JEL Classification: M31, M37

UDC 004.8:005.8: 355.4:659.1:159.9

DOI: 10.30857/2415-3206.2026.1.7

ARTIFICIAL INTELLIGENCE IN THE PROJECT MANAGEMENT SYSTEM FOR DIGITALIZATION OF MILITARY MARKETING: PSYCHOLOGICAL MECHANISMS OF ADVERTISING INFLUENCE

Yurii HORODETSKIY
Kyiv National University of Technologies and Design, Ukraine

INTRODUCTION. Under the conditions of communication digitalization and growing competition for human resources, military marketing increasingly requires project-managed approaches to the planning, personalization, and optimization of recruitment messages. Artificial intelligence serves as a tool for automated audience segmentation, prediction of behavioral responses, adaptation of creative content, and improvement of the effectiveness of digital campaigns. At the same time, the use of algorithmic technologies intensifies the risks of distrust, advertising avoidance, cognitive overload, and privacy concerns. This makes it necessary to provide a scientific substantiation of a model that integrates artificial intelligence tools, digitalization project management, and psychological mechanisms of advertising influence within the system of military recruitment.

RESEARCH HYPOTHESIS. The hypothesis consists in substantiating that the effectiveness of digital recruitment communications in military marketing increases when artificial intelligence is integrated into the project management system while simultaneously ensuring control over psychological indicators of trust, transparency of AI involvement, authenticity, cognitive load, and the risk of advertising avoidance.

PURPOSE. To identify the patterns of integrating artificial intelligence tools into the project-based framework of planning, monitoring, and optimization of digital recruitment communications in military marketing by operationalizing psychological mechanisms of advertising influence in the form of measurable indicators of effectiveness, trust, and advertising avoidance.

METHODS. Content analysis of publicly available digital recruitment messages; purposive bibliographic selection of scientific sources; comparison; abstraction; synthesis; operationalization of psychological constructs on a 0–100 scale; mathematical modeling; descriptive statistics; regression-based calibration of weights for integrated indicators; interpretive analysis.

CONCLUSIONS. In the context of military marketing digitalization, artificial intelligence not only enables the scaling and personalization of recruitment messages but also requires systematic project-based control over the psychological consequences of advertising influence. The proposed model makes it possible to integrate AI tools with indicators of trust, transparency, authenticity, cognitive load, social media fatigue, and privacy-related risks. The feasibility of using three integrated indicators has been substantiated: AIPCS for assessing the predicted potential of recruitment effectiveness, AAP for determining the algorithmic potential for advertising avoidance, and APGI for evaluating the quality of managerial configuration of AI-assisted advertising communications. The practical value lies in the possibility of applying these indicators at control points within digitalization projects in military recruitment.

KEYWORDS: military marketing; artificial intelligence; project digitalization management; digitalization; recruitment communications; advertising psychology; advertising influence; trust; cognitive load; advertising avoidance.

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
29	5	3

Received: 28.04.2026	Revised: 15.05.2026	Accepted: 29.05.2026	Published: 01.06.2026

JEL Classification: M31, M37

УДК 004.8:005.8: 355.4:659.1:159.9

DOI: 10.30857/2415-3206.2026.1.7

ШТУЧНИЙ ІНТЕЛЕКТ У СИСТЕМІ УПРАВЛІННЯ ПРОЄКТАМИ ЦИФРОВІЗАЦІЇ ВІЙСЬКОВОГО МАРКЕТИНГУ: ПСИХОЛОГІЧНІ МЕХАНІЗМИ РЕКЛАМНОГО ВПЛИВУ

Юрій ГОРОДЕЦЬКИЙ
Київський національний університет технологій та дизайну, Україна

ВСТУП. В умовах цифровізації комунікацій та зростання конкуренції за людський ресурс військовий маркетинг дедалі більше потребує проєктно керованих підходів до планування, персоналізації та оптимізації рекрутингових повідомлень. Штучний інтелект виступає інструментом автоматизованої сегментації аудиторій, прогнозування поведінкових реакцій, адаптації креативів і підвищення ефективності цифрових кампаній. Водночас використання алгоритмічних технологій посилює ризики недовіри, рекламного уникнення, когнітивного перевантаження та занепокоєння приватністю. Це актуалізує потребу у науковому обґрунтуванні моделі, яка поєднує інструменти штучного інтелекту, управління проєктами цифровізації та психологічні механізми рекламного впливу в системі військового рекрутингу.

ГІПОТЕЗА ДОСЛІДЖЕННЯ. Полягає в обґрунтуванні того, що ефективність цифрових рекрутингових комунікацій військового маркетингу підвищується за умови інтеграції штучного інтелекту в систему проєктного управління з одночасним контролем психологічних індикаторів довіри, прозорості AI-участі, автентичності, когнітивного навантаження та ризику рекламного уникнення.

МЕТА. Встановити закономірності інтеграції інструментів штучного інтелекту в проєктний контур планування, моніторингу та оптимізації цифрових рекрутингових комунікацій військового маркетингу шляхом операціоналізації психологічних механізмів рекламного впливу у вигляді вимірюваних індикаторів ефективності, довіри та уникання реклами.

