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ALGORITHMIC AUTOMATION IN DIGITAL ADVERTISING: Use of Artificial Intelligence and Campaign Performance in Meta Ads

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ABSTRACT

This exploratory study analyses the impact of algorithmic automation on digital advertising campaigns through a case study of Meta Ads. Manual and automated configurations are compared in traffic and conversion campaigns using aggregated performance metrics. The results show that automation can improve certain indicators, particularly in conversion-oriented campaigns, although its effects are not uniform. The study also identifies potential strategic implications related to the loss of creative control and the homogenisation of advertising. This study contributes to understanding algorithmic mediation in digital advertising and highlights the need for hybrid approaches that integrate data with professional judgement.

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1. Introduction

The increasing integration of artificial intelligence systems into digital advertising may be changing not only campaign optimisation processes, but also the criteria used for the visual selection of advertising creatives. Within the Meta Ads environment, algorithmic automation actively contributes to prioritising certain images according to their performance (Meta, 2026a), which may in turn suggest or condition the aesthetic patterns favoured by the system.

Despite the sector's growing interest in the application of artificial intelligence to digital advertising (IAB Spain, 2026), the literature identified to date has tended to focus on performance optimisation from a technical or analytical perspective, with particular emphasis on efficiency metrics, tools and process automation (Kshetri et al., 2024; Yang et al., 2023). In this context, the visual and aesthetic dimension of advertising creatives appears to have received comparatively less attention, particularly with regard to the influence of algorithmic systems on their selection and circulation.

Within the field of conversion optimisation (in English, *Conversion Rate Optimization*, hereafter CRO), research has traditionally focused on optimising the user experience within websites, prioritising aspects such as usability, information architecture and interface design. However, this methodological approach tends to give less attention to the earlier stages of user acquisition, particularly those related to exposure to advertising creatives on social platforms (García-Martínez et al., 2025).

Against this background, this study adopts an exploratory perspective that seeks to broaden the focus of analysis to the stage preceding the user's arrival at the website. More specifically, we aim to analyse how the algorithmic selection of visual creatives in advertising campaigns may influence user interaction and the initial traffic and conversion indicators within the advertising platforms themselves. Approaches such as that of Hocutt (2024) understand digital advertising platforms as spaces in which human actors and artificial intelligence agents work together, and in which the AI embedded in these systems directly influences the composition and selection of advertising elements (Hocutt, 2024). This approach supports the idea that the user experience in digital environments begins even before access to the website, since the algorithmic selection of visual creatives, together with the decisions arising from it, may shape the user's first interaction with the brand, affecting initial traffic and conversion indicators.

The purpose of this research is therefore to examine, on a preliminary basis, how certain CRO-related strategies can be transferred to the field of social media campaigns.

Through this multidisciplinary approach, we therefore seek to contribute to research on digital communication by exploring the role of artificial intelligence in shaping the dynamics of social media advertising, while also generating knowledge that may prove useful for conversion optimisation.

1.1. The Rise of AI-Mediated Advertising: Automation and Decision-Making

Digital advertising has undergone a significant transformation with the progressive incorporation of artificial intelligence (hereafter AI) and machine learning systems into ad creation and management platforms. Current advertising environments enable advertisers to design, segment and distribute campaigns on the basis of multiple variables, ranging from keywords and demographic data to behavioural and browsing patterns. Platforms such as Google Ads, Meta Ads, LinkedIn Campaign Manager and Microsoft Ads have progressively integrated algorithmic systems that mediate strategic and creative decision-making in advertising campaigns.

Marketing research points to a notable increase in academic interest in AI from 2017 onwards, highlighting its impact on process automation, personalisation and campaign optimisation (Feng et al., 2021). In this context, AI is involved not only in ad delivery, but also in the generation and selection of content, including text, images and creative combinations tailored to specific audiences (Van Esch and Black, 2021).

From the perspective of the platforms themselves, AI is presented as a structural component of their advertising systems. Google has described AI as "fundamental" to its advertising ecosystem, highlighting its role in maximising return on investment and operational efficiency (Hocutt, 2024). Similarly, in 2023 Meta announced the integration of generative AI tools designed for the automated creation of advertising content and campaign optimisation (Meta, 2023). This move was replicated by other platforms such as LinkedIn and TikTok during the same period (Agius, 2023), suggesting widespread adoption of these technologies across the digital advertising ecosystem.

Generative AI has also introduced a new logic into advertising creativity. Algorithmic systems can recombine materials provided by advertisers — images, videos and text — to generate variations tailored to different audiences and campaign objectives (Murphy and Criddle, 2023). This automation enables the large-scale production of creative variants and their simultaneous testing, partially shifting human control over the selection of specific combinations.

This scenario entails a redefinition of the role of advertising professionals. Whereas creative teams traditionally designed different ad versions based on audience profiles and subsequently conducted optimisation tests, current systems delegate some of these decisions to algorithms that determine which combinations perform best according to predefined conversion objectives. The professional thus moves from being a direct creator to acting as a curator and supervisor of algorithmically generated proposals.

However, this automation also raises questions about the potential loss of approaches centred on users and on building long-term relationships. In the case of Meta, AI constitutes a strategic pillar of its advertising business model. The company uses AI systems for content personalisation, audience segmentation and ad delivery optimisation, directly contributing to its advertising revenues and to improvements in the user experience (Mostefaoui and Benkirat, 2024).

Overall, recent literature appears to emphasise that these capabilities enable personalisation at scale and the dynamic adaptation of advertising messages, reinforcing the centrality of algorithmic mediation in contemporary digital advertising. These developments are shaping an advertising ecosystem in which visual and strategic decision-making is increasingly mediated by algorithms. Digital advertising is therefore no longer exclusively a form of human creative practice, but rather a hybrid process in which human judgement, large-scale data and AI systems capable of continuous learning and optimisation interact.

