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GENERATIONS Z AND Y

PERSPECTIVES ON FOOD WASTE:

THE ROLE OF MARKETING

COMMUNICATION

ON SUSTAINABLE BEHAVIOUR

Food waste is currently a key issue in discussions of sustainable development. The main objective of the study is to examine the attitudes of generations Z and Y toward food waste and to analyze the perceived role of marketing communication in shaping sustainable consumer behavior, with an emphasis on the current state of household food waste in V4 countries. Our own research was conducted using a consumer questionnaire. 593 Slovak consumers participated in the survey: 284 from Generation Z and 309 from Generation Y. We used statistical tests such as the Chi-square goodness-of-fit test, Chi-square test of independence, Mann-Whitney U test, and FORECAST.LINEAR function to estimate the future trend in food waste. Based on the study's objectives, we formulated 2 hypotheses; one was confirmed, and the other was not. The results indicate the existence of a value-action gap, i.e., a gap between values and behavior. Although Generations Z and Y are aware of the seriousness of food waste, in practice they often do not take action to mitigate the problem. Generation Y shows more signs of sustainable consumer behavior than Generation Z, without marketing being perceived as a significant influence on such behavior. The study's added value lies in its link between food waste and marketing communication.

1 Introduction — Food waste currently features prominently in the debate on sustainable development. It is a problem that causes enormous economic and environmental damage. In this context, the study of consumer behavior is crucial, especially among younger generations, who are increasingly forming new shopping habits and values.

Generations Z and Y represent consumers who are in daily contact with digital technologies, exposed to various marketing campaigns and sensitive to environmental sustainability issues. Their attitudes on food waste can therefore have a significant impact on future developments in this area.

Marketing, as a tool for influencing consumer behavior, plays a key role in shaping purchasing decisions. Although marketing communication is associated with promoting consumption, in recent years it has also been used to promote sustainable behavior and reduce food waste.

2 Theoretical background — The Earth is under massive stress due to current consumption levels, which have exceeded the planet's capacity to sustain itself. Thus, the need of the hour is to promote sustainable production and consumption (Sheoran and Kumar 2022). Despite policy initiatives, driving consumer behavior towards sustainable consumption remains a challenging task (Francis and Sarangi 2022). Sustainability and sustainable development are inextricably linked to the environment and environmental problems (Kollár Rybanská et al. 2024).

In recent years, food waste has received growing interest from local, national, and European policymakers, international organizations, and academics from various disciplinary fields. Growing concerns about food security and environmental impacts, such as resource depletion and greenhouse gas emissions associated with food waste, have intensified attention to the topic (Schanes et al. 2018). Even though many of the Earth's inhabitants suffer from hunger and scarcity, consumers in developed countries prefer a consumerist way of life, wasting scarce resources and over-consuming the environment (Rybanská et al. 2021). Globally, around 13.2 percent of food produced is lost between harvest and retail. In comparison, an estimated 19 percent of total global food production is wasted in households, food service, and retail together (United Nations 2024).

We already know quite a lot about food waste and its production. However, many consumers still throw away all their unconsumed food thoughtlessly, overbuy, and do not consider the consequences of their behavior (Rybanská et al. 2021). Generation Z wastes more food than other generations. Young people living on their own waste half as much as those living with parents (Mendelu 2024). Although young people often express pro-environmental attitudes, their behavior does not reflect them. This discrepancy is often due to a lack of motivation, knowledge, and practical skills needed to change behavior (Clement et al. 2023). The literature highlights a consistent discrepancy between consumers' environmental intentions and their actual purchasing behaviour, suggesting that pro-environmental attitudes do not always translate into action (Sharma et al. 2022). The value-action gap is influenced by time perception, social norms, and behavioral imitation (Franco and Ghisetti 2022). Spoločnosť ochrany spotrebiteľov (2023) states that even small changes in our habits can have a significant global impact and provides several tips on how to reduce food waste in households: adopt a healthier and more sustainable diet, buy only what is truly needed, choose „ugly“ fruits and vegetables, store food properly, understand food labelling, serve smaller portions, freeze and compost food leftovers, support local food producers, keep our soil and water clean, eat more legumes and vegetables, donate surplus food.

