



# ADVERTISING TARGETING TRENDS: RETARGETING AND NEW TECHNOLOGIES USER PERCEPTION OF E-COMMERCE PLATFORMS IN COLOMBIAN AND ISRAELI CITIES

Tendencias en la orientación de la publicidad:  
Reorientación y la percepción del usuario sobre las plataformas  
de comercio electrónico en ciudades de Colombia e Israel<sup>1,2,3</sup>

Recibido: 10 de noviembre de 2023  
Aceptado: 12 de diciembre de 2023

1 - Mauricio Junior Santamaria Ruiz\*. Grado académico: Maestrando en administración y negocios. Adscripción: Corporación de educación superior del litoral. Correo electrónico: [msantamaria@litoral.edu.co](mailto:msantamaria@litoral.edu.co).  ORCID ID: <https://orcid.org/0000-0002-2976-0834>. \*Autor de correspondencia

2 - Brays Pérez Barragán. Grado académico: Técnica profesional en producción publicitaria digital. Adscripción: Corporación de educación superior del litoral. Correo electrónico: [perezbrays@litoral.edu.co](mailto:perezbrays@litoral.edu.co).  ORCID ID: <https://orcid.org/0009-0006-4243-7288>

3 - Sebastián David Hinojoza-Montañez. Grado académico: Tecnólogo en distribución física internacional. Adscripción: Corporación de educación superior del litoral. Correo electrónico: [hinojozasebastian@litoral.edu.co](mailto:hinojozasebastian@litoral.edu.co).  ORCID ID: <https://orcid.org/0009-0007-5706-3183>



Esta obra está bajo una licencia de Creative Commons Reconocimiento-NoComercial 4.0 Internacional. <https://creativecommons.org/licenses/by-nc-sa/4.0/>

## ABSTRACT

*Digital media advertising has undergone changes with the advent of industry 5.0, transforming promotional methods for digital consumers and their behaviors regarding the offered products. This transformation has influenced the user's final decision. It is aimed to analyze advertising segmentation or "targeting" trends on e-commerce platforms and their impact on the digital user's perception. The used method is descriptive, within the post-positivist paradigm, through a probabilistic sampling of the digital consumer population surveyed in the cities of Barranquilla, Colombia, and Tel Aviv, Israel. Results indicate that retargeting has a general presence of 4.38, being very common among consumers. Psychographic segmentation is at 2.55, with low presence, geographic segmentation at 4.15, which is "present," and behavioral segmentation at 3.77. These new trends have impacted the market with marketing strategies.*

**Keywords:** Advertising; E-commerce; Digital marketing; Advertising media.

## RESUMEN

*La publicidad en los medios digitales ha experimentado cambios por la bienvenida de la industria 5.0, transformando las formas promocionales en el consumidor digital y sus conductas sobre los productos ofrecidos, logrando una influencia en la percepción sobre la decisión final de usuario. Se pretende analizar las tendencias de la segmentación o "targeting" de la publicidad en las plataformas de comercio electrónico y su incidencia en la percepción del usuario digital. La metodología es de tipo descriptiva, dentro del paradigma postpositivista, con un muestreo probabilístico de la población consumidora digital, encuestados en las ciudades de Barranquilla, Colombia y Tel Aviv, Israel. Los resultados señalan que la presencia de la retargetización es 4.38 general, estando muy presente en los consumidores, la segmentación psicográfica es de 2.55, con baja presencia, la segmentación geográfica de 4.15 "presente" y segmentación conductual con 3.77. Las nuevas tendencias han impactado el mercado con estrategias de marketing.*

**Palabras clave:** Publicidad; Comercio electrónico; Mercadeo digital; Publicidad en medios.

**Clasificación JEL:** M37

## Introduction

Advertising is the method of driving a modern economy and is a crucial way for brands to communicate with their audiences. It is a fundamental tool to promote services or products and manages to be effectively adapting to trends constantly. However, with the constant evolution of these technologies, and consumer behavior, they directly influence the way people interact with advertising and make purchasing decisions, therefore, advertising has had to transform and adapt to remain effective when connecting with audiences. Advertising has evolved so much drastically that its future promises even more disruptive changes, so it is important to understand the new technologies that are part of migration to industry 5.0 where cognitive computing allows analyzing data with logical relationships similar to those made by the human brain, part of this whole process is the adaptation of advertising to trends and changes in consumer behavior and is based on Various theoretical principles.