1.2. Research Objectives

This study aims to examine how the increasing incorporation of artificial intelligence systems into advertising platforms is transforming the processes of selecting, distributing and prioritising creatives in digital campaigns on social media and, specifically, on platforms such as Meta Ads. We proceed from the premise that algorithmic systems not only optimise ad delivery, but may also influence which formats, configurations and creative decisions are favoured according to their performance.

Accordingly, the study sets out the following specific objectives:

SO1: to analyse how artificial intelligence tools integrated into advertising platforms such as Meta influence the selection and prioritisation of advertising creatives and formats.

SO2: to conduct an empirical exploratory study comparing campaigns with a higher degree of algorithmic automation with campaigns involving greater manual human intervention, assessing their impact on advertising performance metrics.

SO3: to explore whether automated optimisation tends to favour certain formats, configurations or creative characteristics according to their performance, beyond the advertiser's initial creative intention.

These objectives will enable us to advance our understanding of artificial intelligence not only as a tool for technical optimisation, but also as a system that mediates decision-making in advertising communication. They will also allow us to provide initial empirical evidence regarding potential tensions between algorithmic automation and human creative control, as well as the relative effectiveness of both approaches in terms of performance.

2. Design and Method

2.1. Object of Study and Type of Research

Unlike traditional CRO studies (García-Martínez et al., 2025), which generally focus on optimising the user experience within websites or applications, this study adopts an exploratory and empirical approach based on a case study comparing advertising campaigns with different degrees of algorithmic automation. Specifically, campaigns configured using the platform's automated optimisation options are analysed alongside campaigns managed with greater human intervention in campaign and ad set configuration and segmentation, as well as in the selection of formats or creatives.

Methodologically, the study is based on the triangulation of quantitative techniques (advertising performance metrics) with qualitative analysis of the configuration decisions and optimisation criteria employed. This design enables us to observe how automation may influence results without necessarily assuming direct causal relationships, instead exploring trends and system behaviour.

To delimit the automation functionalities analysed in this study, Table 1 summarises the main Meta Ads AI tools used to configure the campaigns included in the case study.

Table 1. AI-based automation functionalities used in Meta Ads campaigns

Automation dimension	Application in Meta Ads	Implications for advertising management	Source
Audience segmentation	Advantage+ detailed targeting based on machine learning	Delegation of audience identification and adjustment to the algorithmic system	Advantage+ Audience: how Meta automatically finds the right audience. Meta (2026c)
Ad placements	Advantage+ automatic placements	Dynamic ad distribution according to the probability of performance by placement	How Advantage+ placements optimise where your ads appear. Meta (2026b)
Content optimisation	Advantage+ Creative with automatic adjustments to image creatives and copy	Variations generated or adapted using Meta's AI	Advantage+ Creative: automated creative optimisation for ads. Meta (2026d)

Source: Authors' own elaboration based on Meta for Business functionalities (2026)

2.2. Scope of the Study and Sample Selection

The case study is conducted in the personal storage services sector, in collaboration with a Spanish company running social media advertising campaigns. For reasons of confidentiality and to protect recent strategic information, the identity of the company is not disclosed, thereby ensuring the neutrality of the analysis and avoiding any potential competitive advantage arising from publication.

The research is conducted in a real-world Meta Ads management environment, using active traffic acquisition and conversion campaigns aimed at securing contracts for storage services. The observation period covers December 2025 and January 2026. The study focuses on comparing campaigns configured with different degrees of algorithmic automation through Advantage+ functionalities with campaigns configured with greater manual control over segmentation, placements and creative selection.

Given the empirical and observational nature of the study, the sample is not defined *a priori* by a fixed number of participants, but rather emerges naturally from the users reached by the campaigns during the analysis period. We therefore adopt non-probability sampling based on advertising exposure and interaction data, considering aggregate metrics such as reach, impressions, clicks and interaction rate, obtained directly from Meta Business Manager and Google Analytics (Pakkala et al., 2012).

For reasons of privacy and regulatory compliance, we do not have access to users' personal data or individualised behavioural information. The analysis is limited to aggregate metrics provided by the advertising platform, thereby ensuring compliance with ethical principles and current data protection regulations.

This design does not seek to establish direct causal relationships, but rather to identify trends associated with the use of algorithmic automation in campaign management.

2.3. Research Variables and Techniques

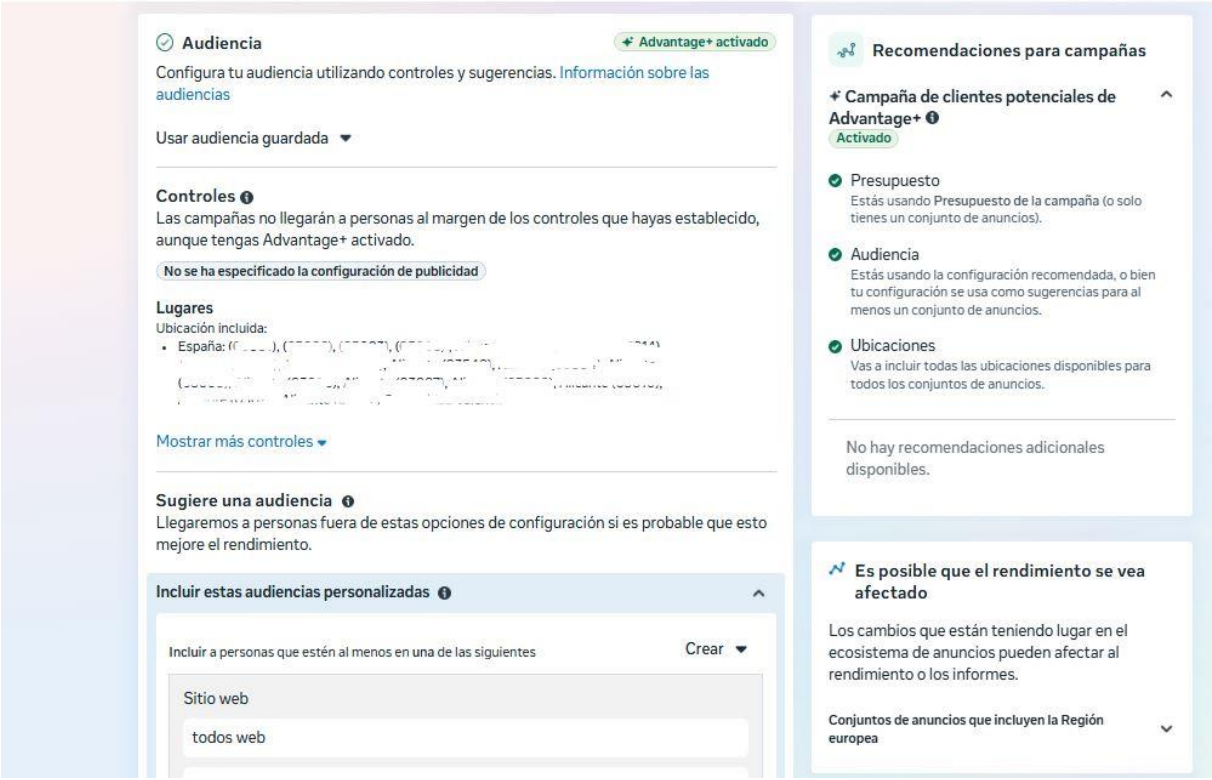
The main variables analysed were aggregate advertising performance metrics provided by the advertiser's Meta Ads platform, including reach and impressions, clicks and click-through rate (hereafter CTR). These metrics allow us to assess users' initial responses to advertising stimuli and are commonly used in studies of advertising effectiveness in digital environments (Kaushik, 2009).