One of the primary roles of marketing communication should be to contribute to environmental protection (Kollár Rybanská et al. 2024). Many marketing communication tools influence consumers' decisions to purchase and consume food (Rybanská et al., 2021). Smolka (2019) emphasizes that generations differ in their consumer behavior and purchasing preferences. According to Kansal et al. (2022), campaigns aimed at reducing food waste are a very useful tool. For these campaigns to be effective, it is necessary to apply principles of social marketing and emotional and social appeals, and consumers must trust the organizations behind the campaigns. Kutlu (2022) finds in their study that focusing on individuals through communication tailored to their personalities is likely to increase the success of interventions aimed at reducing food

waste. The younger generation spends a lot of time on social networks, so these platforms are an ideal place for informational, educational, and social campaigns. A good example is a short video campaign featuring a conversation between an environmentally minded father and his little son. father does not like wasting food, so he shows his son how to make use of leftover food (in this case, ketchup), even though the son thinks the food container is already empty. The conversation is witty and dynamic, using language that resonates with the younger generation of consumers. The video features a single performer playing both roles (Rybanská and Poláček 2022).

In a context where food waste has received increased attention in recent years, food supply chain actors have begun to act to reduce it as part of their corporate social responsibility strategies (Aschemann-Witzel et al. 2016). Ubrežiová et al. (2015) identify the environmental pillar as a key pillar of CSR. An important part of the environmental pillar of CSR is food waste (Kádeková et al. 2021). CSR marketing activities of food companies are increasingly influencing consumer behavior (Osúchová 2024). Food companies with transparent environmental CSR strategies achieve better results in reducing food waste (Biggi et al. 2024). Igarová et al. (2023) found that the credibility of CSR activities is crucial for consumers. If consumers trust a CSR strategy, it influences their consumer behavior in the desired way. A key finding from Bhagat (2024) is that transparent and honest disclosure of both successes and challenges in sustainability initiatives can significantly increase public trust in a company.

However, one paradox remains on the scene. Food companies often reassure consumers of their commitment to reducing waste. However, their promotional activities (e.g., bulk offers and oversized portions) may inadvertently encourage consumers to over-shop. The challenge, therefore, is to design communications that simultaneously increase sales and promote a conscious consumer mindset (Aschemann-Witzel et al. 2016).

3 Research methodology — **The main objective of the study is to clarify the attitudes** of generations Z and Y towards food waste and to examine the role of marketing communication in sustainable consumer behavior, with a link to the current state of household food waste in V4 countries. The influence of marketing communication is measured perceptually, based on respondents’ evaluations (focusing on their subjective perceptions of its effect). The study does not measure actual exposure to campaigns but only captures the perceived effect of marketing communication. Primary and secondary sources of information were used. Secondary data were obtained from studies by domestic and foreign authors, as well as from the WoS, SCOPUS, and Eurostat databases.

We have obtained data on food waste from the Eurostat database. As tracking the state of food waste at national, regional, and global levels is not easy, the European Commission has adopted a common EU methodology for measuring food waste. In 2020, for the first time, member states collected data using this methodology (Eufic 2024). The measurement is carried out in the following categories:

- | primary production,
- | processing and manufacturing,
- | retail and other food distribution,
- | restaurants and food services,
- | households (EUR-Lex, 2019).

Meanwhile, data for the period 2020-2023 are available on the Eurostat website. Although food waste data over four years represents a relatively short time horizon, it can still provide an important analytical basis for tracking developments and identifying key trends.

Our own research was conducted using a consumer questionnaire. Generation Z included respondents born between 1997 and 2008 (adult respondents), and Generation Y included respondents born between 1981 and 1996. The data were collected through an online questionnaire using a convenience sampling method. The results may be influenced by self-selection bias, as respondents with greater sensitivity to environmental and sustainability issues may have been more inclined to participate, potentially affecting the generalizability of the findings. 593 Slovak consumers participated in the survey, 284 from Generation Z and 309 from Generation Y.

Data were processed into tables and graphs in Microsoft Excel, and the results were interpreted. Statistical analysis was performed using XL Stat software. We used statistical tests such as the Chi-square goodness-of-fit test, the Chi-square test of independence, the Mann-Whitney U test, and the FORECAST.LINEAR function to estimate the future trend in food waste. Based on the aim of the study, we established the following hypotheses:

- | Hypothesis 1: We assume that there will be a significant decrease in food waste in Slovak households in the coming years.
- | Hypothesis 2: We assume that there is a dependency between the generation of consumers and the change in their attitudes towards food waste in recent years.

