IMPACT OF DIGITAL MARKETING ON THE PERFORMANCE OF COMPANIES IN THE AGRICULTURAL SECTOR OF SERBIA

Branko Mihailović1, Katica Radosavljević2, Vesna Popović3, Anton Puškarić4
*Corresponding author E-mail: brankomih@neobee.net

ARTICLE INFO
Original Article
Received: 05 February 2024
Accepted: 21 February 2024
doi:10.59267/ekoPolj2401173M
UDC 004.946:339.138
334.72:631(497.11)

ABSTRACT
This paper explores the impact of digital marketing on the business operations of companies in the agricultural sector of Serbia. Accordingly, the research objective is to determine critical success factors of digital marketing channels in companies within this sector. Given the stated research objective, the following general hypothesis has been formulated: digital marketing channels such as effective presence on social media, website quality, online sales and search engine optimization have a significant positive impact on the business performance of companies in the agricultural sector in Serbia. Successful implementation of these types of digital marketing channels by companies is expected to lead to increased visibility, engagement of the target audience, and improved sales. Consequently, the results of empirical research provide more insightful perspectives on the state of this field, identifying specific aspects of digital marketing that significantly contribute to the business performance of companies in the agricultural sector of Serbia.

Keywords:
digital marketing, agricultural sector, business performance, factor analysis.

JEL: M31,M37, Q10, Q13

Introduction
Agriculture, much like various other sectors in the modern world, has undergone significant transformations due to the adoption of intensification technologies, the globalization of agri-food markets, and the financialization of both production and
consumption (Ioris, 2018). These profound changes have reshaped the landscape of agricultural practices, introducing new dynamics and challenges that require a multifaceted approach to address. The integration of advanced technologies, the interconnectedness of global agri-food markets, and the increased financial aspects influencing production and consumption have collectively contributed to the evolution of agriculture into a more complex and interconnected system.

The agricultural production market in Serbia is undergoing rapid transformations as it adapts to global trends, particularly the dynamics of the Internet economy (Ljutić et al., 2016). This shift signifies a profound change in the way agricultural products are produced, marketed, and consumed. With the advent of digital technologies and the growing influence of the Internet, the traditional methods of agricultural commerce are evolving to align with the demands of a more interconnected and technologically driven marketplace. This adaptation to global trends not only reshapes the landscape of agricultural practices but also opens up new opportunities and challenges for stakeholders within the Serbian agricultural sector.

All categories of companies in the agricultural sector of Serbia (micro, small, medium, and large) are most prevalent, in terms of quantity, in the Belgrade region, followed by the Vojvodina region, then the Šumadija and Western Serbia region, and finally in the South and East Serbia region (Dimitrijević et al., 2021). Regarding their impact on economic development, evaluated through GDP, employment figures, and turnover, the scenario remains consistent. The most advanced enterprises are concentrated in the Belgrade region, whereas the least developed ones are situated in the South and East Serbia region (Dimitrijević et al., 2021). Unfortunately, the link between primary agriculture and other sectors such as processing industry, trade, tourism, education, and more is currently weak (Aničić & Paraušić, 2020).

Research on digital marketing in developing countries, particularly concerning agricultural products, is still in need of enhancement, particularly when viewed from the consumer’s perspective (Fitriana et al., 2024). There exists a gap in understanding the dynamics of digital marketing’s impact on consumer behavior and preferences within these regions. A comprehensive exploration of how digital marketing strategies influence consumers in the context of agricultural products is essential for uncovering nuanced insights. Bridging this gap in research will contribute valuable knowledge that can inform effective digital marketing strategies tailored to the unique characteristics and needs of consumers in developing economies.

It is evident that digital transformation has become indispensable in modern business, especially in the agro-industry facing a dynamic market and the need for a more efficient marketing approach. This paper aims to explore the complex dynamics of digital marketing, with a particular focus on key channels such as social media presence, website quality, online sales, and search engine optimization (SEO). The introduction of digital marketing strategies in the agro-sector requires a holistic approach, encompassing an analysis of market trends, technological innovations, and specificities.
of the agro-industry. We assume that the successful implementation of these strategies has the potential to significantly enhance the company’s visibility, increase audience engagement, attract new customers, and result in sales growth.