Also, some ways to which advertising adjusts to evolution are taking into account a data analysis: with the rise of technologies, a large amount of data on consumer behaviors is collected and so brands use this analysis to better understand the audience, know their preferences, needs and this is what allows them to customize advertisements. Social media advertising and mobile advertising have managed to have a very good growth since the use of mobile devices is easy as well as their accessibility, and many people spend much of their time on social networks and these have become an important place for advertising aimed at specific audiences.

The approach to sustainability and social responsibility is a tool that adjusts to evolution since modern consumers increasingly value brands that have and manage a sustainable and socially responsible approach and advertising has been adjusted to highlight these aspects in their messages (Preston, 2005). And a native advertising, with this has been observed an increase with ads that integrate more organically into the content they show, so much so that it provides a more fluid experience for consumers (Hayes et al., 2022)

The adaptation of advertising to trends and changes that arise in consumer behavior is essential to maintain relevance and good effectiveness of each advertising message (Lee & Cho, 2020). And by relying on these theories of behavior and communication, each advertising strategy can be adjusted to meet each changing need of consumers and achieve a very large impact on the market.

New technologies are driving very significant changes in the field of advertising, the immersion of artificial intelligence (AI) and virtual reality (VR) are tools that are present in the market allowing brands and advertisers to reach their audiences more effectively and creatively.

## 1. Advertising trend.

### 1.1. Advertising powered by Artificial Intelligence

According to Sayoh (2023), AI is an advertising that is changing the way brands connect with their audience. The expectation is that AI-based advertising will allow for greater personalization, with specific messages and offers tailored to each individual based on their preferences and past behaviors. In this Artificial Intelligence, chatbots and virtual assistants are the ones that interact with customers and their role is important since it is also providing instant answers and personalized services 24 hours a day.

## 1.2. Augmented Reality and Immersive Advertising

This augmented reality will open new opportunities for immersive and experiential advertising. With this, ads could be more easily integrated into the consumer's environment, allowing them to interact with products and services virtually before making a purchase decision. This AR could also change the way consumers experience advertising content, resulting in more impactful and memorable campaigns (Sung, 2021).

## 1.3. Voice-based advertising

Voice-based advertising, with the growth of voice assistants and smart speakers will become an emerging trend. Brands will need to be able to adapt their strategies to be able to communicate effectively in a voice-driven environment, where consumers could interact and make purchases using voice commands (Zierau et al., 2023).

## 1.4. Interactive ads

New technologies allow interactive ads to be created that involve a lot of user participation and allow them to make decisions within the ad itself, and this greatly increases consumer participation and can improve the retention of the advertising message you want to give (Kim, 2021).

AI has driven a revolution in advertising that has enabled more precise segmentation and personalization of advertising messages. AI algorithms can analyze large amounts of data about consumer behavior, their interests and also their preferences, allowing brands to offer highly relevant ads to each audience. AI-powered advertising isn't just about reaching the right audience, it's about delivering the right message at the most opportune time possible. Also, apart from the issue of personalization, AI has facilitated the automation of purchases by advertising means (Li, 2019). Programmatic advertising is an example of how AI algorithms can make real-time decisions to optimize ad spend and maximize ad reach and impact. This has allowed brands to gain greater efficiency in their advertising campaigns.

When AI and VR are combined, a large corporation is created that takes advertising to a whole new level. AI can analyze data about consumer preferences and design highly personalized ads, while VR provides the platform to deliver these unique experiences. For example, with the help of AI, brands or companies can identify consumers who are most likely to be interested in a particular product or service. Then, they can offer them a VR experience that allows them to virtually try the product or explore a tourist destination, thus creating a stronger emotional connection with the brand (Subawa et al., 2021).