From the perspective of campaign configuration, the variables of interest considered were the type of audience segmentation — manual versus Advantage+ —, the management of ad placements — manual versus Advantage+ automatic placements — and the use of automated creative optimisation options versus configurations defined manually by the advertiser. These dimensions reflect different degrees of algorithmic intervention in strategic advertising decision-making.

An observational comparative analysis is conducted between campaigns with different configurations, without strict experimental manipulation or random assignment to conditions. This approach allows us to identify trends associated with the use of artificial intelligence tools in a real-world context on this platform, although without establishing direct causal relationships.

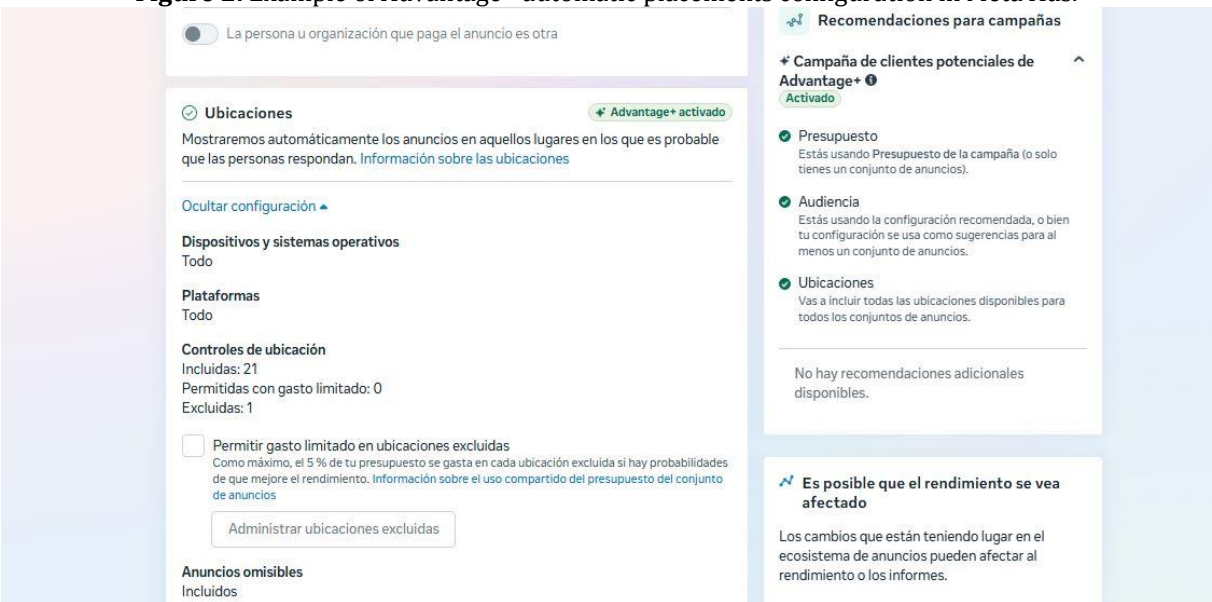
Figures 1 and 2 document examples of the automation configurations used in Meta Ads Manager, with the aim of enhancing the transparency and replicability of the study design.

Figure 1. Example of Advantage+ audience targeting configuration in Meta Ads.



Source: Authors' own elaboration based on the Meta Ads Business Manager interface (2026).