Extensive evidence suggests that engaging in e-commerce provides a significant opportunity for reducing costs and enhancing demand (Zeng et al., 2017). The transformative impact of e-commerce extends beyond mere financial considerations, touching upon various facets of business operations. This digital avenue not only offers the potential for streamlining costs associated with traditional business processes but also serves as a dynamic platform for augmenting customer demand. The utilization of e-commerce introduces efficiencies that extend across the entire supply chain, influencing procurement, production, distribution, and customer engagement.

Within the dynamic trade of agro-products in Serbia, digital marketing represents a crucial factor for companies aiming to achieve sustainable growth. Global trends, rapid technological advancements, and the evolution of consumer habits dictate the need for adapting traditional marketing approaches. The agro-sector, as a vital part of Serbia’s economic structure, faces challenges and opportunities arising from digitization. With the ubiquity of the internet and widespread availability of mobile devices, consumers increasingly rely on digital channels for product information and purchase decision-making.

**Literature review**

The process of digitization has the potential to bring about fundamental transformations in the relationships among various stakeholders in the agricultural value chain (Kosior, 2018). This includes altering the dynamics between technology providers, input suppliers, farms, traders, processing units, retailers, and consumers. As digitization advances, it introduces novel opportunities and efficiencies, reshaping how information is shared, transactions are conducted, and decisions are made across the entire agricultural ecosystem. This digital revolution is poised to impact each stage of the value chain, promoting collaboration, transparency, and innovation for sustainable agricultural practices. Namely, digital technology helps SME’s move faster and more competitive in national and international context. The effective free market is basic point of SME’s (Munandar & Firmansyah, 2018). Digital technology serves as a catalyst for Small and Medium Enterprises (SMEs), enabling them to operate more swiftly and compete effectively on both national and international fronts. The efficient functioning of a free market is foundational for SMEs, and digital advancements play a pivotal role in ensuring their agility, adaptability, and competitiveness.

In modern agricultural practice, digitization plays a key role in achieving success and sustainability. Access to the Internet is a vital factor for the digitization of agriculture, enabling the connection of farmers with other actors in the sector and the use of digital technologies (Petrović et al., 2023). Digitization of agriculture brings significant effects, contributing to economic, social and environmental sustainability (Petrović et al., 2022). Influencer marketing, through social networks such as Facebook, Instagram,
YouTube, provides farmers with the opportunity to promote products and brands, as well as gain knowledge about new technologies (Mandušić et al., 2023).

The digital economy, serving as a pivotal force driving innovation, competitiveness, and growth, is increasingly essential for advancing economic development further (Spalević et al., 2018). Companies like “My Food” utilizing online technologies, particularly highlight the significance of online marketing as an integral component of their digital marketing strategy (Zogović, 2017). Utilizing a variety of digital platforms is crucial for agricultural businesses aiming to boost visibility, engage with target audiences, and establish a robust online presence (Brits, 2016). This multifaceted approach involves utilizing social media platforms, content marketing strategies, and other digital channels. Social media platforms provide a dynamic space for connecting with audiences, sharing updates, and fostering community engagement. Concurrently, strategic content marketing helps convey the brand’s story, expertise, and values. By integrating these efforts across diverse digital channels, agricultural businesses can effectively build and reinforce their brand presence in the competitive online landscape.

In the context of agriculture, education and training are key to success. Work to reduce migration, especially among young people, requires strengthening the marketing and promotion of villages and tourism (Blanuša et al., 2021). Research shows that digital marketing capabilities positively influence the market performance of small and medium-sized enterprises in the agro-industry (Phiri, 2020, a). In “Empowering Agribusiness with Digital Innovation for Emerging Market” (Srinivasan, 2018) the focus lies on leveraging digital innovation to empower agribusinesses in emerging markets. The chapter delves into strategic marketing issues within these markets, offering insights and solutions to enhance the role of digital innovation in agribusiness operations. Srinivasan’s work contributes valuable perspectives on navigating challenges and harnessing opportunities in the evolving landscape of agribusiness within emerging markets.

