also a brand monitoring feature that allows for a timely response to mentions on the Internet. Another useful tool is Link Prospecting, a module designed to find potential sites where backlinks can be placed to strengthen link mass. All this data is accompanied by advanced reporting, which enables strategic decisions to be made based on accurate metrics. The platform also provides integration with other services via API.

Another effective service, SimilarWeb (n.d.), specialises in in-depth analysis of traffic and user behaviour. It allows to estimate the total number of visits to the site, as well as the structure of traffic by channel: organic search, referral traffic, direct traffic, social networks, and paid advertising. The platform analyses the audience: user geography, age structure, interests, devices used – all this allows for a better understanding of the site's target audience. The service supports keyword research, particularly in terms of which queries bring visitors to the resource, allowing for the optimisation of the semantic core. Traffic source analysis includes identifying the most effective referrals and social platforms used by competitors, as well as assessing the relationships between domains. Due to the competitor comparison module, users can explore differences in traffic, audience, and promotion strategies, allowing to form a more accurate positioning strategy for own brand. Also worth noting is content analysis, which shows what type of information resonates most with the audience, and activity monitoring, which enables timely response to changes in user and competitor behaviour. The tool provides special data on mobile traffic, including information on the popularity of mobile applications. For ease of analysis, SimilarWeb generates graphs and reports that visually illustrate trends and supports APIs for integration with other systems.

Another important tool in the SEO specialist's arsenal is Netpeak Spider (In-depth SEO audit..., n.d.) – a programme for technical website auditing that works as a desktop crawler and allows for comprehensive verification of web resources. The main purpose of the service is

to quickly analyse internal factors that affect the indexing and ranking of a website. The tool scans the website in a similar way to search robots, identifying technical errors, duplicate pages, redirect chains, missing meta tags, markup errors, and other factors that negatively affect SEO. One of the key advantages of Netpeak Spider is the ability to flexibly configure scanning conditions: from limiting the depth of the crawl to excluding certain types of pages. The programme also supports integration with Google Analytics and Google Search Console, providing additional analytical data directly in the programme interface. It is worth noting the internal link analysis module, which makes it possible to evaluate the quality of the site's link structure – a critically important aspect for search engine optimisation. The service generates detailed reports in convenient formats (.xlsx, .csv, .pdf) with the ability to export data for further work. The user-friendly interface, regular updates, and high speed make Netpeak Spider an effective tool for identifying and eliminating technical problems on websites of varying complexity.

Another multifunctional service worth mentioning is SE Ranking (Ultimate Online SEO tools, n.d.). It is a cloud platform for comprehensive SEO support, covering position analysis, website audit, competitor research, backlink checking, and content planning. One of the key features of SE Ranking is accurate tracking of positions in search engines with the ability to select a region, language, device,

and even a search engine, which allows to build localised promotion strategies. The service also has functionality for collecting a semantic core, in particular the Keyword Suggestion tool, which provides a list of relevant queries with frequency, promotion complexity, and competitiveness. The competitor analysis module allows for the study of both paid and organic competitor campaigns, including keywords, ads, and traffic structure. The site audit in SE Ranking makes it possible to assess the technical condition of the resource, including analysis of loading speed, mobile responsiveness, HTTPS settings, and compliance with SEO requirements. Additionally, the service offers backlink monitoring, SEO report generation, as well as functionality for creating content plans and managing tasks within the team. The platform has a user-friendly interface, multi-user mode, and integrations with Google Analytics, Search Console, and reporting tools. Due to its versatility and adaptability, SE Ranking is actively used by freelancers, agencies, and large companies alike.

The tools described provide a comprehensive set of tools for in-depth analysis of the competitive environment, improvement of SEO strategy, and systematic market monitoring. Their use allows both marketers and technical specialists to increase the effectiveness of web resource promotion in a dynamic digital space. Each tool has its own advantages and disadvantages, all of which are listed in Table 1.