4 Results and discussion — The unprecedented scale of food waste in global food supply chains is attracting increasing attention due to its environmental, social, and economic impacts (Papargyropoulou et al. 2014). There are generational differences in beliefs, attitudes, and behaviors regarding household food consumption and waste (Karunasena et al. 2021). Generations Z and Y are the most active on climate and environmental issues, but paradoxically they waste more food than older generations (Reardin 2023). The following section presents the results of our study.

4.1 Representativeness of the sample by generation — To verify the representativeness of the sample by the generation of respondents, we used the Chi-square goodness-of-fit test and established these hypotheses:

- | H0: The sample is representative by the generation of respondents.
- | H1: The sample is not representative by the generation of respondents.

Generation	Baseline dataset	Empirical frequencies (Sample dataset)	Theoretical frequencies (Sample dataset)	(E-T)2/T
Z	545 312	284	302.98	1.19
Y	1 307 629	309	290.02	1.24
Total	1 852 941	593	593	2.43

TABLE 1: CHI-SQUARE GOODNESS-OF-FIT TEST
SOURCE: AUTHORS

Table 1 contains the calculation of the test. We calculated the test statistic using empirical and theoretical frequencies, yielding 2.43. The critical value, determined using the CHIINV function, is 3.84. Since the test statistic is less than the critical value, we do not reject H0, indicating that the sample is representative of the respondent population.

4.2 Comparison of food waste in households between V4 countries and trend in food waste in Slovak households — Data on households in the V4 countries were selected from the Eurostat database mentioned. We decided to compare countries because Slovakia is part of this group and the other countries are close to it both economically and geographically (Figure 1).

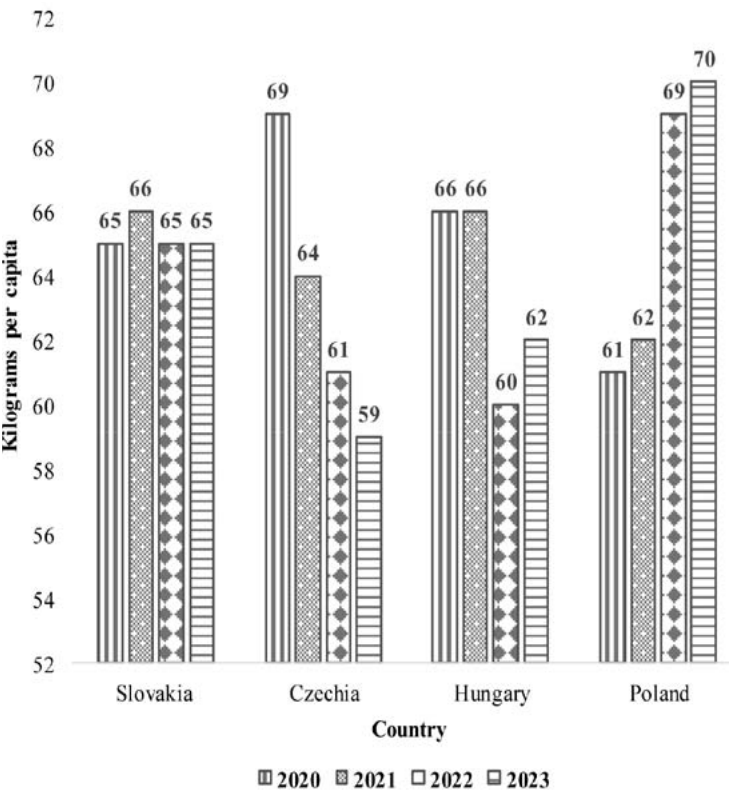


FIGURE 1: HOUSEHOLD FOOD WASTE IN V4 COUNTRIES FOR 2020-2023
SOURCE: AUTHORS ACCORDING TO EUROSTAT (2025)