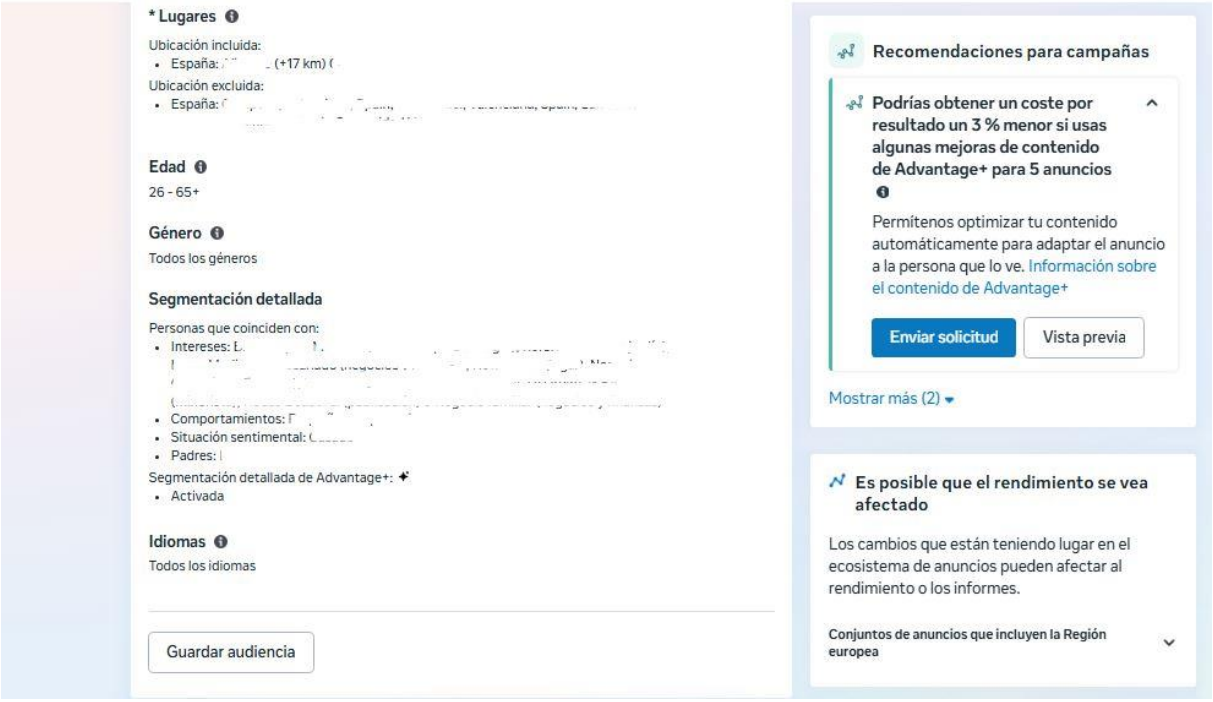
Figure 2. Example of Advantage+ automatic placements configuration in Meta Ads.



Source: Authors' own elaboration based on the Meta Ads Business Manager interface (2026).

By contrast, Figure 3 shows an example of manual audience configuration, in which targeting is defined according to demographic and interest-based criteria without full algorithmic delegation, also referred to as detailed targeting in Meta Ads.

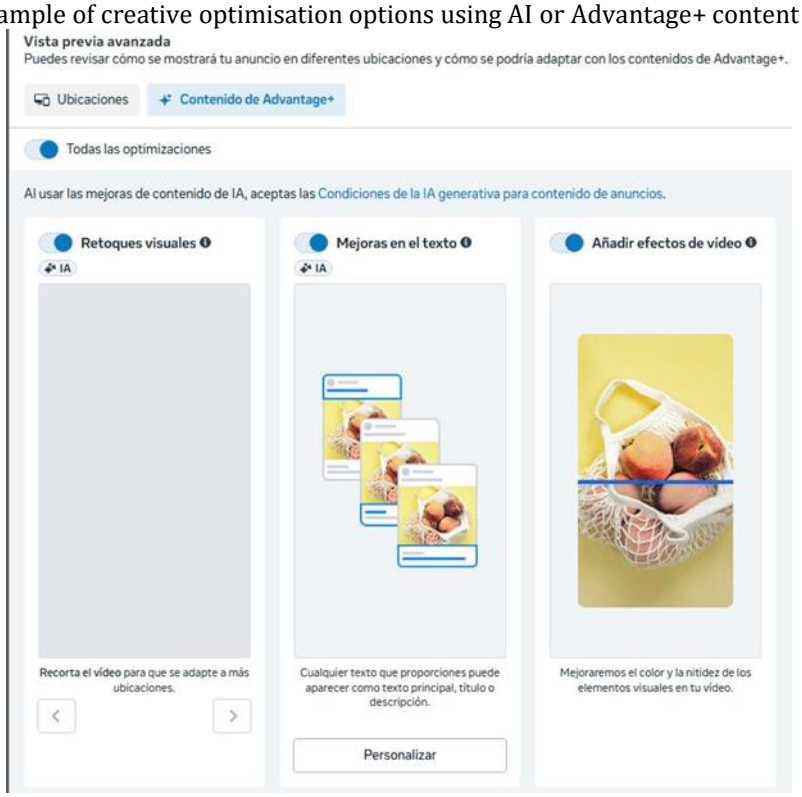
Figure 3. Example of manual audience targeting configuration in Meta Ads without Advantage+ automation.



Source: Authors' own elaboration based on the Meta Ads Business Manager interface (2026).

The automated creative optimisation offered by the platform allows visual enhancements, text improvements and AI-based content adaptations to be applied, among other options (Figure 4).

Figure 4. Example of creative optimisation options using AI or Advantage+ content in Meta Ads.



Source: Authors' own elaboration based on the Meta Ads Business Manager interface (2026).

3. Fieldwork and Data Analysis

3.1. Data Collection

Data were collected directly from Meta Ads Business Manager, using access to the advertising account provided by the client and drawing on the aggregate reports and analytics available for the active campaigns analysed.

Advertising performance metrics commonly used to evaluate digital campaigns were recorded, including reach, impressions, cost per click, number of clicks and CTR. These metrics allow us to observe users' initial responses to advertising stimuli and are suitable for exploratory studies of advertising effectiveness.

During December, the traffic and conversion campaigns were configured with different degrees of algorithmic automation, whereas in January a predominantly manual configuration was adopted. In addition, in one of the advertiser's target cities, we were able to conduct a fortnight-by-fortnight comparison within the same month in order to observe possible performance variations associated with the activation of the automation options suggested by the platform.

The design therefore does not correspond to a controlled experiment with random assignment of users or to a formal A/B test (Orazi and Johnston, 2020; Tayar, 2018). The campaigns were conducted under real-world advertising management conditions, in which the budget and potential reach were not divided across experimental conditions; instead, each configuration had access to the full budget allocated to its corresponding period. This approach prioritises the validity of the study under real-world advertising conditions, although it limits the possibility of establishing strict causal relationships.