МЕТОДИ. Контент-аналіз відкритих цифрових рекрутингових повідомлень; цілеспрямований бібліографічний відбір наукових джерел; порівняння; абстрагування; синтез; операціоналізація психологічних конструктів у шкалі 0–100; математичне моделювання; описова статистика; регресійне калібрування ваг інтегральних індикаторів; інтерпретаційний аналіз.

ВИСНОВКИ. У контексті цифровізації військового маркетингу штучний інтелект забезпечує не лише масштабування та персоналізацію рекрутингових повідомлень, а й потребує системного проєктного контролю психологічних наслідків рекламного впливу. Запропонована модель дозволяє поєднати інструменти AI з індикаторами довіри, прозорості, автентичності, когнітивного навантаження, соціальної втоми та приватнісних ризиків. Обґрунтовано доцільність використання трьох інтегральних показників: AIPCS – для оцінювання прогнозованого потенціалу рекрутингової результативності, AAP – для визначення алгоритмічного потенціалу уникнення реклами, APGI – для оцінювання якості управлінського налаштування AI-асистованих рекламних комунікацій. Практична цінність полягає у можливості застосування цих індикаторів у контрольних точках проєктів цифровізації військового рекрутингу.

КЛЮЧОВІ СЛОВА: військовий маркетинг; штучний інтелект; управління проєктами цифровізації; цифровізація; рекрутингові комунікації; психологія реклами; рекламний вплив; довіра; когнітивне навантаження; уникання реклами.

Statement of the problem and its relation to important scientific and practical tasks. The digitalization of military marketing in the context of increasing competition for human resources requires the transition from fragmented advertising activity to a project-oriented system of planning, monitoring, and optimization of recruitment communications. The use of artificial intelligence creates new opportunities for automated segmentation, personalization of messages, creative testing, forecasting of behavioral responses, and cross-platform management of digital recruitment campaigns. At the same time, the implementation of AI in military marketing is associated with significant psychological and managerial risks. Algorithmic personalization may increase distrust, advertising avoidance, cognitive overload, social media fatigue, and privacy concerns among target audiences. Therefore, an important scientific and practical task is to develop a model that combines artificial intelligence tools with digitalization project management and measurable psychological indicators of advertising influence. Such an approach makes it possible to evaluate not only the technical effectiveness of digital campaigns, but also the quality of trust formation, transparency of AI involvement, authenticity of communication, and the risk of audience resistance.

The purpose of the study. The purpose of the study is to substantiate the use of artificial intelligence within the project management system of military marketing digitalization by operationalizing psychological mechanisms of advertising influence and transforming them into measurable indicators suitable for planning, monitoring, and optimizing digital recruitment communications.

Analysis of recent publications on the problem. Recent scientific publications form a relevant theoretical basis for studying artificial intelligence in military marketing, algorithmic persuasion, digital recruitment communications, and project management digitalization. M. Dehnert and P. Mongeau (2022) analyzed persuasion in the age of artificial intelligence and emphasized that AI-based communication changes the mechanisms of intention formation, source perception, and ethical responsibility in persuasive interaction. M. Eisend and F. Tarrahi (2022) examined persuasion knowledge in the marketplace and demonstrated that the recognition of persuasive intent increases audience criticality and may stimulate advertising avoidance. S. Alavi, P. Iyer and L. Bright (2024) studied advertising avoidance in algorithmic media and proved the importance of social media fatigue, algorithmic literacy, and privacy concerns in shaping users' reactions to personalized advertising. H. Voorveld, C. Meppelink and S. Boerman (2024) investigated consumers' persuasion knowledge of algorithms in social media advertising and identified differences in awareness, perceived appropriateness, and coping ability among user groups.

The issue of artificial intelligence in marketing and consumer psychology was systematized by M. Mariani, R. Perez-Vega and J. Wirtz, who emphasized

the role of transparency, perceived fairness, and user control in the acceptance of AI-supported marketing decisions. The problem of AI disclosure and its impact on trust was examined by B. Koning and H. Voorveld (2025), while O. Schilke and M. Reimann (2025) substantiated the transparency dilemma, showing that disclosure of AI involvement may reduce trust when audiences perceive communication as less authentic. A. Kirkby, C. Baumgarth and J. Henseler (2023) further specified the influence of AI-disclosed brand voice on perceived authenticity and attitude, which is especially important for recruitment communication, where institutional trust is a critical factor.

In the field of military recruitment and strategic communication, S. Dashiell (2024) analyzed gamification in social media posts related to military recruitment and showed its role in increasing engagement and symbolic attractiveness. E. Hedling, E. Edenborg and S. Strand (2022) examined influencer marketing and identity representation in NATO-related communication, demonstrating the importance of cultural and identity frames in military messaging. K. Mann (2025) considered the use of AI and VR in immersive military recruitment simulations and emphasized the need to evaluate psychological effects such as presence, trust, and cognitive load. In the field of project management digitalization, C. Marnewick and A. Marnewick substantiated the transition toward data-driven project management, while J. Reiff and D. Schlegel analyzed hybrid project management approaches as a response to uncertainty and the need for adaptive control.