Overall, household food waste trends in the V4 countries differ. In Slovakia, there is stable development, indicating consistent household behavior. The Czech Republic shows the most significant decrease among the V4 countries. This trend is likely related to increased emphasis on food waste prevention, quality education, and changes in consumer behavior. A study by Nováková et al. (2021), conducted on more than 400 households in the Czech Republic, reports that the total amount of food waste is 57.1 kg per person per year. The estimated cost of wasted edible food in the Czech Republic reached 14 euros per person per year (Sosna et al. 2019). During COVID-19, food waste in Czech households increased significantly. A statistically significant difference can also be observed in the causes of food waste. People purchased

large food packages that they could not consume in time (Morávková et al. 2022). The development in Hungary, according to available data, appears to be fluctuating without a clear trend. After reaching a higher value, there was a decrease, but then food waste slightly increased again. A study by Kasza et al. (2020) estimates household food waste in Hungary at 65.49 kg per person per year. Households identified obstacles to reducing food waste, such as impulsive shopping or improper storage methods (Keller and Gombos 2025). A survey conducted in November-December 2023 showed that the decline in household food waste in Hungary has somewhat slowed (Maradeknelkul 2024). Poland is the only country experiencing a significant increase in food waste. We assume this may be related to rising purchasing power and lower efficiency in shopping planning. Currently, there are no detailed studies in Poland focusing on the amount and composition of food waste. However, a study conducted in the Polish city of Opole showed that total household food waste there is 79.9 kg per person per year (Den Boer et al. 2023). The most common causes of food waste in Poland were food spoilage and failure to check expiration dates (Bilska et al. 2020).

Today, environmental awareness is widely regarded as a universal European value that shapes business practices, strategies, and policies across Europe (Mihajlović et al. 2016). The European Green Deal is the European Commission's document for a green transformation of the European Union's economy to ensure a sustainable future. Its main objective is to make Europe the first climate-neutral continent by 2050. An important part of this initiative is also the objective of reducing food waste in European countries (MŽP SR 2020). The European Union has committed to achieving the global Sustainable Development Goal 12.3, which aims to halve per capita food waste at the retail and consumer levels by 2030, and to reduce food losses within food production and supply chains. This is a key global benchmark. Binding food waste reduction targets have also been introduced, which all EU Member States must achieve by 2030. They are required to adopt effective measures to reduce food waste by 10% in processing and production and by 30% jointly in retail and consumption (restaurants, food services, and households) (European Commission 2025). Based on these facts, we have established our first hypothesis: there will be a significant decrease in food waste in Slovak households in the coming years.

We used the FORECAST.LINEAR function to estimate the future trend (Figure 2).

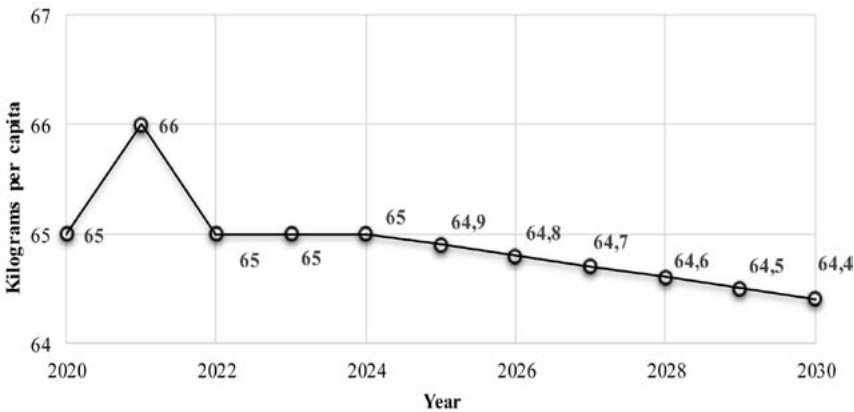


FIGURE 2: FUTURE TREND OF FOOD WASTE IN SLOVAK HOUSEHOLDS
SOURCE: AUTHORS ACCORDING TO EUROSTAT (2025)

The indicative trend projection through 2030 shows a minimal decline. Therefore, it is not a matter of significant decline, but rather long-term stagnation with a slight downward trend. The first hypothesis has not been confirmed. However, the result should be interpreted with caution due to the short time series (2020-2023). On the other hand, data from Eufic (2024) within the European Union indicate a steadily decreasing trend over time:

- | in 2004, 117.5 million tonnes of food were wasted: 240 kg per person,
- | in 2006, 116.2 million tonnes of food were wasted: 235 kg per person,
- | in 2008, 96.9 million tonnes of food were wasted: 195 kg per person,
- | in 2010, 92.2 million tonnes of food were wasted: 184 kg per person,
- | in 2012, 88 million tonnes of food were wasted: 173 kg per person,
- | in 2020, 58.1 million tonnes of food were wasted: 130 kg per person,
- | in 2021, 58.4 million tonnes of food were wasted: 131 kg per person.