The combination of AI and VR has paved the way for the future of advertising. Brands are embracing these technologies to deliver more immersive and relevant experiences to consumers, resulting in greater impact and retention of the advertising message. Also, as technology continues to advance, we are likely to see greater integration of AI and VR into advertising. This could include VR ads that adapt in real time based on consumer emotional responses or the ability of AI-based voice assistants to interact with VR ads (Rathore, 2023).

## 2. The market segmentation of the product with the use of retargeting

According to Stidsen (1975), Market Segmentation consists of two basic things, understanding and being applied strategically, is an essential process throughout the field of marketing and advertising which involves dividing a very large market into much smaller and homogeneous segments. These segments will be composed of consumers with characteristics such as their needs and behaviors that have similar, which allows each company to direct all its marketing in a more precise and effective way. Through this segmentation, companies will also adapt each of their products, their strategies, and their messages to specific groups of customers, and with this increase their efficiency and competitiveness in the market (Brotspies & Weinstein, 2019)

Market segmentation brings with it several benefits. First, it allows companies to have a greater understanding with their customers and know what the individual preferences of each one is. By dividing your market into different segments, you will be able to identify opportunities and market niches that may have previously been untapped. In addition, having marketing and advertising strategies become much more effective when they are designed to meet the unique and different needs and desires of each segment, which manages to increase the chances of customer loyalty and conversion (Armstrong et al., 2014).

Having market segmentation is a strategic approach that allows companies to understand and serve their customers more effectively. By dividing a market into smaller, more defined groups, companies can personalize their marketing efforts and achieve competitive advantage in an increasingly diverse and complex business environment.

### 2.1. Process

Identify what is the Market you want to reach or Target Market. Start by clearly defining your target market. This involves understanding your industry, the products, or services you offer and every demographic, geographic, psychographic, psychographic and potential factor.

Have a data collection to gather information about your current and potential customers. Use surveys, interviews, data analysis and other sources of information to get something relevant that shows or tells you about their characteristics and behaviors:

#### i. Demographic segmentation

Divide your segments based on demographic characteristics such as age, gender, income, education level and their occupations. These factors show us and provide us with a solid base to have an initial segmentation (Permanasari et al., 2022).

#### ii. Psychographic segmentation

This is the one that shows us the groups of consumers according to their values, interests, personality and lifestyle. This segmentation is very useful to understand customers' buying motivations and to be able to create persuasive messages for them (Liu et al., 2019)

iii. Behavioral segmentation

Dividing the market based on customers' buying behaviors, frequency of purchase, brand loyalty and decision-making process (Borg et al., 2021)

iv. Geographic segmentation

It is an important part to segment considering the geographic location of people, since people's needs and preferences vary according to their place of residence (Griva et al., 2023).

v. Target segments

It is important to be clear about the objectives of your brand or business venture, evaluate the identified segments and select the most relevant and promising ones for a good management of your business (Zatonatska et al., 2022).

vi. Develop differentiated strategies

Create specific marketing and advertising strategies for each target segment, adjust your product, price, promotion, and distribution to meet the unique needs of each group (Ferreira-Barbosa et al., 2023).

It is always important to maintain the implementation and good monitoring. When you launch your strategies to the market you must constantly monitor them in order to evaluate their effectiveness. As you collect data you can adjust each approach you have to maximize results.

### 3. Retargeting

It is based on a digital marketing strategy in which specific ads are shown to users who have previously interacted with a website, online content, or application. This is also done to attract the user's attention again and increase the chances of conversion, as it targets users who have previously shown an interest in a particular product or service.