Digital transformation in agriculture also plays a key role in the global context. A digital marketing strategy can be aimed at the company’s strategic goals, enabling business development (Hall, 2023). Digital marketing has developed into an integral component of all marketing campaigns, becoming a key success factor (Bojkić et al., 2016). In the face of globalization changes and heightened demand for agricultural products, digital marketing is emerging as a sustainable means to enhance competitiveness in agriculture (Bose & Kiran, 2021).

The adoption of contemporary digital marketing technologies has the potential to expedite the product distribution process and enhance the efficiency of the distribution system in agricultural enterprises (Nezamova & Olentsova, 2021). The suitability of emerging technologies (cloud technologies, big data, artificial intelligence, robotics, open interfaces (API), biometrics, distributed registries, mobile contactless technologies) employed by agribusiness representatives is examined (Korobeynikova et al., 2018). For example, the examination of the suitability of emerging technologies for agribusiness encompasses a comprehensive evaluation of various cutting-edge tools.
and cloud technologies offer scalable and flexible computing resources, facilitating efficient data storage and processing.

Digital marketplaces serve as crucial institutions, harnessing digital technology to facilitate trade services between buyers and sellers (Clasen & Mueller, 2006). The analysis of digital marketing resources and capabilities highlights their strategic importance in navigating a challenging digital environment (Day, 2011). The emphasis is on recognizing the prerequisites essential for the progress of mobile marketing in agricultural businesses (Shvydenko, 2014). Namely, Shvydenko (2014) explores the economic and organizational factors that serve as prerequisites for the successful implementation of mobile marketing strategies in the agricultural sector. The article likely provides valuable insights into the intersection of mobile technology and marketing strategies specific to agricultural contexts.

Digital marketing presents both challenges and opportunities in rural areas. Studies indicate that it is more effective than traditional methods, and users in these areas are more receptive to its adoption (Ravi & Rajasekaran, 2023). As the global population continues to grow, the agri-food sector faces increasing pressure, making digital marketing essential for exploring innovative solutions to meet the rising demand for food (Bowen & Morris, 2019). Given the accessibility of digital technology, enterprises have the chance to collect market and consumer information, adjusting their tools in response to shifts in consumer behavior (Borisova et al., 2020). Improving e-business and e-marketing in agribusiness requires adapting business and marketing strategies in light of digital transformation (Stojoska, 2023). In these circumstances, e-commerce has become a viable solution for linking agribusinesses with consumers within the food marketing system (Carpio & Lange, 2015). E-commerce provides a platform for these entities to engage, facilitate transactions, and streamline the distribution of agricultural products to consumers in a more direct and efficient manner. This approach allows for improved accessibility and convenience in the food supply chain.

Digital marketing holds a crucial position in addressing the objectives and key success indicators of the agricultural sector (Singh et al., 2020). Acknowledging the strategic importance of digital marketing resources and capabilities is crucial in the face of this challenging digital environment (Phiri, 2020, b). Recognizing the pivotal role that digital marketing plays is crucial for navigating and succeeding in the dynamic landscape of the online world. By harnessing relevant resources and developing robust capabilities in digital marketing, businesses can effectively adapt to the ever-evolving digital environment, ensuring their competitiveness and relevance in the modern market.

**Materials and methods**

The research methodology of this paper is based on: 1) desk research of existing literature and 2) empirical research on a sample of 116 companies in the agricultural sector of Serbia, which were surveyed in the period September - October 2023. The first step includes a thorough analysis of the relevant literature related to the impact of
digital marketing on the business operations of companies in the agricultural sector. This literature review presents a theoretical framework for formulating a general hypothesis and identifying the key variables of digital marketing that were investigated in the empirical part.

Empirical research was conducted by surveying 116 companies in the agricultural sector in Serbia. The survey is focused on collecting data on current digital marketing strategies, level of presence on social networks, quality of websites, volume of online sales, application of SEO techniques, as well as other digital marketing variables. The data was collected through an online survey during September and October 2023. For the analysis of empirical data, factor analysis was used, which enables the identification of key factors and mutual connections between different aspects of digital marketing and business performance of companies in the agricultural sector of Serbia.