4.3 Food waste and young consumers — The second part of the study addresses the attitudes and behaviors of Generation Z and Generation Y consumers regarding food waste. The data were obtained from an in-house questionnaire survey. Respondents expressed agreement or disagreement with several statements on a scale of 1 to 5 (1 = do not agree at all, 5 = strongly agree).

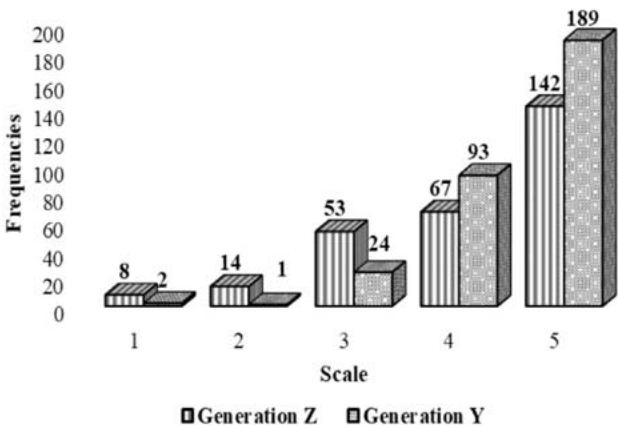


FIGURE 3: STATEMENT 1: I THINK FOOD WASTE IS A SIGNIFICANT PROBLEM THESE DAYS.
SOURCE: AUTHORS

Both generations agree with the statement; however, Generation Y respondents perceive the problem of food waste as more serious than Generation Z respondents do. Up to 91.3% of Generation Y respondents selected option 4 or 5.

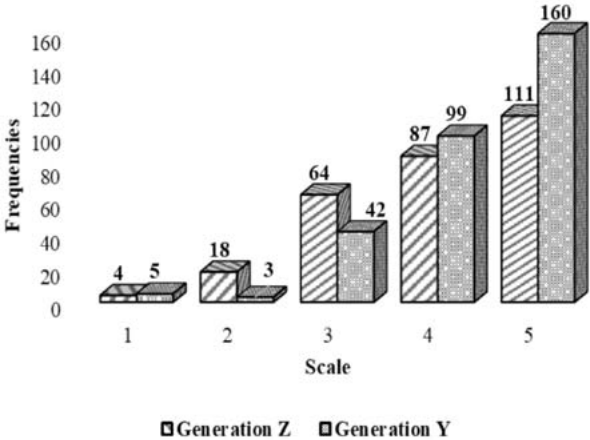


FIGURE 4: STATEMENT 2: I AM AWARE OF THE IMPACT OF FOOD WASTE ON THE ENVIRONMENT (E.G. GREENHOUSE GAS EMISSIONS FROM LANDFILLS, WASTED RESOURCES).
SOURCE: AUTHORS

Both generations largely agree, but awareness of the environmental impact of food waste is slightly lower compared to the previous statement. Generation Y demonstrates a higher level of environmental awareness, with up to 83.8% selecting agreement (options 4 or 5) on the environmental impact of food waste. A study by Kymäläinen et al. (2021) identified a lack of information about the environmental impacts of food, underscoring the need for better communication from the food industry.