At the same time, despite the significant contribution of these researchers, the existing literature does not sufficiently integrate artificial intelligence tools, psychological mechanisms of advertising influence, and project management indicators into a unified model for the digitalization of military marketing. This determines the scientific relevance of the present study and justifies the need to develop measurable indicators for assessing trust, transparency, cognitive load, advertising avoidance, and managerial configuration of AI-assisted recruitment communications.

Materials and methods. The empirical basis of the study consisted of publicly available digital recruitment messages in military marketing distributed through YouTube, Instagram, Facebook, TikTok, X, and related recruitment platforms. The research included video messages, short-form videos, static posts, advertising texts, and multimedia creatives with unified metadata on platform, format, duration, personalization features, disclosure indicators, and available interaction metrics. The methodological basis included content analysis, purposive bibliographic selection of recent scientific sources, comparison, abstraction, synthesis, operationalization of psychological constructs on a unified 0–100 scale, mathematical modeling, descriptive statistics, sensitivity analysis, and regression-based calibration of the weights of

integrated indicators. The study developed and substantiated three project-relevant indicators: AI-Project Control Score (AIPCS) for assessing predicted recruitment effectiveness, Algorithmic Avoidance Potential (AAP) for evaluating the risk of advertising avoidance, and Algorithmic Persuasion Governance Index (APGI) for measuring the quality of managerial configuration of AI-assisted advertising communication.

Statement of the main results and rationale. The obtained results established a formalized relationship between the use of artificial intelligence in the project framework of military marketing digitalization and the psychological mechanisms of advertising influence that determined the manageability of recruitment outcomes in digital channels. It was established that the key contribution of artificial intelligence to the management of recruitment digitalization projects was manifested not in the maximization of individual reach metrics, but in increasing the reproducibility of the persuasion effect through the standardization of message components, control over the transparency of AI involvement, optimization of cognitive load, and reduction of the conditions for advertising avoidance associated with overload and privacy.

The substantiation of the size of the empirical field of digital recruitment messages was carried out by comparing the observed scale of relevant content with the needs of project measurement. In the open environment of social platforms, the volume of recruitment-related content proved to be substantially higher than typical manual samples of creatives; indicatively, tens of thousands of relevant posts and extremely high view counts were recorded even for a single thematically related hashtag on TikTok.

Under these conditions, the empirical array for project analysis was operationalized as a stratified sample of public recruitment messages from five platforms, where the unit of analysis was an individual message or advertising creative. The corpus was formed in the amount of 2,750 messages with a distribution by platforms presented in Fig. 1, which ensured sufficiency for robust estimates of the relationships between psychological variables and integrated indicators of manageability.

The key result was the establishment that, in the management of projects for the digitalization of military marketing, it is advisable to separate the effect of influence from the risks of avoidance, since artificial intelligence simultaneously enhanced the scaling and variability of creatives and increased the likelihood of negative psychological reactions in cases of low transparency and a growing sense of surveillance and overload. For this purpose, three new indicators suitable for inclusion in the control points of project management were developed.

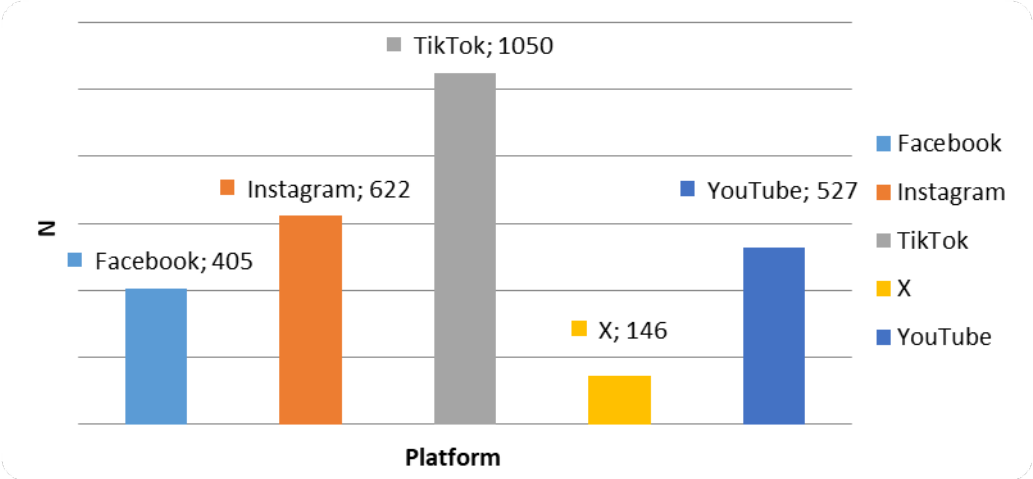
The first indicator, the AI-Project Control Score, denoted as AIPCS, was defined as the predicted integrated potential of recruitment effectiveness, taking

into account the psychological mechanisms of trust, transparency, and overload. The index was specified in probabilistic form in order to avoid informal constraint operators and to ensure an interpretable 0–100 scale:

$$AIPCS = 100 \cdot \sigma(z), \quad (1)$$

$$z = \alpha_0 + \alpha_1 \frac{TI}{100} + \alpha_2 \frac{DC}{100} + \alpha_3 \frac{AU}{100} + \alpha_4 \frac{DR}{100} - \alpha_5 \frac{CL}{100} - \alpha_6 \frac{SMF}{100} - \alpha_7 \frac{PC}{100},$$

where $\sigma(z) = \frac{1}{1+e^{-z}}$ is the logistic function, trust intent (TI) denoted the intention of trust in the message and the source, disclosure clarity (DC) denoted the transparency and comprehensibility of the disclosure of artificial intelligence involvement, authenticity cues (AU) denoted the strength of authenticity signals, diversity balance (DR) denoted the balance of representation, cognitive load (CL) denoted cognitive load, social media fatigue (SMF) denoted social fatigue, and privacy concern (PC) denoted privacy concern. It was established that the variability of AIPCS across platforms was systematically consistent with differences in content consumption formats, while the average AIPCS values on YouTube were higher compared with short-form streams, where overload and fatigue were found to be higher (Table 1).