Retargeting is a powerful tool used to increase conversions, improve customer retention, and optimize the performance of digital marketing campaigns by targeting audiences that already have some level of interest in the brand or its products (Mark et al., 2023). This is crucial in advertising because it allows you to reach users who have shown prior interest in a product or service. By targeting this audience with personalized ads, it increases the likelihood of conversion as they are reminded of their previous interest. This maximizes ROI and improves campaign effectiveness by targeting audiences more likely to convert, and it has several uses in digital marketing (Desimpelaere et al., 2022).

It is used to remind users that they left products in their online shopping cart and encourage them to complete a purchase. shows ads for products that users have seen on a website, which reinforces an interest and incentivizes them to return to complete and make their purchase. also targets users who have already taken some action on the website, downloads, or subscriptions, prompting them to complete desired actions such as a registration or a purchase. It can also be used to display ads for some related or higher value products to users who have previously made a purchase, thus further increasing, and increasing the average order value.

It can also be used to introduce new products to users who are already customers, increasing the likelihood of purchase. Allows you to create targeted campaigns for specific segments of users based on their

past behavior and activity on the site. Creates targeted campaigns for specific segments of users based on their past behavior and activity on the site promotion is an important part and helps to promote those events, websites, downloadable content, or other resources that are relevant to users who have previously interacted with the website. It is used to bring back to calf or to recover those users who have not interacted with the site for some time, allowing them to remember the brand and its products; this helps to strengthen and maintain the brand's presence in users' minds by showing them more relevant ads even after they have left the site.

Being relevant to close knowledge gaps on the use of new advertising trends as tools present in the market to focus marketing on consumers segmented according to the company increasing sales through virtual platforms, the current article is a product of the IDEA research group in articulation with the research group Tajamar, under the digital media research seedbed, framed in the Research Line in Entrepreneurship and Innovation, in the subline of market research within the subject of digital marketing, marketing mix and design of research projects of the program of digital advertising production of the educational corporation of the coast, together with the seedbed of Research in Business Studies and Territory-SIET being relevant in the line of Research in Entrepreneurship and Innovation, in the subline of market research within the subject of Marketing Mix. and project design of the Professional Technician in Administrative Processes program.

Therefore, the general objective of this research is to analyze advertising trends such as retargeting and new technologies. Which were resolved through the following specific objectives:

- a) To know what advertising is and its impact on society,
- b) Describe the market segmentation used according to the perception of users of ecommerce platforms in cities in Colombia and Israel.

## 4. Method

This research is framed within the positivist paradigm which allows understanding human behavior through quantifiable information which is based on the scientific method according to the law of the three states of knowledge (Davidson, 1991): descriptive type where the perception of consumers of Ecommerce products is expressed, based on information from the newspaper, time (March 12, 2023) users of ecommerce platforms are approximately 25.000 when taking the amount of dispatches coming from digital platforms in the whole year 2022; with this we average an estimated population, a projection of a probabilistic sampling was used the data used are the following Confidence level (Z): 90% which corresponds to a Z value of 1.645 according to the standard distribution; Population size (N): 25,000; with a 10% margin of error (E): 0.10. The formula to calculate it was:

$$n = \frac{E^2 Z^2 \cdot p \cdot (1-p)}{N}$$

Subsequently, the clearance is made to obtain an ideal sample:

$$n = \frac{1.645^2 \cdot 0.5 \cdot (1-0.5)}{0.10^2} = 422.43$$

Finally, the finite population correction is used:

$$N_0 = 250001 + 25000 - 125000 * 25000 - 4224325000 - 1 = 12.61$$

This indicates that the minimum sample should be 13 subjects, the total sample taken for the research was 53 study subjects limited to the cities of Barranquilla Colombia and Tel Aviv Israel, the data were taken through a dichotomous questionnaire due to its high rate of acceptance by the subjects and the ease to be analyzed (García et al., 2006). where binary answer options YES = 1; NO = 2 were used; for ethical reasons and to improve the quality of the data, it was a covert questionnaire where no information was presented that would allow them to directly relate Retargeting with the survey to avoid biases in the answers and to obtain more genuine perceptions.