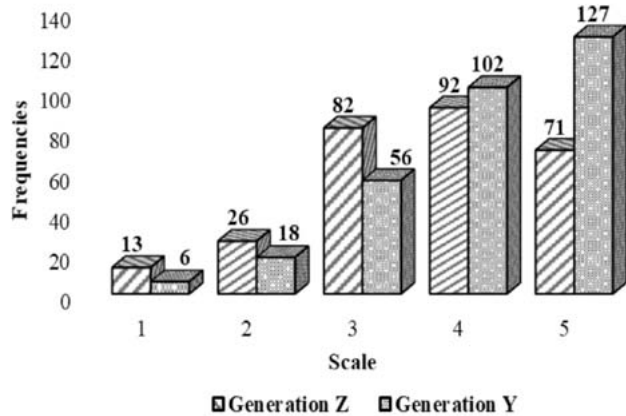


FIGURE 5: STATEMENT 3: I AVOID BUYING FOOD IN BULK UNLESS I AM SURE I WILL BE ABLE TO CONSUME/USE IT BEFORE IT GOES BAD.
SOURCE: AUTHORS

Both generations express high levels of agreement, but the differences between them are more pronounced than in the previous statements. The results suggest that Generation Y is more likely to report avoiding purchasing surplus food when they are unsure about consuming it. In contrast, Generation Z more frequently selects answer 3 and shows a higher proportion of disagreement (1-2), which is associated with lower levels of food purchase planning and less experience with household food management.

According to a survey conducted by IPSOS for Munch, based on a representative sample, the main reason for throwing away food for almost 40% of respondents is the expiry date. In addition, more than 51% of Slovaks throw away food because it goes bad. These data, showing that 37% of people throw away food at least once a week and 63.8% at least once a month, point to a systemic problem in shopping and consumer behavior (Nextech 2025). The increase in food waste among young consumers is due to a lack of food management skills in shopping, storage, and cooking with leftovers (Karunasena et al. 2021).

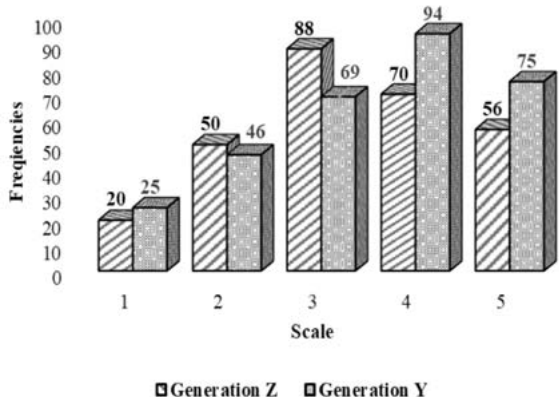


FIGURE 6: STATEMENT 4: I AM OPEN TO USING APPS OR ONLINE RESOURCES TO HELP MANAGE AND REDUCE FOOD WASTE (E.G. RECIPES USING LEFTOVERS, EXPIRY DATE REMINDERS).
SOURCE: AUTHORS

Generation Y reports greater openness to using digital tools to reduce food waste, with more than half of respondents (54.7%) indicating willingness to use these technologies. In contrast, Generation Z shows a higher proportion of neutral attitudes (31%). Although digital technologies are widely used by Generation Z, their use for food waste reduction does not appear to be perceived as a natural or automatic choice within this group. In Finland, on the other hand, Generation Z very often uses apps and services to reduce food waste (Kymäläinen et al. 2021). In Italy as well, younger consumers are more interested in using these apps (Fraccascia and Nastasi 2023).

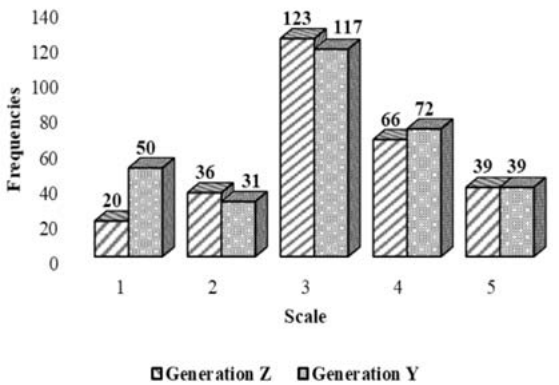


FIGURE 7: STATEMENT 5: I THINK THAT MARKETING CAMPAIGNS AIMED AT REDUCING FOOD WASTE (E.G. BY SUPERMARKETS OR FOOD BRANDS) INFLUENCE MY BEHAVIOR.
SOURCE: AUTHORS

Respondents from both generations generally reported a neutral perception of the influence of marketing campaigns on their food waste behavior. An Indonesian study finds that presenting environmental information on social media sites such as Instagram and YouTube has a very positive influence on the pro-environmental behavior of Generation Z (Suminar et al. 2024). Targeted social marketing campaigns using emotional appeals or practical advice can encourage individuals to adopt more responsible food practices (Rybanská et al. 2021).