3.2. Data Analysis

The data analysis was conducted using a phased exploratory approach aimed at identifying possible variations in performance between campaigns with different configurations and comparing changes or trends in metrics between manual and automated configurations.

From a quantitative perspective, advertising performance metrics and campaign performance data were analysed both within the platform itself and on the website through Google Analytics (Clifton, 2012; Tayar, 2018).

In parallel, from a qualitative perspective, we examined the campaign configurations and the types of decisions delegated to the algorithmic system, considering aspects such as targeting, formats and the possibility of allowing the algorithm to make creative optimisation decisions within the options available during the months in which the campaigns were run. This analysis enabled us to contextualise the quantitative results within the current operational logic of the advertising platform.

To clarify the research process followed, Table 2 summarises the main methodological stages of the study.

Table 2. Methodological process stages

Phase	Description	Source(s)
Initial data analysis (quantitative)	Evaluation of user behaviour in previous ads and on the website using digital analytics tools (GA4 and Meta Ads Manager).	Pakkala et al., 2012; Tayar, 2019
Preliminary analysis (qualitative) and definition of the context prior to the study	Analysis of the advertiser's own ads and those of direct competitors. Delimitation of the object of study and the advertising environment in Meta Ads, establishing the distinction between manually configured campaigns and campaigns using Advantage+ automation.	Hayes, 2025; Meta, 2026a
Campaign configuration and data collection	Implementation of traffic and conversion campaigns with different degrees of automation (Advantage+ targeting) compared with manual configurations.	Meta, 2026c; Gordon et al., 2019; Meta, 2026d
Comparison of results	Observational comparative analysis of the impact of creatives on user acquisition and advertising performance.	Singh et al., 2022; Pakkala et al., 2012
Limitations and adjustments	Constraints related to the duration of the research. Limitations inherent in observational studies conducted in real-world advertising environments.	Gordon et al., 2019; Hermayanto, 2023

Source: Authors' own elaboration (2026)

4. Results

4.1. Starting Point of the Campaigns (Quantitative, without Automation)

In the initial phase of the conversion campaigns, configured without Advantage+ automation functionalities, we can observe a relatively homogeneous distribution of metrics across the different ad sets, as the creatives and configurations were equivalent across all locations (Figure 5).

Figure 5. Initial performance of conversion campaigns in Meta Ads without Advantage+ automation.

Conjunto de anuncios	Impresiones	CPM (coste por 1000...	Clics en el enlace	Clics en la tienda	CPC (Coste por clic en e...	CTR (tasa de clics en el...	Clics (todos)
conversiones	52 525	4,95 €	14 052	—	0,02 €	26,75%	13 309
conversiones	33 460	6,88 €	8618	—	0,03 €	25,76%	8116
conversiones	22 605	5,75 €	5812	—	0,02 €	25,71%	5401
conversiones	22 220	6,74 €	6500	—	0,02 €	29,25%	6171
conversiones	18 742	5,32 €	4530	—	0,02 €	24,17%	4163
conversiones	17 719	6,04 €	4358	—	0,02 €	24,60%	3995
conversiones	—	—	—	—	—	—	—
Resultados de 7 conjuntos de anuncios	167 271 Total	5,84 € Por 1000 impresiones	43 870 Total	— Total	0,02 € Por acción	26,23% Por impresiones	41 155 Total

Source: Authors' own elaboration based on Meta Ads Business Manager (2025–2026).

As shown in Figure 5, variations in impressions and click volume are mainly associated with the size of the target cities, with higher levels of exposure recorded in those with larger populations and greater potential demand for the service. However, advertising efficiency indicators such as cost per click and CTR show similar values across ad sets, suggesting relatively stable performance during this initial phase.

In aggregate terms, the conversion campaigns achieved 167,271 impressions and 43,870 link clicks, with an average cost per click of €0.02 and a CTR of 26.23%. These values constitute the performance baseline prior to the introduction of algorithmic automation.

In the traffic campaigns (Figure 6), impressions were likewise more concentrated in larger cities, although some ad sets in cities with lower levels of competition showed relatively higher interaction levels in proportion to their volume of impressions. This behaviour may be related to lower advertising saturation in those local markets.

Figure 6. Initial performance of traffic campaigns in Meta Ads without Advantage+ automation.

Conjunto de anuncios	Impresiones	CPM (coste por 1000...	Clics en el enlace	Clics en la tienda	CPC (Coste por clic en e...	CTR (tasa de clics en el...	Clics (todos)
tráfico	355 685	0,28 €	1474	—	0,07 €	0,41%	1751
tráfico	217 771	0,37 €	1050	—	0,08 €	0,48%	1315
tráfico	145 324	0,41 €	814	—	0,07 €	0,56%	1147
tráfico	143 665	0,35 €	668	—	0,07 €	0,46%	890
tráfico	115 945	0,69 €	1036	—	0,08 €	0,89%	1425
tráfico	113 839	0,44 €	616	—	0,08 €	0,54%	765
tráfico	—	—	—	—	—	—	—
tráfico	—	—	—	—	—	—	—
Resultados de 8 conjuntos de anuncios	1 092 229 Total	0,38 € Por 1000 impresiones	5658 Total	— Total	0,07 € Por acción	0,52% Por impresiones	7293 Total

Source: Authors' own elaboration based on Meta Ads Business Manager (2025–2026).

Overall, this initial phase provides a reference point for subsequently comparing campaign performance following the introduction of artificial intelligence-based options.

It should also be noted that during this initial phase the client provided us with access to its Google Analytics 4 (GA4) account in order to compare changes in website traffic. However, for reasons of

confidentiality and the protection of commercially sensitive data, detailed web analytics and internal conversion data are not included in this study.

4.2. Performance Viability (Qualitative) across Creatives with Manual Configuration

In the phase prior to the activation of algorithmic automation, we analysed the results of different manually configured ads across several target cities. To preserve the confidentiality of the advertiser's brand, the ad preview column has been concealed in Figure 7.