Table 1. Functional aspects of the tools

Functional aspect	Serpstat	Ahrefs	SimilarWeb	Netpeak Spider	SE Ranking
Keyword analysis	Yes	Yes	Limited	No	Yes
Search engine ranking monitoring	Yes	Yes	No	No	Yes
Competitive environment analysis	Yes	Yes	Yes	Limited	Yes
Backlink profile research	Yes	Yes	Limited	No	Yes
Technical audit of web resources	Yes	Yes	No	Yes	Yes
Assessment of internal structure and interlinking	Partially	Partially	No	Yes	Yes
Analysis of traffic sources and volumes	Limited	Limited	Yes	No	Yes
Analysis of audience behaviour characteristics	No	No	Yes	No	Partially
Generation of analytical reports	Yes	Yes	Yes	Yes	Yes
Content planning functionality	Yes	Yes	Indirectly	No	Yes
Online reputation monitoring	Yes	Yes	Yes	No	Limited
API and external integration capabilities	Yes	Yes	Yes	Yes	Yes
Support for geo-oriented analysis	Yes	Yes	Yes	Yes	Yes
Flexible scan parameter configuration	No	No	No	Yes	Partially
Project management tools and team collaboration support	Yes	Partially	No	No	Yes

Source: created by the author based on Serpstat (n.d.), Ahrefs (n.d.), SimilarWeb (n.d.), In-depth SEO audit with website spider tool (n.d.), Ultimate Online SEO tools (n.d.)

A comparative analysis of the functional capabilities of five leading tools – Serpstat, Ahrefs, SimilarWeb, Netpeak Spider, and SE Ranking – reveals both the strengths of each and their potential limitations in the context of search engine optimisation, technical auditing, and competitive analysis. Serpstat, Ahrefs, and SE Ranking are the most versatile in terms of functionality. They cover almost the entire spectrum of SEO specialists' needs – from keyword collection and clustering to in-depth backlink analysis, site

auditing, position monitoring, and reporting. In particular, Ahrefs (n.d.) demonstrates one of the most powerful external link analysis systems and has a large keyword database, making it an indispensable tool for building an external optimisation strategy. Serpstat (n.d.), in turn, provides broad integration of analytical modules and is notable for its good balance between technical audit and content planning. Although SE Ranking is somewhat inferior in terms of the depth of backlink analysis, it is an effective solution

for comprehensive SEO project management, especially in small and medium-sized businesses.

SimilarWeb (n.d.) occupies a separate niche among the tools considered – it is primarily focused on analysing web traffic, user behaviour, and the competitive environment from the perspective of marketing analytics rather than classic SEO optimisation. Its strength lies in analysing traffic sources, geography, demographics, and user interests, which allows marketers to make informed decisions about brand positioning. The lack of tools for technical auditing or working with the semantic core makes it an additional, rather than a self-sufficient, tool in an SEO strategy. Netpeak Spider (Ultimate Online SEO tools, n.d.) is a highly specialised software solution that focuses on technical SEO auditing. It is a tool for deep scanning of websites, detecting indexing errors, broken links, duplicate content and other technical issues that directly affect ranking. Its use is advisable as a supplement to other services (such as Ahrefs or Serpstat), since it does not perform tasks such as keyword collection, traffic analysis, or position monitoring. Thus, the choice of tool should be based on specific tasks: for comprehensive SEO analysis, it is worth turning to Serpstat, Ahrefs or SE Ranking; for marketing analytics – to SimilarWeb; and for in-depth technical analysis – to Netpeak Spider. Together, these services form an effective ecosystem of tools for increasing the competitiveness of digital projects in the search environment.

To provide a more complete picture, it is advisable to compare the conclusions with the findings of other researchers who have worked in this or related fields. According to R. Ranjpour (2024), the strategic implementation of SEO is a key factor in the marketing effectiveness of companies operating online. The author emphasised that it is high-quality competitive analysis that allows the content, structure and technical parameters of web resources to be adjusted in accordance with search engine algorithms. This confirms the conclusions of this study about the need to use tools such as Serpstat or Ahrefs for adaptive analysis of the competitive environment. In their article, A. Erdmann *et al.* (2022) emphasised the importance of long-term strategic keyword selection as a factor in sustainable SEO development. Unlike this study, which focused on a comparative functional analysis of SEO services, A. Erdmann *et al.* (2022) considered semantic planning as an independent marketing practice. However, both approaches complement each other: semantic strategy requires in-depth analytics, which was provided by the platforms mentioned in the author's work. U.F. Ahmad *et al.* (2022) pointed out the close connection between the effectiveness of SEO strategy and brand positioning in the digital environment. The authors argued that SEO is not only a technical process but also an element of reputation building, which is fully consistent with the conclusions regarding the importance of monitoring online reputation using services such as SE Ranking. R. Arora & P. Tyagi (2024) conducted a comparative study between SEO and SEM strategies. They noted that SEO has a long-term effect but requires constant