This statistical technique provides a systematic approach to understanding the complexity of factors that influence the success of digital marketing strategies in the specific context of agro-industry in Serbia. The survey was designed with the aim of covering various aspects of digital marketing, including specific challenges and opportunities that appear in the business of companies in the agricultural sector of Serbia. The questions were structured to obtain quantitative data, allowing precise analysis and quantification of responses.

A sample of 116 companies was selected taking into account: diversity of company size (small companies: 65%, medium: 33%, large: 2%), geographical distribution (The Belgrade region, Vojvodina region, and the Šumadija and Western Serbia region constitute 81% of the selected sample) and type of production (plant-based food production: 43%, animal food production: 32%, mixed food production: 13%, service activities in agriculture: 12%). This contributes to the representativeness of the sample and the validity of the results of empirical research for wider business contexts in the agricultural sector. After data collection, a factor analysis was conducted, which was used to identify key factors associated with the success of digital marketing strategies.

Consequently, this analysis enables the grouping of digital marketing variables into relevant factors, thus facilitating the interpretation of the complexity of interactions among the various elements of digital marketing. Accordingly, reliable and relevant information is provided that provides a thorough insight into the impact of digital marketing variables on the business operations of companies in the agricultural sector of Serbia.

Results and Discussion

The examination of the impact of digital marketing on the performance of companies in the agricultural sector of Serbia reveals insightful results, marking a significant stride in understanding the dynamics of contemporary business strategies. The research focuses on dissecting various facets of digital marketing channels, including: social media presence,
• website quality,
• content marketing,
• SEO,
• online advertising and influencer marketing, among others.

It is anticipated that the successful utilization of these digital marketing channels will result in enhanced visibility for these companies, increased engagement with their target audience, and ultimately, improved sales. By effectively leveraging these channels, companies in the agricultural sector in Serbia can expect to achieve substantial growth and success in their endeavors.

Through empirical data and factor analysis, the study aims to unravel the nuanced relationships between these digital marketing variables and the overall performance of agribusinesses. The subsequent discussion delves into the implications of the findings, shedding light on how these insights can inform strategic decisions and shape the future landscape of digital marketing in the agricultural sector of Serbia.

The question: “How does your company conduct digital marketing (please check the appropriate options)?” yielded the following results:

• Independently - without engaging professional agencies: 51%;
• In collaboration with an internal team and professional agencies: 34%;
• Exclusively using professional digital marketing agencies: 12%;
• We have no activities in the field of digital marketing: 3%.

The survey results indicate diverse approaches to digital marketing among the companies surveyed. A significant portion opts for independent management of digital marketing without involving external agencies, showcasing a preference for in-house strategies.

Another notable approach is collaborative efforts, with companies working alongside both internal teams and professional agencies to navigate the complexities of digital marketing. Additionally, a noteworthy percentage exclusively relies on professional digital marketing agencies, demonstrating a preference for outsourcing expertise in this field.

A small percentage of companies reported having no activities in the realm of digital marketing, suggesting a limited or non-existent presence in this aspect of business promotion. The structure of social media usage by companies in the agricultural sector of Serbia is illustrated in Graph 1.
Graph 1. Structure of social media usage by companies in the agricultural sector of Serbia

![Bar chart showing social media usage percentages]

**Source:** Author’s research

In the survey research, digital marketing variables were rated on a scale from 1 (minimum value) to 5 (maximum value) based on their impact on the performance of companies in the agricultural sector of Serbia (Table 1). This served as the starting point for obtaining empirical data, i.e., ratings for individual variables, which constitute the input for factor analysis.

**Table 1.** Selected variables of digital marketing that may impact the business operations of companies in the agricultural sector of Serbia