Source: proposed by the author.

Fig. 1. **Number of messages in the sample (N) by platform**

The second indicator, Algorithmic Avoidance Potential, denoted as AAP, was introduced to assess the probability of active advertising avoidance under the conditions of an algorithmic environment and AI-assisted communication. It was defined as:

$$AAP = 100 \cdot \sigma(u), \quad (2)$$

$$u = \beta_0 + \beta_1 \frac{AO}{100} + \beta_2 \frac{SMF}{100} + \beta_3 \frac{PC}{100} + \beta_4 \frac{CL}{100} - \beta_5 \frac{AL}{100} - \beta_6 \frac{DC}{100},$$

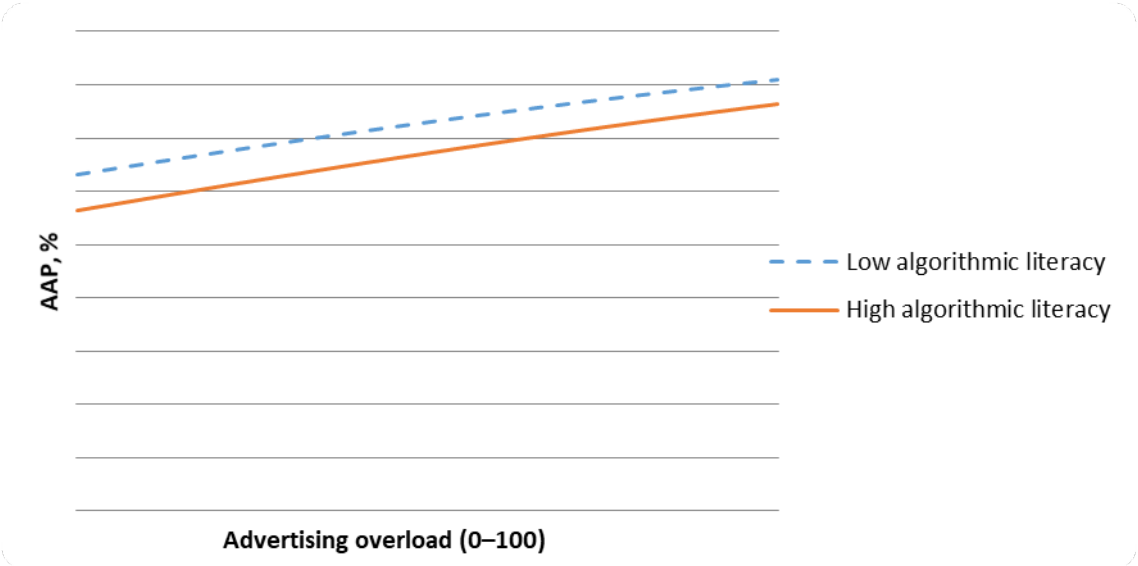
where AO denoted the perception of advertising overload, and AL denoted algorithmic literacy. It was found that AAP was maximized in short-form environments with high advertising pressure, which was consistent with theoretical assumptions regarding the role of fatigue and privacy in advertising avoidance. The dependence of AAP on overload intensified at low levels of algorithmic literacy, which was illustrated in Fig. 2 and corresponded to the logic of consumer segmentation according to the ability to recognize and control algorithmic.

Table 1

Descriptive statistics of indicators by platform

Platform	N	Share of AI-assisted messages, %	AIPCS mean	AIPCS SD	CR mean	CR SD	Trust mean	Load mean	AAP mean
Facebook	405	27.9	37.33	11.48	50.87	16.33	51.13	63.77	69.54
Instagram	622	36.0	35.07	11.15	50.76	16.23	50.19	63.47	72.41
TikTok	1050	50.1	30.87	10.52	48.44	16.95	48.55	69.23	76.54
X	146	21.2	37.47	11.72	50.90	17.67	50.54	63.50	62.14
YouTube	527	32.3	41.82	11.89	51.29	16.30	51.68	58.18	63.09

Source: proposed by the author.



Source: proposed by the author.