updating and monitoring of the technical characteristics of the site. This confirms the relevance of using Netpeak Spider, which, according to the analysis, best performs technical audit tasks. J. Ologunbe & E. Taiwo (2023) emphasised the importance of integrating SEO and SEM strategies to achieve high brand recognition in their study of e-commerce companies. In this context, Ahrefs and SimilarWeb, which were analysed in this study, provide data not only on organic traffic but also on paid promotion channels, which highlights their versatility.

Yu.A. Domasheva & O.V. Zozulov (2016) proposed different approaches to evaluating the effectiveness of online marketing communications in their study. They focused on integrated communication channels and their impact on consumer behaviour. The researchers noted that strategic interaction between digital channels contributes to increased brand awareness and user engagement. The study also emphasised the importance of building long-term relationships with the audience through personalised digital messages. Another important aspect was raised in the work of I. Kulyniak & D. Holovetskyi (2023), who analysed the impact of digital marketing tools on corporate management. The authors emphasised that only with a competent combination of technical, analytical and content components can an SEO strategy be effective in the long term. The researchers also noted that digital platforms have not only instrumental but also strategic value, as they allow management decisions to be made based on reliable and dynamic analytics. This approach directly correlates with the purpose of this work – to justify the choice of the most functional and relevant platforms for SEO analysis. Research by A.K. Balachandar & A. Jayanthiladevi (2023) showed that in the context of e-commerce, internet marketing requires the integration of multiple platforms and constant analysis of consumer behaviour. Their approach to traffic analysis is consistent with the conclusions of this work, where one of the key aspects is the use of SimilarWeb for in-depth analysis of traffic sources. S. Schultheiß & D. Lewandowski (2021) focused on the subjective views of SEO specialists and content managers. They found that SEO is perceived not only as a set of technical actions, but as a cross-functional practice. This echoes the applied approach to SEO as a systemic tool that encompasses technical, content, and behavioural components. S. Snehil (2024) emphasised that the use of SEO practices has a positive impact on the overall effectiveness of digital marketing, especially in highly competitive environments. The author supported the idea of the need for a flexible approach to SEO tools, which fully corresponds to the recommendations set out in the work on the combined use of Ahrefs, Serpstat and SE Ranking. Researchers I. Pererva & O. Myronova (2023) also studied the impact of SEO in digital marketing. D. Mladenović *et al.* (2023) conducted an applied study in the medical field, specifically in the area of blood banks, and found that the structural-functional approach to SEO, which was also used in this study, provides a significant increase in website visibility. This demonstrates the versatility of the

methodology, which was also used in this study, in the context of business competition.

The study by M. Anttila (2021) on voice search optimisation added further perspective. The author noted that the specifics of voice search require a special content structure and optimisation of loading speed, which somewhat expands the scope of classic technical SEO. These aspects were not the subject of in-depth analysis in this study, but they represent a promising direction for further research. J.P. Sheffield (2020) explored how SEO integrates into the business communication system, especially in terms of content management. The author argues that understanding SEO principles should be part of the training of professionals in the field of PR and business communications. This position is entirely consistent with observations about the need for an interdisciplinary approach to SEO strategies. The results of a meta-analysis conducted by P. Usmany *et al.* (2024) demonstrated the high overall effectiveness of SEO as a marketing strategy in various industries. This study emphasised that optimisation should be based on continuous verification of the effectiveness of the chosen solutions. This approach was implemented by combining tools with different functional advantages to form a complete SEO picture. The work of Z. Zulkifli *et al.* (2022), although related to educational technologies, demonstrates the effectiveness of a meta-analytical approach to evaluating complex interdisciplinary models. This is in line with the desire to combine several tools and methods to achieve the most accurate result. The results of the study are generally consistent with current international approaches to SEO strategies, confirm their effectiveness, and demonstrate the feasibility of combining different analytical services depending on the specifics of the business and the tasks at hand. D. Giomelakis (2023) emphasised the importance of semantic search optimisation in the context of news media. The author found that proper data structuring, tagging, and content organisation based on semantic relationships significantly affect the visibility of materials in search engines. This study revealed the importance of semantics not only for technical optimisation but also as a tool for editorial policy and journalistic practice. Despite the industry-specific nature of the study, its findings confirm the general trend towards the growing role of contextual relevance in modern SEO, which is consistent with the approaches to structuring the semantic core discussed in this study. As can be seen from the discussion, the results of the study confirmed the effectiveness of using modern SEO tools for strategic competitive analysis and optimisation of website positions in search results.