**Table 1.** Operationalization of the instrument

Questions	Indicator	Answer Options	
1. Have you seen online ads for products you have recently searched for?	Retargeting	YES	NO
2. Do you think the ads you see online are targeted to you specifically?	Retargeting	YES	NO
3. Have you noticed that some companies send you emails with offers based on what you have bought before?	Retargeting	YES	NO
4. Do you think companies should try to remind you of the products you have left in your online shopping cart?	Retargeting	YES	NO
5. Do you find it helpful when companies tailor their ads based on your location or age?	Geographic/ Demographic Segmentation	YES	NO
6. Would you like companies to show you new products based on what you have already bought?	Retargeting	YES	NO
7. Do you think it is important for companies to understand your interests before trying to sell you something?	Psychographic Segmentation	YES	NO
8. Have you ever felt that some companies send you offers that are not relevant to you at all?	Behavioral Segmentation	YES	NO

Source: Own elaboration.



## 4.1 Reliability

The reliability of the instrument was calculated with the Kuder Richardson “KR-20” coefficient, and interpreted with an interpretation scale according to Hernandez et al. (2012) values from 0 to 0.40 = low reliability; >0.40 and < 0.60 medium reliability; >0.60 and < 0.80 high reliability; >0.80 e =1 excellent reliability, was calculated with the following formula:

$$Kr20 = \frac{K}{K-1} \left( 1 - \frac{\sum P^2}{Q^2} \right)$$

Being cleared thus  $88 \cdot 1 \cdot 10.951.72206095791001$

$$Kr20 = 1.14285714285714 \cdot 0.448449140885273 = 0.51$$

For this reason, with a Kr-20 equal to 0.51, it is framed in the scale with a medium reliability, making it feasible to give relevance to the study.

## 5. Results

Based on the data collected, a data analysis was generated in which the information is presented in a simple manner to facilitate the understanding of the data for all types of audiences, whether academic or not.

**Table 2.** Description of the market segmentation used according to the perception of users of ecommerce platforms in cities in Colombia and Israel

Indicator	Absolute frequency		Relative Frequency		Average	Presence per item	Grouped Presence
	Yes	No	Yes	No			
Retargeting	53	0	1.00	0.00	100%	5.00	4.38
Retargeting	37	16	0.70	0.30	71%	3.49	
Retargeting	50	3	0.94	0.06	94%	4.72	
Retargeting	41	12	0.77	0.23	76%	3.87	
Retargeting	51	2	0.96	0.04	96%	4.81	
Psychographic Segmentation	27	26	0.51	0.49	48%	2.55	2.55
Behavioral Segmentation	40	13	0.75	0.25	74%	3.77	3.77
Geographic/ Demographic Segmentation	44	9	0.83	0.17	80%	4.15	4.15

Source: Own elaboration.

In accordance with the above, the presence of the different types of segmentation described above is evident, according to the interpretation scale, and for this reason the following table is presented.

**Table 3.** Presence of the types of used segmentation

Scale	Indicator							
	Retargeting					Other Trends		
	Item a	Item b	Item c	Item d	Item e	PS*	BS**	G/DS***
Categories	Range							
Absent	1.00 – 1.79						2.55	
Slightly present	1.8 – 2.59							
Moderately present	2.6 – 3.39							
Present	3.4 – 4.19		3.49		3.87			3.77
Very present	4.2 – 5.00	5.00		4.72		4.81		4.15

\*Psychometric segmentation

\*\*Behavioral segmentation

\*\*\* Geographic/Demographic segmentation

Source: Own elaboration.

From the above it is understood that “Item a” is considered the type of segmentation with the greatest strength with an average of 5.00, categorized as Very present according to the scale of interpretation, followed by “item e”, “Item c” and Geographic/Demographic Segmentation with these indicators closes the category with the greatest presence according to the perception of consumers; “Item d”, behavioral segmentation and “Item b” are considered as present; In the absent category is psychographic segmentation with an average of 2.55.