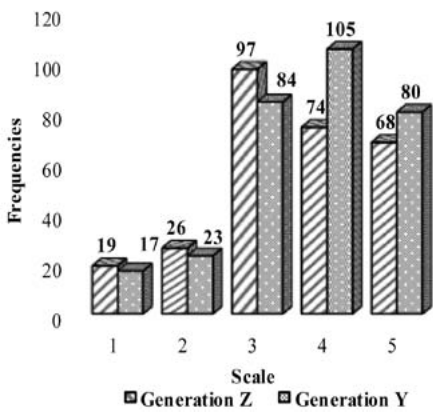


FIGURE 8: STATEMENT 6: I SUPPORT FOOD BRANDS OR RETAILERS THAT PROMOTE FOOD WASTE REDUCTION (E.G. OFFERING IMPERFECT PRODUCTS AT A DISCOUNT).
SOURCE: AUTHORS

Respondents from both generations express strong support for brands and stores that commit to reducing food waste. Generation Y respondents report slightly higher levels of agreement, whereas Generation Z appears somewhat more reserved in their responses, although attitudes in this group remain predominantly positive. An example of good practice is the retail chain Lidl, which has started selling three-kilo packs of various fruit and vegetables for the symbolic price of €1. These are fruit and vegetables that were previously thrown away for various reasons, such as damaged packaging or one bad piece in the pack. Since the project's launch, 66,925 boxes have been sold, resulting in the rescue of more than 200,000 kilograms of fruit and vegetables (Hrnčárová 2023).

To verify the differences between generations in individual statements, we used the Mann-Whitney U test (Table 2).

Statement	p-value	Statistically significant difference between generations	Effect size	Effect size interpretation
1	0.00004	Yes	0.151	Small effect
2	0.00006	Yes	0.154	Small effect
3	0.027	Yes	0.103	Small effect
4	0.227	No	0.054	Very small effect
5	0.011	Yes	0.112	Small effect
6	0.984	No	0.002	Almost zero effect

TABLE 2: MANN-WHITNEY U TEST
SOURCE: AUTHORS

In statements 1 (food waste as a significant problem), 2 (environmental consequences of food waste), 3 (avoiding buying food in bulk), and 5 (marketing campaigns to reduce food waste), a statistically significant difference between generations was demonstrated, with Generation Y evaluating all statements more positively, but the effect size is small.

In statements 4 (use of apps to reduce food waste) and 6 (support for brands focused on reducing food waste), no statistically significant difference between generations was found. Given that the opinions of generations differ slightly, in the second hypothesis we assume that there is a dependency between consumer generation and changes in their attitudes towards waste in recent years. We used the Chi-square test of independence (Tables 3 and 4).

Change in attitudes toward food waste	Generation		
	Z	Y	Total
Yes, I pay more attention to it now	190	202	392
No, my opinions have remained the same	75	102	177
I am less concerned about it now	19	5	24
Total	284	309	593

TABLE 3: CONTINGENCY TABLE
SOURCE: AUTHORS

N	593
df	2
p-value	0.003
Cramer's V	0.14 (weak dependency)

TABLE 4: CHI-SQUARE TEST OF INDEPENDENCE
SOURCE: AUTHORS

The p-value is 0.003, which is less than the significance level of 0.05. Based on this, we reject the null hypothesis that there is no dependence between consumer generation and changes in their attitudes towards waste in recent years. The second established hypothesis has therefore been confirmed. The value of Cramer's V coefficient is 0.14, which indicates a very weak dependence between the examined elements. The observed differences between generations may be associated with variations in consumer preferences and attitudes. According to Smolka et al. (2021), sustainability-related preferences differ across generations in Slovakia, a finding that confirms our own.

5 Conclusion — This study aimed to examine the attitudes of Generation Z and Generation Y towards food waste and to analyze the role of marketing communication in shaping sustainable consumer behavior, with an emphasis on future trends in household food waste in Slovakia.

The study was divided into 2 main parts. The first part dealt with the current state of household food waste in V4 countries and with future trends in Slovak households. Estimates suggested long-term stagnation among Slovak households, with a slight downward trend.