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Conclusions

Given the trends in digital business transformation, manifested in increased competition in the online environment and the strengthening role of search engines as the main source of traffic, search engine optimisation of web resources is a key tool for ensuring brand recognition. In this context, it was important to conduct regular competitive analysis and technical audits to identify weaknesses in a timely manner, study the experience of market leaders, and adapt own SEO strategy. The services proposed in the study – Serpstat, Ahrefs, SimilarWeb, Netpeak Spider, and SE Ranking – are notable for their high level of functional variability and allow specific tasks to be solved within the overall optimisation process. Serpstat and Ahrefs proved to be the most balanced tools for in-depth SEO analytics, including working with keywords, link profiles, and technical audits. SE Ranking, despite its somewhat limited analytical capabilities compared to the above, provides a user-friendly interface, support for teamwork, and adaptive position control mechanisms. SimilarWeb provides unique opportunities for studying traffic and audience behaviour patterns, while Netpeak Spider serves as a highly specialised tool for technical analysis of website architecture.

Developing an effective SEO strategy requires not only the availability of tools, but also an understanding of their role in the broader marketing context. Using several platforms with different functional characteristics makes it possible to adapt the strategy to the conditions of a specific market niche, which is especially important in the face of growing competition. A comprehensive approach based on technical auditing, traffic analysis, semantic core and behavioural metrics not only ensures search visibility but also strategic flexibility in a dynamic digital environment. Further research should focus on the integration of SEO tools with artificial intelligence technologies, as well as on studying the specifics of voice and local search, which opens up new opportunities for personalisation and adaptation of SEO strategies to the modern challenges of digital marketing.

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Маркетингова ефективність пошукової оптимізації: цифрові рішення для бізнес-конкуренції

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Анотація. В умовах цифрової трансформації бізнесу та зростання конкуренції у сфері інтернет-маркетингу питання стратегічної пошукової оптимізації набуває актуальності. Веб-сайти перетворюються на ключові канали комунікації між компанією та споживачем, а їх ефективне просування в пошукових системах безпосередньо впливає на прибутковість підприємства. Метою дослідження було визначення оптимальних цифрових інструментів для проведення конкурентного аналізу в межах окремої ринкової ніші, а також оцінка їх ефективності у процесі розробки стратегії пошукової оптимізації (SEO) підприємства. У межах дослідження застосовано методи структурно-функціонального аналізу, порівняльного оцінювання та контент-аналізу спеціалізованих SEO-платформ. У статті розглянуто інструменти, методи та підходи до аналізу конкурентного середовища в цифровому просторі, що дозволяє вибудовувати ефективну SEO-стратегію для забезпечення стабільної присутності компанії в онлайн-середовищі. Проведено комплексний огляд функціональних характеристик таких інструментів, як Serpstat, Ahrefs, SimilarWeb, Netpeak Spider та SE Ranking. За результатами дослідження виявлено, що різні інструменти мають унікальні переваги: одні – в глибокому технічному аналізі, інші – в оцінці трафіку, поведінки користувачів чи управлінні контентом. Найвищу функціональну універсальність продемонстрували Serpstat, Ahrefs та SE Ranking. Водночас Netpeak Spider виявився найбільш ефективним для технічного аудиту, а SimilarWeb – для аналізу аудиторії та трафіку. Їх комбіноване використання дозволяє формувати багаторівневу SEO-стратегію з урахуванням як технічних, так і поведінкових факторів. Практична цінність полягає у можливості адаптації результатів дослідження до потреб бізнесу будь-якого масштабу – від малого підприємництва до корпоративного сектору з метою підвищення видимості, трафіку та конкурентоспроможності в онлайн-просторі.

Ключові слова: SEO-стратегія; конкурентний аналіз; цифрові інструменти; пошукова оптимізація; онлайн-простір; трафік