## 6. Discussion

Contextualizing the results obtained from the literature review necessary to respond to the first objective, which is to know what advertising is and its impact on society, new types of market segmentation used in the new global context of industry 4.0 collects this segmentation and optimizes them with the application digital transformations this according to (Lang & Lang, 2021) who mentions that the new trends used in ecommerce obey the need to digitally transform organizations, from which new questions can also arise such as How is the market segmentation in the SMEs of the city of Barranquilla Colombia and Tel Aviv Israel? What is the current situation of the digital content of the SMEs of the city of Barranquilla Colombia

and Tel Aviv Israel? These are relevant questions according to the literature reviewed, with high importance in the development of a country, for this reason in the long term can be innovative research to deepen the applicability of advertising and its impact on society.

## 7. Conclusions

Nowadays, new advertising trends integrate psychology, neurosciences and data analytics which impact on the market society due to the correct use of information, for this reason it has a significant impact on society by influencing purchasing decisions, shaping the perceptions of products, it is a powerful tool that should be used responsibly and ethically to contribute to the welfare of society.

Moreover, retargeting is the most used segmentation in digital marketing to increase conversions and customer retention. In addition, you can mention emerging advertising trends, such as artificial intelligence-based advertising, augmented reality and voice-based advertising, to illustrate how companies are adopting new technologies to effectively reach their audiences.

## References

- Armstrong, G., Adam, S., Denize, S., y Kotler, P. (2014). *Principles of marketing*. Pearson Australia Group.
- Borg, K., Lindsay, J., y Curtis, J. (2021). Targeted change: Using behavioral segmentation to identify and understand plastic consumers and how they respond to media communications. *Environmental Communication*, 15(8), 1109-1126. DOI: <https://doi.org/10.1080/17524032.2021.1956558>.
- Brotspies, H., y Weinstein, A. (2019). Rethinking business segmentation: a conceptual model and strategic insights. *Journal of strategic marketing*, 27(2), 164-176. DOI: <https://doi.org/10.1080/0965254X.2017.1384750>.
- Davidson, D. (1991). Three varieties of knowledge. *Royal Institute of Philosophy Supplements*, 30, 153-166. DOI: <https://doi.org/10.1017/S1358246100007748>.
- Desimpelaere, L., Hudders, L., y Van de Sompel, D. (2022). Children's hobbies as persuasive strategies: the role of literacy training in children's responses to personalized ads. *Journal of Advertising*, 1-16. DOI: <https://doi.org/10.1080/00913367.2022.2102554>.
- Ferreira-Barbosa, H., García-Fernández, J., y Cepeda-Carrión, G. (2023). The Mediating Role of e-Lifestyles to Use the Fitness Center App. *International Journal of Human-Computer Interaction*, 1-10. DOI: <https://doi.org/10.1080/10447318.2023.2204273>.
- Griva, A., Zampou, E., Stavrou, V., Papakiriakopoulos, D., y Doukidis, G. (2023). A two-stage business analytics approach to perform behavioural and geographic customer segmentation using e-commerce delivery data. *Journal of Decision Systems*, 1-29. DOI: <https://doi.org/10.1080/12460125.2022.2151071>.
- Hayes, J. L., Holiday, S., y Park, H. (2022). Corporate social responsibility & the advertising strategic planning process: a literature review & research agenda. *International Journal of Advertising*, 41(2), 210-232. DOI: <https://doi.org/10.1080/02650487.2022.2038432>.