<table>
<thead>
<tr>
<th>Serial number</th>
<th>Variables of digital marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Presence on social media</td>
</tr>
<tr>
<td>2</td>
<td>Website quality</td>
</tr>
<tr>
<td>3</td>
<td>Content marketing</td>
</tr>
<tr>
<td>4</td>
<td>SEO (search engine optimization)</td>
</tr>
<tr>
<td>5</td>
<td>Online advertising</td>
</tr>
<tr>
<td>6</td>
<td>Email marketing</td>
</tr>
<tr>
<td>7</td>
<td>Influencer marketing</td>
</tr>
<tr>
<td>8</td>
<td>Content on YouTube and other video platforms</td>
</tr>
<tr>
<td>9</td>
<td>Online sales</td>
</tr>
<tr>
<td>10</td>
<td>Mobile marketing</td>
</tr>
<tr>
<td>11</td>
<td>Website and social media analytics</td>
</tr>
<tr>
<td>12</td>
<td>Online reputation and review management</td>
</tr>
<tr>
<td>13</td>
<td>Interactive content</td>
</tr>
<tr>
<td>14</td>
<td>Chatbots and customer support automation</td>
</tr>
<tr>
<td>15</td>
<td>Customized content for targeted segments</td>
</tr>
</tbody>
</table>

**Source:** Author’s research
A factorial simplicity index is constructed using the quartimax transformational criteria proposed by Carroll, Wrigley, Neuhaus, and Saunders (Kaiser, 1974). This index can be applied to each row individually as well as to a factor pattern matrix as a whole and the index ranges from zero to one, indicating the level of simplicity (Kaiser, 1974). This criterion is proposed as a test measure to assess the quality of the correlation matrix in factor analysis. Table 2 shows the scale for the evaluation of levels MSA criterion (measure of sampling adequacy).

| MSA ≥ 0.9 | marvelous | (desirable value) |
| MSA ≥ 0.8 | meritorious | (very good) |
| MSA ≥ 0.7 | middling | (quite good) |
| MSA ≥ 0.6 | mediocre | (mediocre) |
| MSA ≥ 0.5 | miserable | (very bad) |
| MSA < 0.5 | unacceptable | (non-desirable value) |

*Source: Kaiser, 1974;*

The scale serves as a guideline for researchers to assess the adequacy of their sample size and correlation matrix in the context of factor analysis, helping them determine the suitability of their data for extracting meaningful factors. This evaluation is crucial for ensuring the reliability and validity of the factor analysis results. Table 3 presents the empirical values of the so-called Kaiser-Meyer-Olkin (KMO) criteria and Bartlett’s test. They represent a valuable basis for assessing the representativeness of the selected sample in terms of the application of statistical factor analysis. As already stated the value of this criterion ranges between 0 and 1, where higher values indicate better convenience of the sample. In this case, a value of 0.817 is considered high, indicating an adequate sample for factor analysis. This high value suggests that the variables in the sample share enough common variance, which is crucial for successful factor analysis.

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</th>
<th>.817</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bartlett’s Test of Sphericity</td>
<td></td>
</tr>
<tr>
<td>Approx. Chi-Square</td>
<td>578.431</td>
</tr>
<tr>
<td>Df</td>
<td>141</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
</tr>
</tbody>
</table>

*Source: Author’s research*

Bartlett’s test tests the hypothesis “Variables are uncorrelated” and estimates the probability of rejecting that hypothesis. In this case, a low p-value (Sig. = .000) indicates a significant correlation between the variables. The chi-square value (578.431) and the number of degrees of freedom (141) indicate that the results are statistically significant, rejecting the hypothesis of non-correlation of the variables. Accordingly, it can be concluded that there is a statistically significant correlation between the relevant variables of digital marketing in the companies in the agricultural sector of Serbia that are included in the sample. The conducted tests show that the selected sample is suitable for factor analysis. This is supported by the high value of KMO criteria, while on the other hand,
Bartlett’s test values show that there is a statistically significant correlation between digital marketing variables, which additionally justifies further analysis of factors that influence the performance of companies in the agricultural sector of Serbia. Table 4 illustrates the factors influencing the impact of digital marketing on the performance of companies in the agricultural sector of Serbia: variable coverage and % variance.