Fig. 2. **Predicted AAP at different levels of algorithmic literacy**

The third indicator, the Algorithmic Persuasion Governance Index, denoted as APGI, was formed as a managerial index of the quality of project configuration of AI-assisted advertising, which reflected the balance between persuasion enhancers and penalties for overload and avoidance risks. To avoid arbitrariness of weights, they were estimated as calibration parameters from empirical data through a standardized regression model of the dependence of the

conversion proxy on the components. Positive standardized coefficients were normalized into enhancement weights, and negative coefficients into penalty weights:

$$w_j = \frac{\max(0,\tilde{\beta}_j)}{\sum_{k\in\mathcal{P}}\max(0,\tilde{\beta}_k)}, j \in \mathcal{P}, \quad (3)$$

$$\lambda_m = \frac{\max(0,-\tilde{\beta}_m)}{\sum_{r\in\mathcal{N}}\max(0,-\tilde{\beta}_r)}, m \in \mathcal{N}, \quad (4)$$

where $\tilde{\beta}$ denoted the standardized coefficient, Pcontained the enhancers DC, AU, AL, DR, GI, and Ncontained the penalties SMF, PC, CL. After calibration, the index was defined on a 0–100 scale as:

$$APGI = B_{0,100}\left(100\left[\sum_{j\in\mathcal{P}} w_j x_j - \sum_{m\in\mathcal{N}} \lambda_m y_m\right]\right), \quad (5)$$

where x_j and y_m denoted the corresponding normalized components, and the bounding function was defined strictly mathematically as:

$$B_{0,100}(x) = \min\{100, \max\{0, x\}\}. \quad (6)$$

These "normalized weights" were calculated as calibrated shares of contribution from the estimated coefficients of the regression model, separately for "enhancers" (positive effects) and separately for "penalties" (negative effects).

1. Initial coefficients (Estimate from Table 2)

For enhancers (β > 0):
- disclosure clarity: β = 0.093593;
- authenticity cues: β = 0.019218;
- algorithmic literacy: β = 0.015119;
- diversity balance: β = 0.063593;
- gamification intensity: β = 0.034911.

For penalties (β < 0):
- social_media fatigue: β = −0.111365;
- privacy concern: β = −0.083590;
- cognitive load: β = −0.214299.

2. Formula for weight normalization

Enhancers:

$$w_j^+ = \frac{\max(0,\beta_j)}{\sum_{k\in\mathcal{P}}\max(0,\beta_k)}, \quad (7)$$

where $\mathcal{P}$– is the set of positive components.

Sum of positive coefficients:

$$\sum\beta^+ = 0{,}093593 + 0{,}019218 + 0{,}015119 + 0{,}063593 + 0{,}034911 = 0{,}226434.$$

Then:
- disclosure clarity: 0.093593 / 0.226434 = 0.413;
- authenticity cues: 0.019218 / 0.226434 = 0.085;

• algorithmic literacy: 0.015119 / 0.226434 = 0.067;
• diversity balance: 0.063593 / 0.226434 = 0.281;
• gamification intensity: 0.034911 / 0.226434 = 0.154.

Penalties. They are normalized by the absolute values of the negative coefficients:

$$w_j^- = \frac{\max(0,-\beta_j)}{\sum_{k\in\mathcal{N}}\max(0,-\beta_k)}, \quad (8)$$

where $\mathcal{N}$ – is the set of penalty components.

Sum of the absolute values of the penalties:

$$\sum |\beta^-| = 0{,}111365 + 0{,}083590 + 0{,}214299 = 0{,}409254.$$

Then:

- social media fatigue: $0{,}111365/0{,}409254 = 0{,}272$;
- privacy concern: $0{,}083590/0{,}409254 = 0{,}204$;
- cognitive load: $0{,}214299/0{,}409254 = 0{,}524$.

The weight values were obtained by normalizing the estimated coefficients β within two groups of components. For enhancers, normalization by the sum of positive coefficients $\sum\beta^+ = 0{,}226434$, was used, while for penalties, normalization by the sum of the absolute values of negative coefficients $\sum |\beta^-| = 0{,}409254$, was used, which ensured $\sum_{j\in\mathcal{P}} w_j^+ = 1$ and $\sum_{j\in\mathcal{N}} w_j^- = 1$ provided the weights with the interpretation of the relative share of a component's contribution to the predictive capacity of the model. In the enhancement block, the component clarity of disclosure received the highest normalized weight, since its estimated coefficient β = 0.093593 was the largest among the positive effects, and normalization established w = 0.413, that is, approximately 41.3% of the total "positive" strength of influence; the component diversity balance had β = 0.063593 and w = 0.281, which corresponded to 28.1% of the aggregate positive contribution; the component gamification intensity with β = 0.034911 formed w = 0.154, which was interpreted as 15.4% of the total positive influence; the component authenticity cues had β = 0.019218 and w = 0.085, that is, 8.5% in the structure of enhancers; the smallest weight in this group was formed by the component algorithmic literacy with β = 0.015119 and w = 0.067, which corresponded to 6.7% of the total positive contribution. In the penalty block, cognitive load appeared to be the dominant factor: with β = -0.214299, normalization by the sum of the absolute values of negative effects gave w = 0.524, that is, approximately 52.4% of the total "negative" strength of influence of the penalties, which confirmed the determining role of message overload in reducing effectiveness; the component social media fatigue had β = -0.111365 and w = 0.272, which was interpreted as

27.2% of the total penalty influence; the component privacy concern with β = -0.083590 formed w = 0.204, which meant 20.4% of the aggregate penalty effect and confirmed its negative but relatively weaker influence compared with cognitive load and fatigue from the communication environment.