- Helmold, M. (2022). Market Segmentation, Targeting, Differentiation and Positioning. En Helmold, M. (Ed.), *Performance Excellence in Marketing, Sales and Pricing: Leveraging Change, Lean and Innovation Management* (pp. 105-116). Springer International Publishing.
- Kim, J. (2021). Advertising in the metaverse: Research agenda. *Journal of Interactive Advertising*, 21(3), 141-144. DOI: <https://doi.org/10.1080/15252019.2021.2001273>.
- Lang, V., y Lang, V. (2021). Digitalization and Digital Transformation. En *Digital Fluency*. Apress. DOI: [https://doi.org/10.1007/978-1-4842-6774-5\\_1](https://doi.org/10.1007/978-1-4842-6774-5_1).
- Lee, H., y Cho, C. H. (2020). Digital advertising: present and future prospects. *International Journal of Advertising*, 39(3), 332-341. DOI: <https://doi.org/10.1080/02650487.2019.1642015>.
- Li, H. (2019). Special section introduction: Artificial intelligence and advertising. *Journal of advertising*, 48(4), 333-337. DOI: <https://doi.org/10.1080/00913367.2019.1654947>.
- Liu, H., Huang, Y., Wang, Z., Liu, K., Hu, X., y Wang, W. (2019). Personality or value: A comparative study of psychographic segmentation based on an online review enhanced recommender system. *Applied Sciences*, 9(10), 1992. DOI: <https://doi.org/10.3390/app9101992>.
- Mark, T., Dhar, T., Verhoef, P. C., y Lemon, K. N. (2023). How is retargeting related to purchase incidence, channel choice, and purchase quantity?. *Marketing Letters*, 1-14. DOI: <https://doi.org/10.1007/s11002-023-09693-4>.
- Permanasari, K. I., Sarosa, M., Moentamaria, D., y Zuhri, F. M. A. (2022). The Influence of Marketing Mix and Demographic Segmentation on Customer Satisfaction. En *Annual Management, Business and Economics Conference* 1(1), 144-149. Recuperado de: <http://proceeding-ambec.polinema.ac.id/index.php/ambec2022/article/view/37>.
- Preston, C. (2005). Advertising to children and social responsibility. *Young Consumers*, 6(4), 61-67. DOI: <https://doi.org/10.1108/17473610510701322>.
- Rathore, B. (2023). Digital Transformation 4.0: Integration of Artificial Intelligence & Metaverse in Marketing. *Eduzone: International Peer Reviewed/Refereed Multidisciplinary Journal*, 12(1), 42-48. Recuperado de: <https://www.eduzonejournal.com/index.php/ei-prmj/article/view/248>.
- Sayoh, M. M. R. (2023), Utilizing Artificial Intelligence in Digital Out-of-Home Advertising. *International Design Journal*, 13 (4), 417-425. DOI: <https://dx.doi.org/10.21608/idj.2023.305380>.
- Stidsen, B. (1975). Market segmentation, advertising and the concept of communication systems. *Journal of the Academy of Marketing Science*, 3, 69-84. DOI: <https://doi.org/10.1007/BF02729959>.
- Subawa, N. S., Widhiasthini, N. W., Astawa, I. P., Dwiatmadja, C., y Permatasari, N. P. I. (2021). The practices of virtual reality marketing in the tourism sector, a case study of Bali, Indonesia. *Current Issues in Tourism*, 24(23), 3284-3295. DOI: <https://doi.org/10.1080/13683500.2020.1870940>.
- Sung, E. C. (2021). The effects of augmented reality mobile app advertising: Viral marketing via shared social experience. *Journal of Business Research*, 122, 75-87. DOI: <https://doi.org/10.1016/j.jbusres.2020.08.034>.

- Zatonatska, T., Dluhopolskyi, O., Artyukh, T., y Tymchenko, K. (2022). Forecasting the Behavior of Target Segments to Activate Advertising Tools: Case of Mobile Operator Vodafone Ukraine. *Economics*, 10(1), 87-104. DOI: <https://doi.org/10.2478/eoik-2022-0005>.
- Zierau, N., Hildebrand, C., Bergner, A., Busquet, F., Schmitt, A., y Marco, J. (2023). Voice bots on the frontline: Voice-based interfaces enhance flow-like consumer experiences & boost service outcomes. *Journal of the Academy of Marketing Science*, 51, 823-842. DOI: <https://doi.org/10.1007/s11747-022-00868-5>.