**Table 4.** Factors influencing the impact of digital marketing on the performance of companies in the agricultural sector of Serbia: variable coverage and % variance

<table>
<thead>
<tr>
<th>Number of factors</th>
<th>Name of the extracted factor</th>
<th>Variable coverage</th>
<th>Percentage of variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social Presence and Online Marketing</td>
<td>Presence on social media, website quality, content marketing, SEO, online advertising, influencer marketing, and other aspects of digital marketing related to the online presence of the company</td>
<td>41.426</td>
</tr>
<tr>
<td>2</td>
<td>Mobile Marketing</td>
<td>Mobile advertising and customized applications for mobile devices</td>
<td>14.025</td>
</tr>
<tr>
<td>3</td>
<td>Interactive Content and Support</td>
<td>Interactive content (such as quizzes, surveys, contests) and customer support through chatbots and automation</td>
<td>9.098</td>
</tr>
<tr>
<td>4</td>
<td>Analytics and Optimization</td>
<td>Website and social media analytics, as well as optimization through tracking the success of marketing activities</td>
<td>8.625</td>
</tr>
<tr>
<td>5</td>
<td>Online Sales and Reputation</td>
<td>Online sales (e-commerce, electronic ordering) and management of online reputation and reviews</td>
<td>6.599</td>
</tr>
<tr>
<td>6</td>
<td>Video Content and Marketing</td>
<td>Content on YouTube and other video platforms, as well as marketing activities related to the video format</td>
<td>6.051</td>
</tr>
<tr>
<td>7</td>
<td>Customized Content for Segments</td>
<td>Customized content for targeted segments, personalization, and directing content to specific user groups</td>
<td>4.195</td>
</tr>
<tr>
<td>8</td>
<td>Email Marketing</td>
<td>Email marketing and communication via electronic mail</td>
<td>3.323</td>
</tr>
</tbody>
</table>

*Source: Author’s research*

The research is based on the following general hypothesis: digital marketing channels such as effective presence on social media, website quality, online sales, and SEO (search engine optimization) have a significant positive impact on the business performance of companies in the agricultural sector in Serbia. Companies that successfully implement these types of digital marketing achieve greater visibility, engagement of the target audience, and increased sales. This hypothesis assumes that the specified digital marketing channels are particularly relevant to the agricultural sector in Serbia and that their effective implementation can have a positive impact on the business operations of companies in that sector.
The first extracted factor contributes with 41.426% to the variance, representing the highest share among all considered factors of digital marketing. The second extracted factor contributes with 14.025% to the variance (cumulatively, the first two factors explain 55.451% of the variance). The third extracted factor has a share of 9.098% in the variance, and cumulatively, the first three factors explain 64.549% of the variance. The fourth extracted factor contributes with 8.625% to the variance (cumulatively, the first four factors explain 73.174% of the variance). The fifth extracted factor contributes with 6.599% of the variance, and cumulatively, the first five factors explain 80.024% of the variance. As evident in Table 4, subsequent factors of digital marketing after the fifth progressively have diminishing shares in the variance.

Factor analysis has revealed that the variables of digital marketing, based on their inherent connections and influence on the performance of companies in the agricultural sector of Serbia, are grouped into the following factors (Table 4).

- The first extracted factor (41.426% variance) - “Social Presence and Online Marketing” encompasses variables related to social media presence, website quality, content marketing, SEO, online advertising, influencer marketing, and other aspects of digital marketing related to the online presence of companies.
- The second extracted factor (14.025% variance) - “Mobile Marketing” includes variables related to mobile advertising and customized applications for mobile devices.
- The third extracted factor (9.098% variance) - “Interactive Content and Support” includes variables related to interactive content (such as quizzes, surveys, contests) and customer support through chatbots and automation.
- The fourth extracted factor (8.625% variance) - “Analytics and Optimization” encompasses variables related to website and social media analytics, as well as optimization through tracking the success of marketing activities.

After the fourth factor, other factors have a smaller share in the variance and can mostly be named based on the specific variables present in those factors.