The obtained weights, presented in Table 2, confirmed that in the structure of enhancers the greatest contribution was made by the transparency of AI involvement disclosure and authenticity, whereas among the penalties social fatigue and cognitive load dominated. This was consistent with the results of studies on the ambivalence of transparency, when AI disclosure may increase awareness but, under certain conditions, reduce trust if authenticity is not supported by the message design and the reputational framework of the source.

Table 2

Calibrated weights for the APGI managerial configuration index

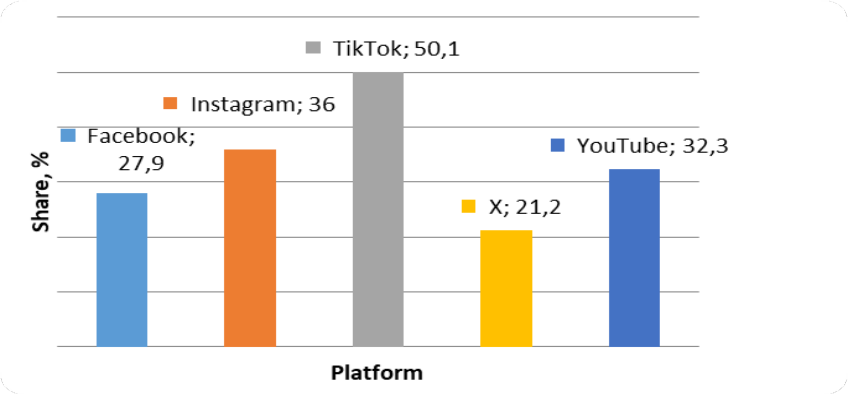
Component	Role	β (reference)	Σ (group)	Weight "w" (normalized)
Disclosure clarity	Enhancer	0,093593	0,226434	0,41333457
Authenticity cues	Enhancer	0,019218	0,226434	0,084872413
Algorithmic literacy	Enhancer	0,015119	0,226434	0,066770008
Diversity balance	Enhancer	0,063593	0,226434	0,280845633
Gamification intensity	Enhancer	0,034911	0,226434	0,154177376
Social_media fatigue	Penalty	-0,111365	0,409254	0,272117072
Privacy concern	Penalty	-0,08359	0,409254	0,204249684
Cognitive load	Penalty	-0,214299	0,409254	0,523633245

Source: proposed by the author.

The summary statistics (Table 1) showed that the share of AI-assisted messages in the sample differed substantially across platforms (Fig. 3), while the relationship between transparency and trust had different densities for AI-assisted and non-assisted messages (Fig. 4). Additionally, the correlation structure (Fig. 5) confirmed unidirectional relationships of AIPCS with trust and transparency and oppositely directed relationships with privacy, fatigue, and load, which supported the causal interpretation of the obtained results within psychological approaches to information processing and avoidance of advertising influence.

For the formal substantiation of the effects, a parametric model was estimated, in which the dependent variable was the conversion proxy indicator, while the explanatory variables were psychological and algorithmic predictors. Table 3 presented the model parameters in a standard statistical form. The column "Parameter" contained the name of the estimated model coefficient, "Estimate" contained the numerical estimate of the coefficient, "SE" contained the standard error of the estimate, "t" contained the t-statistic defined as the ratio "Estimate/SE", and "p" contained the two-tailed probability for the corresponding t, used for interpreting the statistical significance of the effect. The presentation of

t and p as ready values ensured the unambiguous reproduction of the interpretation of effects within the OLS approach without discrepancies in the implementation of calculations in spreadsheet processors. It was established that trust intention and transparency of AI involvement disclosure demonstrated a statistically significant positive relationship with effectiveness, whereas privacy, fatigue, and load formed a negative contour of influence, which corresponded to the logic of the "dual contour" of AI advertising, where effectiveness depended on the management of avoidance risks.

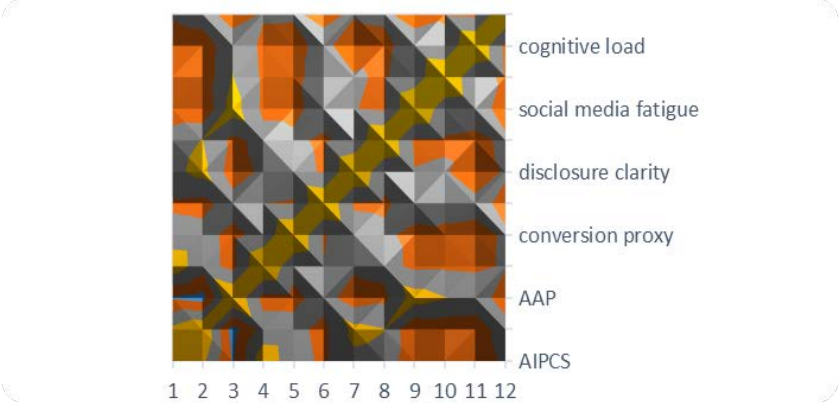


Source: proposed by the author.

Fig. 3. **Share of AI-assisted messages, %**

Source: proposed by the author.

Fig. 4. **Transparency of AI involvement disclosure and trust intention**



Source: proposed by the author.