Figure 7. Variation in performance across creatives in manually configured campaigns.

o	Impresiones	CPM (coste por 1000...	Clics en el enlace	Clics en la tienda	CPC (Coste por clic en e...	CTR (tasa de clics en el...	Clics (todos)
ad1 - Copia 4	198 506	0,21 €	674	—	0,06 €	0,34%	698
ad1	169 631	0,20 €	524	—	0,06 €	0,31%	541
ad1 - Copia 3	128 570	0,16 €	363	—	0,06 €	0,28%	352
ad1 - Copia	92 537	0,22 €	318	—	0,07 €	0,34%	425
ad1 - Copia 2	30 883	1,06 €	409	—	0,08 €	1,32%	621
ad1 - Copia 2	28 609	1,36 €	437	—	0,09 €	1,53%	701
ad1	20 398	0,19 €	57	—	0,07 €	0,28%	61
ad1 - Copia	18 090	0,34 €	88	—	0,07 €	0,49%	119
ad1 - Copia 3	16 794	1,40 €	282	—	0,08 €	1,68%	413
ad1 - Copia 2	13 256	1,25 €	156	—	0,11 €	1,18%	242
ados de 20 anuncios	718 780 Total	0,33 € Por 1000 impresiones	3338 Total	— Total	0,07 € Por acción	0,46% Por impresiones	4213 Total

Source: Authors' own elaboration based on Meta Ads Business Manager (2025–2026).

As shown in Figure 7, greater variations in performance between creatives begin to emerge depending on geographical location. Although the campaigns shared a similar structure, the data show statistically significant differences in impressions, clicks and CTR between ads, suggesting differentiated audience responses according to the local context.

In this case study, these variations do not appear to be associated solely with the type of offer presented, but also with the combination of visual and textual elements in the ads. Some ad sets record CTRs above 1%, while others remain at more moderate levels, reflecting heterogeneity in user interaction.

The analysis of these behaviours enabled us to identify preliminary patterns of preference for certain creatives in specific cities. Based on this observation, and in coordination with the advertiser, we proposed incorporating algorithmic automation functionalities in order to assess whether automated optimisation could broaden reach to new audiences or improve the efficiency of existing campaigns.

This phase therefore marks the transition from predominantly manual management to the exploration of artificial intelligence-based configurations on this social media advertising platform.

4.3. Campaign Configuration and Data Collection

The campaigns were configured in accordance with the methodological framework previously described in the research design in Section 3. The planned automation functionalities were enabled in December 2025, including Advantage+ targeting, automatic placements and creative optimisation.

Figures 1 to 3 document examples of these configurations in the Meta Ads Manager interface. These options were activated in a planned manner according to the phases of the study, enabling their performance to be compared with that of manual configurations.

Data were collected continuously during the campaign periods described above, using the aggregate reports provided by the advertising platform.

4.4. Comparison of Results

The comparison between manual configurations and configurations using automated targeting shows relevant variations in campaign performance depending on the city and period analysed.

Figure 8. Performance of campaigns using Advantage+ targeting in a large city.

Conjunto de anuncios	Resultados	Alcance	CPC (Coste por clic en e...	Impresiones	Frecuencia	Clics en el enlace	Coste por resultado
conversiones	218 Clientes potenciales	4493	0,16 €	8594	1,91	1394	1,05 € Por cliente potencial
conversiones	49 Clientes potenciales	3510	0,17 €	8674	2,47	583	2,04 € Por cliente potencial
conversiones	269 Clientes potenciales	2559	0,15 €	10 113	3,95	1698	0,96 € Por cliente potencial
conversiones	141 Clientes potenciales	2515	0,18 €	5309	2,11	844	1,06 € Por cliente potencial
conversiones	78 Clientes potenciales	2362	0,16 €	7808	3,31	829	1,67 € Por cliente potencial
conversiones	— Cliente potencial en el...	—	—	—	—	—	— Por cliente potencial
Resultados de 6 conjuntos de anuncios	— Varias conversiones	14 842 cuentas del Centro de...	0,16 € Por acción	40 498 Total	2,73 Por cuenta del Centro...	5348 Total	— Varias conversiones

Source: Authors' own elaboration based on Meta Ads Business Manager (2025–2026).

As shown in Figure 8, in one of the larger cities, the activation of Advantage+ targeting did not result in an immediate improvement in performance. In the second row of the table, 49 leads were recorded at a cost per result of €2.04, a higher figure than that of other ad sets during the same period. Although reach (3,510) and impressions (8,674) were comparable to those of other ad sets, efficiency in terms of cost per lead was lower.

Figure 9. Performance of campaigns using manual targeting in the same city.

Conjunto de anuncios	Resultados	Alcance	CPC (Coste por clic en e...	Impresiones	Frecuencia	Clics en el enlace	Coste por resultado	CTR (tasa de clics en el...
conversiones	471 Clientes potenciales	16 051	0,03 €	33 460	2,08	8618	0,49 € Por cliente potencial	25,76%
conversiones	595 Clientes potenciales	8592	0,02 €	52 525	6,11	14 052	0,44 € Por cliente potencial	26,75%
conversiones	315 Clientes potenciales	8159	0,02 €	22 220	2,72	6500	0,48 € Por cliente potencial	29,25%
conversiones	205 Clientes potenciales	4014	0,02 €	22 605	5,63	5812	0,63 € Por cliente potencial	25,71%
conversiones	136 Clientes potenciales	3439	0,02 €	17 719	5,15	4358	0,79 € Por cliente potencial	24,60%
conversiones	— Cliente potencial en el...	—	—	—	—	—	— Por cliente potencial	—
Resultados de 6 conjuntos de anuncios	— Varias conversiones	35 818 cuentas del Centro de...	0,02 € Por acción	148 529 Total	4,15 Por cuenta del Centro...	39 340 Total	— Varias conversiones	26,49% Por impresiones

Source: Authors' own elaboration based on Meta Ads Business Manager (2025–2026).