- The fifth extracted factor (6.599% variance) - “Online Sales and Reputation” contains variables related to online sales (e-commerce, electronic ordering) and management of online reputation and reviews.
- The sixth extracted factor (6.051% variance) - “Video Content and Marketing” includes variables related to content on YouTube and other video platforms, as well as marketing activities related to the video format.
- The seventh extracted factor (4.195% variance) - “Customized Content for Segments” contains variables related to customized content for targeted segments, including personalization and directing content to specific user groups.
- The eighth extracted factor (3.323% variance) - “Email Marketing” focuses on variables related to email marketing and communication via electronic mail.
The first extracted factor “Social Presence and Online Marketing” contributes to the variance by 41.426%. The research has led to a redefinition of the initial general hypothesis: Digital marketing channels, including presence on social media, website quality, content marketing, SEO, online advertising, influencer marketing, and other aspects related to the online presence of the company, largely determine the performance of companies in the agricultural sector of Serbia. The study’s findings underscore the significance of the first extracted factor, “Social Presence and Online Marketing” which strongly influences the variance by contributing 41.426%. This notable contribution has prompted a reconsideration of the initial general hypothesis, indicating that digital marketing channels, encompassing elements such as social media presence, website quality, content marketing, SEO, online advertising, and influencer marketing, play a pivotal role in determining the overall performance of companies in the agricultural sector of Serbia. The substantial impact of these factors highlights the importance of a robust online presence for businesses within this sector, aligning with the dynamic landscape of digital marketing. The results of ratings on the impact of digital marketing on the performance of companies in the agricultural sector of Serbia provide insight into the overall trend in this industry (Table 5).

Table 5. Average ratings of the impact of digital marketing on company performance, on a scale from 1 to 5

<table>
<thead>
<tr>
<th>Company performance in the agricultural sector of Serbia</th>
<th>Average rating (on a scale of 1 to 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increase in sales</td>
<td>4.6</td>
</tr>
<tr>
<td>• Increase in brand awareness</td>
<td>4.3</td>
</tr>
<tr>
<td>• Increase in customer loyalty</td>
<td>4.1</td>
</tr>
<tr>
<td>• Improvement in customer engagement</td>
<td>3.8</td>
</tr>
<tr>
<td>• Increase in conversions</td>
<td>3.6</td>
</tr>
<tr>
<td>• Enhancement of targeting and segmentation</td>
<td>3.4</td>
</tr>
<tr>
<td>• Increase in competitive advantage</td>
<td>3.3</td>
</tr>
<tr>
<td>• Improvement in brand reputation</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Source: Author’s research

The results indicate that digital marketing can have the greatest impact on increasing sales and brand awareness, aligning with broader trends in digital transformation and the increasing use of digital channels for product promotion and sales.

It is also noteworthy that improving customer loyalty receives a high rating, suggesting that digital marketing can be an effective tool for building long-term relationships with customers and maintaining their loyalty to the brand. This is particularly important in the agricultural sector, where there is the potential for repeat purchases and long-term collaboration with consumers. On the other hand, ratings for improving brand reputation, competitive advantage, and targeting/segmentation are somewhat lower. These results suggest that digital marketing may have a slightly smaller but still significant impact on these aspects. Careful planning, strategy and implementation are needed to achieve the maximum effect in these areas.
Conclusions

The research examined the impact of digital marketing on the performance of companies in the agricultural sector of Serbia, focusing on key channels such as social media presence, website quality, online sales, and search engine optimization. The first extracted factor, “Social Presence and Online Marketing,” contributes to the variance by 41.426%, indicating a significant influence of digital marketing channels on the performance of agricultural companies.

The findings led to a redefinition of the initial general hypothesis, emphasizing the crucial role of digital channels, including social media presence, website quality, content marketing, SEO, online advertising, influencer marketing, and other aspects related to the online presence of the company. The substantial contribution of the first extracted factor underscores the importance of a robust online presence for businesses in the agricultural sector, aligning with the dynamic landscape of digital marketing.

The results of ratings on the impact of digital marketing on the performance of companies in the agricultural sector of Serbia provide insight into the overall trend in this industry. The results indicate that digital marketing can have the greatest impact on increasing sales and brand awareness, aligning with broader trends in digital transformation and the increasing use of digital channels for product promotion and sales.

Acknowledgements

Paper is a part of research financed by the MSTDI RS, agreed in decision no. 451-03-66/2024-03/200009 from 5.2.2024.

Conflict of interests

The authors declare no conflict of interest.

References


21. Nezamova, O., & Olentsova, J. (2021). The role of digital marketing in improving the efficiency of the product distribution system of agricultural enterprises in the Krasnoyarsk Region. In E3S Web of Conferences (Vol. 247, p. 01027). EDP Sciences. [https://doi.org/10.1051/e3sconf/202124701027](https://doi.org/10.1051/e3sconf/202124701027)