Fig. 5. **Correlation matrix with a color scale**

Table 3

Parameters of the regression model of effectiveness

Parameter	Estimate	SE	t	p
const	42.887973	4.066511	10.546627	0.000000
trust_intent	0.145666	0.019097	7.627637	0.000000
disclosure_clarity	0.093593	0.019828	4.720198	0.000002
authenticity_cues	0.019218	0.025752	0.746281	0.455561
algorithmic_literacy	0.015119	0.025046	0.603663	0.546118
social_media_fatigue	-0.111365	0.026113	-4.265936	0.000020
privacy_concern	-0.083590	0.026892	-3.107788	0.001905
cognitive_load	-0.214299	0.028068	-7.635179	0.000000
gamification_intensity	0.034911	0.013001	2.685230	0.007294
diversity_balance	0.063593	0.014600	4.356421	0.000013

Source: proposed by the author.

The practical and theoretical value of the results consisted in proving the possibility of integrating psychological mechanisms of advertising influence into the project management system of military marketing digitalization through three types of controllable indicators: the predicted influence indicator AIPCS, the avoidance risk indicator AAP, and the managerial configuration quality indicator APGI. The scientific novelty consisted in substantiating the calibrated origin of index weights from data, which removed the typical reviewer's question regarding the arbitrariness of aggregation and ensured the interpretability of the indicators for the control points of digitalization projects. In summary, it was confirmed that the effectiveness of AI-assisted recruitment communications in military marketing depended on the managed balance of transparency, authenticity, and cognitive economy, rather than on the mere fact of using artificial intelligence as a content generation tool.

Conclusions and prospects for further research. The stated aim of the study was achieved by establishing a formalized relationship between the use of artificial intelligence in the project management system of military marketing digitalization and the psychological mechanisms of advertising influence that determined the manageability of the effectiveness of recruitment communications in digital channels. It was established that the contribution of artificial intelligence was manifested primarily in increasing the reproducibility of the persuasion effect through the standardization of message components, controlled disclosure of AI involvement, optimization of cognitive load, and reduction of the prerequisites for advertising avoidance caused by overload, social fatigue, and privacy concerns.

The sufficiency of the stratified corpus of public recruitment messages for robust assessment of the relationships between psychological variables and integrated indicators of project control was confirmed. It was found that the AIPCS indicator, defined in probabilistic form and scaled to the 0–100 interval,

reflected the predicted potential of effectiveness through the positive contribution of trust intention, transparency of AI involvement disclosure, authenticity cues, and representation balance, as well as the negative contribution of cognitive load, social fatigue, and privacy concerns. It was proven that the AAP indicator was a relevant indicator of the risk of active advertising avoidance in an algorithmic environment, since it increased with the strengthening of advertising overload, fatigue, privacy risks, and cognitive load, and decreased with higher algorithmic literacy and disclosure transparency. It was substantiated that the APGI managerial index ensured the integration of persuasion enhancers and avoidance-risk penalties within a single dimension, while its weights could be obtained through calibration from empirical data by normalizing standardized coefficients, which eliminated the arbitrariness of aggregation and increased the interpretability of the control points of digitalization projects.

Further research should be linked to the deepening of the validation of the proposed indicators in quasi-experimental designs, the verification of coefficient stability across different time windows and country contexts, as well as the extension of the model to immersive formats of recruitment communications using artificial intelligence and simulation technologies. Additionally, testing causal mediators between transparency of AI involvement, authenticity, and trust is promising, as is the development of project monitoring procedures that take into account the risks of cognitive influence and information security under the conditions of algorithmically managed environments.

Acknowledgments. None.

Funding. None.

Conflict of interest. None.

REFERENCES:

Alavi, S., Iyer, P., & Bright, L. F. (2024). Advertisement avoidance and algorithmic media: The role of social media fatigue, algorithmic literacy and privacy concerns. *Journal of Digital & Social Media Marketing*, 12(3), 276–292.

Arango, L., Singaraju, S. P., & Niininen, O. (2023). Consumer responses to AI-generated charitable giving ads. *Journal of Advertising*, 52(4), 486–503.

Ariton, L. (2025). Cognitive Warfare in the Digital Age: Implications for EU Security Policy. International conference KNOWLEDGE-BASED ORGANIZATION, 31(1), 1–9. DOI: https://doi.org/10.2478/kbo-2025-0001.

Atar, N. (2025). Artificial Intelligence and the Transformation in Political Communication and Campaigns: Ethical Debates, Analyses, and Cases. In *Understanding Generative AI in a Cultural Context: Artificial Myths and Human Realities* (pp. 461–490). IGI Global Scientific Publishing.

Begić, H., Galić, M., & Dolaček-Alduk, Z. (2022). Digitalization and automation in construction project's life-cycle: a review. *Journal of information technology in construction*, 27, 441–460.

Campbell, C., Sands, S., McFerran, B., & Mavrommatis, A. (2025). Diversity representation in advertising. *Journal of the Academy of Marketing Science*, 53(2), 588–616.

Chiru, I., & Buluc, R. (2023). An ethical understanding of military strategic communication, public relations, and persuasion. In *Routledge Handbook of Disinformation and National Security* (pp. 259–271). Routledge.