By contrast, when returning to a manual targeting configuration (Figure 9), a significant reduction in cost per result can be observed. In the second row of this figure, 595 leads were recorded at a cost per result of €0.44, while maintaining high levels of link clicks (14,052) and a CTR of 26.75%. This pattern suggests greater efficiency of the manual configuration in this specific context.

Beyond this particular case, the dataset shows that manual configurations tend to have lower costs per click (around €0.02–€0.03) and stable CTRs above 24%, whereas automated configurations show greater variability across cities. However, this variability does not follow a uniform pattern and appears to depend on the local context and the volume of the available audience.

In terms of frequency, some automated campaigns recorded relatively high values (up to 3.95), which could indicate repeated exposure among similar user segments. However, the observational design of the study does not allow us to determine whether this factor directly influenced campaign efficiency.

In summary, the results of conversion campaigns with and without Advantage+ show that automated targeting does not guarantee consistent improvements in performance and that its effect may vary depending on the geographical context and the specific campaign configuration. These findings reinforce the need to evaluate automation as a flexible tool rather than as a universal solution.

Another relevant aspect observed in the comparison between manual and automated configurations, at least in this case study, concerns the distribution of ad placements.

In manually configured campaigns (Figure 10), ad delivery was distributed across multiple Instagram and Facebook placements (feeds, Reels, Stories, in-stream, among others), showing a greater diversity of active placements, although with moderate interaction volumes in each of them.

Figure 10. Distribution of placements in manually configured campaigns.

Campaña			Resultados	Alcance	CPC (Coste por clic en e...	Impresiones	Frecuencia	Clics en el enlace
Instagram	Instagram Reels	Aplicación para móviles	—	45	0,19 €	52	1,16	1
Instagram	Feed	Aplicación para móviles	—	7	0,05 €	7	1,00	1
Facebook	Resultados de la búsq...	Aplicación para móviles	—	17	—	21	1,24	—
Facebook	Reels in-stream	Aplicación para móviles	—	26	0,03 €	30	1,15	4
Facebook	Feed de Facebook	Web móvil	—	1	—	1	1,00	—
Facebook	Feed de Facebook	Aplicación para móviles	—	87	0,17 €	91	1,05	1
Facebook	Feed de Facebook	Ordenador	—	1	—	1	1,00	—
Facebook	Facebook Stories	Aplicación para móviles	—	7	0,32 €	7	1,00	1
Facebook	Anuncios en Faceboo...	Aplicación para móviles	—	16	0,02 €	16	1,00	1
Facebook	Facebook Reels	Aplicación para móviles	—	42	0,16 €	45	1,07	2
Audience Network	Vídeo con premio	Aplicación para móviles	242	9631	0,02 €	21 265	2,21	6223
Audience Network	Vídeo con premio	Ordenador	—	4	—	13	3,25	—

Source: Authors' own elaboration based on Meta Ads Business Manager (2025–2026).

By contrast, in campaigns with automation enabled (Figure 11), ad delivery is notably concentrated in Audience Network, particularly in rewarded video formats. This placement accounts for the majority of impressions and clicks, reaching significantly higher volumes than the other placements.

Figure 11. Distribution of placements in campaigns using Advantage+ automation.

Campaña			Resultados	Alcance	CPC (Coste por clic en e...	Impresiones	Frecuencia	Clics en el enlace	Coste por resultado
Instagram	Instagram Stories	Aplicación para móviles	—	3	—	3	1,00	—	—
Instagram	Instagram Reels	Aplicación para móviles	—	13	—	14	1,08	—	—
Instagram	Feed	Aplicación para móviles	—	1	—	1	1,00	—	—
Facebook	Resultados de la búsq...	Aplicación para móviles	—	4	—	4	1,00	—	—
Facebook	Marketplace	Aplicación para móviles	—	2	—	2	1,00	—	—
Facebook	Reels in-stream	Aplicación para móviles	—	46	0,16 €	50	1,09	1	—
Facebook	Feed de Facebook	Aplicación para móviles	—	50	0,15 €	57	1,14	1	—
Facebook	Facebook Stories	Aplicación para móviles	—	9	0,04 €	9	1,00	3	—
Facebook	Anuncios en Faceboo...	Aplicación para móviles	—	29	0,03 €	29	1,00	1	—
Facebook	Facebook Reels	Aplicación para móviles	—	54	0,19 €	66	1,22	1	—
Audience Network	Vídeo con premio	Aplicación para móviles	379	6039	0,01 €	38 533	6,38	11 255	0,43 €
Audience Network	Nativo, banner e inters...	Aplicación para móviles	216	3429	0,03 €	13 757	4,01	2790	0,45 €
Resultados de 7 campañas			— Varias conversiones	200 743 cuentas del Centro de...	0,03 € Por acción	1 259 500 Total	6,27 Por cuenta del Centro...	49 528 Total	— Varias conversiones

Source: Authors' own elaboration based on Meta Ads Business Manager (2025–2026).

This pattern suggests that the algorithmic system may prioritise environments in which it identifies a higher probability of interaction at a lower cost. In terms of efficiency, some of these placements record low costs per click and competitive costs per result. However, this concentration also entails less diverse exposure across other areas of the platform.

The observational design of the study does not allow us to determine whether this redistribution affects traffic quality or final conversions, but it does show that automation can substantially alter the logic of ad distribution compared with manual configurations.

In the case of traffic campaigns, the comparison between the initial phase (Figure 6) and the phase incorporating creative automation and algorithmic optimisation (Figure 12) shows more moderate variations than those observed in conversion campaigns.

Figure 12. Performance of traffic campaigns with algorithmic optimisation and automated creative adjustments.