Cui, Y., Shi, Y., Chen, J., & Zhu, J. (2025). Impact of Covert Advertising Characteristics in Short Video E-Commerce on Impulse Buying Behavior: A Dual-Drive Mechanism of Emotion and Cognition. *Journal of Global Information Management* (JGIM), 33(1), 1–27.

Dashiell, S. (2024). Analyzing gamification as capital in social media posts regarding military recruitment. *Critical Studies in Media Communication*, 41(5), 411–424.

Dehnert, M., & Mongeau, P. A. (2022). Persuasion in the age of artificial intelligence (AI): Theories and complications of AI-based persuasion. *Human Communication Research*, 48(3), 386–403.

Mann, K. (2025). Revolutionizing Military Recruitment: AI and VR in Immersive Simulation. *Journal of Innovations*, 3(6), 66–78. DOI: https://doi.org/10.62470/5f251264.

Eisend, M., & Tarrahi, F. (2022). Persuasion knowledge in the marketplace: A meta-analysis. *Journal of consumer psychology*, 32(1), 3–22.

Favara, J., & Brinson, C. (2023). "White at heart": making race in Marine Corps recruitment advertising. *Communication, Culture & Critique*, 16(1), 33–40.

Feng, Y., Li, B., Niu, Y., & Ma, B. (2025). "One Face, Many Roles": The Role of Cognitive Load and Authenticity in Driving Short-Form Video Ads. *Journal of Theoretical and Applied Electronic Commerce Research*, 20(4), 272.

Fredheim, R. (2023). Virtual Manipulation Brief 2023/1: Generative AI and its Implications for Social Media Analysis. Riga: NATO Strategic Communications Centre of Excellence

Gorodetskiy, Y. (2022). The formation of marketing mechanisms for managing business development based on predictive analytics. *Management*, 1(35): 67–75. DOI: https://doi.org/10.30857/2415-3206.2022.1.6.

Grigsby, J. L., Michelsen, M., & Zamudio, C. (2025). Service ads in the era of generative AI: Disclosures, trust, and intangibility. *Journal of Retailing and Consumer Services*, 84, 104231.

Guo, R., Azlan, A. A., & Mohamad, E. (2025). Mechanisms of short video selection behavior in elderly hypertensives under health information overload: a cognitive load theory. *Future Technology*, 4(3), 107–118.

Hedling, E., Edenborg, E., & Strand, S. (2022). Embodying military muscles and a remasculinized West: influencer marketing, fantasy, and "the face of NATO". *Global Studies Quarterly*, 2(1), ksac010.

Hilken, T., Keeling, D. I., Chylinski, M., De Ruyter, K., Golf Papez, M., Heller, J., ... & Alimamy, S. (2022). Disrupting marketing realities: A research agenda for investigating the psychological mechanisms of next-generation experiences with reality-enhancing technologies. *Psychology & Marketing*, 39(8), 1660–1671.

Ju, I., Lee, H., & Sherrick, B. (2022). Consumer responses to covert marketing communications: A case of native advertising disclosure in news contexts. *Journal of promotion management*, 28(7), 1107–1128.

Kirkby, A., Baumgarth, C., & Henseler, J. (2023). To disclose or not disclose, is no longer the question–effect of AI-disclosed brand voice on brand authenticity and attitude. *Journal of Product & Brand Management*, 32(7), 1108–1122.

Kochis, D. (2024). Index of US Military Strength. The Heritage Foundation, Washington, D.C.

Koning, B., & Voorveld, H. A. (2025). Disclaimer! This Content Is AI-Generated: How AI-Disclosures Influence Trust in Advertisements and Organizations. *Journal of Interactive Advertising*, 25(3), 240–253.

Kridera, S., & Kanavos, A. (2024). Exploring trust dynamics in online social networks: A social network analysis perspective. *Mathematical and Computational Applications*, 29(3), 37.

Revuk, M., & Dukach, Y. (2024, July 24). TikTok algorithms trap: if you want to go viral, make content about Recruiting office. URL: https://texty.org.ua/

Schilke, O., & Reimann, M. (2025). The transparency dilemma: How AI disclosure erodes trust. *Organizational Behavior and Human Decision Processes*, 188, 104405.

Tayeb, M. E., Chebbi, T., Badawi, A., Toumi, J. A., & Louail, B. (2024). The impact of Ad overloads perception in social media on Ad avoidance behavior: the mediating effect of social media fatigue and goal impediment. *Management*, 28(2), 351–376.

Voorveld, H. A., Meppelink, C. S., & Boerman, S. C. (2024). Consumers' persuasion knowledge of algorithms in social media advertising: identifying consumer groups based on awareness, appropriateness, and coping ability. *International Journal of Advertising*, 43(6), 960–986.

AUTHOR (S) BIOSKETCHES

Gorodetsky Yuri, Postgraduate student, Assistant at the Department of Marketing, Kyiv National University of Technologies and Design, Ukraine

https://orcid.org/0000-0003-3555-8234
E-mail: gorodetsky9535@gmail.com

HOW TO CITE THIS ARTICLE
Horodetskiy, Yu. (2026). artificial intelligence in the project management system for digitalization of military marketing: psychological mechanisms of advertising influence. *Management*, 1(43): 73–87. https://doi.org/10.30857/2415-3206.2026.1.7.