Conjunto de anuncios	Impresiones	CPM (coste por 1000...	Clics en el enlace	Clics en la tienda	CPC (Coste por clic en e...	CTR (tasa de clics en el...	Clics (todos)
tráfico	216 691	0,46 €	987	—	0,10 €	0,46%	1338
tráfico	128 184	0,62 €	890	—	0,09 €	0,69%	1106
tráfico	92 472	0,86 €	804	—	0,10 €	0,87%	1212
tráfico	176 020	0,34 €	672	—	0,09 €	0,38%	789
tráfico	72 240	0,83 €	600	—	0,10 €	0,83%	875
tráfico	134 985	0,44 €	583	—	0,10 €	0,43%	714
tráfico	—	—	—	—	—	—	—
tráfico	—	—	—	—	—	—	—
Resultados de 8 conjuntos de anuncios	820 592 Total	0,54 € Por 1000 impresiones	4536 Total	— Total	0,10 € Por acción	0,55% Por impresiones	6034 Total

Source: Authors' own elaboration based on Meta Ads Business Manager (2025–2026).

As shown in Figure 12, the traffic campaigns recorded 820,592 impressions and 4,536 link clicks, with an average CPC of €0.10 and a CTR of 0.55%. These values fall within ranges comparable to those obtained in the previous phase, without showing changes as marked as those detected in conversion-oriented campaigns.

Although slight fluctuations can be observed between ad sets, the overall pattern suggests relative stability in the performance of traffic campaigns, even after the introduction of automation in creative elements. This behaviour may indicate that, for traffic objectives, the impact of algorithmic optimisation on creatives is less pronounced than for conversion objectives, where the platform optimises towards more specific actions.

However, the observational nature of the study does not allow direct causal relationships to be established, but only trends in campaign behaviour under different configurations to be described.

4.5. Limitations and Adjustment

This study presents several limitations arising from its applied nature and observational design within a real-world advertising management environment.

First, the data analysed consist of aggregate metrics provided by the advertiser and its advertising platform, without access to user-level microdata or detailed information on the company's final internal conversions. This restriction reflects both privacy policies and confidentiality agreements with the advertiser.

Second, the allocation of manual and automated configurations was not carried out through an experimental design with strict randomisation, but under real-world campaign conditions. This means that external factors — such as auction competition, seasonality of demand or local market dynamics — may have influenced the observed results.

Moreover, the learning logic of advertising algorithms introduces additional variability, since automated optimisation may require learning periods whose duration is not always consistent across campaigns.

Finally, the research focuses on a single applied case in the storage services sector. The results are therefore not intended to be generalisable across all sectors, but rather to provide exploratory evidence on the behaviour of advertising automation in real-world contexts.

The main limitations also include reliance on aggregate metrics provided by the platform and the inability to access more detailed information on final conversions and the company's internal commercial results. Campaign performance may likewise be influenced by external factors inherent to digital advertising, such as auction competition or the seasonality of demand.

Despite these limitations, the approach adopted allows us to obtain exploratory evidence that contributes to understanding how the artificial intelligence options currently available may influence the performance of digital campaigns in real-world contexts**.**

5. Conclusions and Discussion

The results obtained allow us to reflect on the growing role of artificial intelligence in mediating advertising decisions and shaping professional practices in digital marketing (Feng et al., 2021).

From an operational perspective, the automated functionalities offered by platforms such as Meta Ads provide significant support for campaign managers by facilitating the generation of creative variations, the optimisation of placements and the identification of potential audiences. These tools can reduce the technical workload and accelerate testing processes that traditionally required greater human intervention.

However, the findings of this study show that automation does not produce consistent improvements across all contexts. In particular, conversion campaigns appear more sensitive to changes in configuration than traffic campaigns, suggesting that the impact of algorithmic optimisation may vary according to the advertising objective.

At a strategic level, an important issue emerges regarding the potential homogenisation of advertising creatives. If multiple advertisers within the same sector adopt similar algorithmic recommendations in terms of formats, visual styles or copy structures, this could lead to an aesthetic convergence that reduces brand differentiation. This phenomenon, which could be linked to the notion of an "algorithmic aesthetics of conversion", raises questions about the balance between data-driven optimisation and the construction of brand identity.

The results also invite consideration of the primacy of aggregate quantitative metrics as the sole criterion for optimisation. The tendency of algorithms to prioritise lower-cost placements or audiences may not always coincide with the segments of greatest strategic value to the brand. This suggests the need to integrate qualitative assessments and contextual business knowledge into advertising decision-making.

In this regard, artificial intelligence appears to offer greater potential when used as a support tool informed by the advertiser's prior knowledge of its market and customers, rather than as a complete substitute for human judgement. The combination of historical data, brand identity and algorithmic capabilities may constitute a more balanced approach to optimisation.

Furthermore, the redistribution of investment towards certain placements identified in this study demonstrates how algorithms can reconfigure the logic of advertising exposure, opening up new avenues of research into traffic quality and the contexts in which ads are viewed.

Among the main conclusions, this exploratory study has analysed the effect of algorithmic automation on digital advertising campaigns by comparing manual and automated configurations in a real-world campaign management context.

The results indicate that automation can offer operational advantages and contribute to the optimisation of certain performance indicators, but its effects are neither uniform nor do they guarantee improvements in all scenarios. In particular, its impact in this case study appears to be more relevant in conversion-oriented campaigns than in traffic campaigns.

The research suggests that fully delegating decisions to the algorithm may entail strategic risks, such as loss of control over placements, the prioritisation of low-cost metrics with lower qualitative value, or the potential homogenisation of creatives within a sector. In this regard, advertising automation appears to work more effectively when integrated into a strategy informed by the advertiser's prior knowledge of its market, brand identity and customer behaviour (Hocutt, 2024).

Given the case-study nature of the research, the results are not intended to be generalisable, but they do provide relevant empirical evidence on algorithmic mediation in digital advertising. The study points to the need for further research into these phenomena across different sectors, time periods and advertising platforms, including those used by other social networks, in order to better understand how artificial intelligence is reshaping decision-making in commercial communication. This research contributes to the debate on the role of artificial intelligence in contemporary digital advertising by highlighting the importance of hybrid approaches that integrate data, creativity and human intelligence in campaign management.

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