The second part focused on Slovak consumers of generations Z and Y's awareness of food waste and the impact of marketing on sustainable consumer behavior. A total of 593 respondents took part in the questionnaire survey. The results point to a value-action gap. While consumers are aware of the problem of food waste and consider it serious, they often do not take real action to minimize it. Generation Y shows more signs of sustainable consumer behavior than Generation Z, without marketing being perceived as a significant influence on such behavior.

The study's added value lies in its link between food waste and marketing communication. However, it is necessary to acknowledge several limitations. These include the use of self-reported data, which may be affected by social desirability bias. Furthermore, the perceived influence of marketing communication was measured using a single-item indicator, which limits the depth of the analysis. The research was also conducted only among Slovak consumers, which reduces the generalisability of the findings to other countries. Additionally, we consider the use of convenience sampling and the availability of only 4 years of food waste data to be further limitations of the study.

6 Practical and managerial implications — The findings suggest that marketing communication strategies aimed at reducing food waste should place greater emphasis on behavioral and emotional approaches rather than relying solely on informational campaigns. Storytelling and gamification may increase consumer engagement, particularly among Generation Z consumers, who have demonstrated lower levels of food planning and slightly weaker pro-environmental behavior. Digital tools, such as food waste reduction applications and purchase-planning platforms, may further support sustainable decision-making. Since Generation Y displayed somewhat stronger sustainable consumption patterns, environmental loyalty programs could reinforce existing positive behaviors. In addition, the use of trusted brand ambassadors may enhance the credibility and effectiveness of food waste communication initiatives.

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Kľúčové slová | Key Words — food waste, generations Z and Y, marketing communication, sustainable consumer behavior | *plytvanie potravinami, generácie Z a Y, marketingová komunikácia, udržateľné spotrebiteľské správanie*

JEL klasifikácia | JEL Classification — M31, Q56, D12

Résumé — Pohlady generácií Z a Y na plytvanie potravinami: Úloha marketingovej komunikácie pri formovaní udržateľného správania

Plytvanie potravinami je v súčasnosti kľúčovou témou v diskusiách o udržateľnom rozvoji. Hlavným cieľom štúdie je preskúmať postoje generácií Z a Y k plytvaniu potravinami a analyzovať vnímanú úlohu marketingovej komunikácie pri formovaní udržateľného spotrebiteľského správania, s dôrazom na súčasný stav plytvania potravinami v domácnostiach v krajinách V4. Náš vlastný prieskum bol realizovaný prostredníctvom spotrebiteľského dotazníka. Na prieskume sa zúčastnilo 593 slovenských spotrebiteľov: 284 z generácie Z a 309 z generácie Y. Na odhad budúceho trendu v oblasti potravinového odpadu sme použili štatistické testy, ako napríklad chí-kvadrát goodness-of-fit test, chí-kvadrát test nezávislosti, Mann-Whitneyho U-test a funkciu FORECAST.LINEAR. Na základe cieľov štúdie sme sformulovali 2 hypotézy; jedna sa potvrdila, druhá nie. Výsledky poukazujú na existenciu rozporu medzi hodnotami a konaním respondentov. Hoci si generácie Z a Y uvedomujú závažnosť problému plytvania potravinami, v praxi často nepodnikajú žiadne kroky na zmiernenie tohto problému. Generácia Y vykazuje viac známk udržateľného spotrebiteľského správania ako generácia Z, pričom marketing nie je vnímaný ako významný faktor ovplyvňujúci takéto správanie. Prínos tejto štúdie spočíva v prepojení medzi plytvaním potravinami a marketingovou komunikáciou.

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ADOPTION OF ARTIFICIAL INTELLIGENCE IN TOURISM AGENCIES: REALITIES AND CHALLENGES. A FIELD STUDY OF TOURISM AGENCIES IN BORDJ BOU ARRÉRIDJ, ALGERIA.

This research investigates the extent to which tourism agencies in the province of Bordj Bou Arreridj (Algeria) integrate artificial intelligence (AI) applications into their operational and strategic activities. The study further explores the key challenges hindering the effective adoption of such technologies. Employing a descriptive method design, the data were analyzed using SPSS v27 to address the central research question and to measure the degree of AI adoption in several domains, including marketing strategy development, trip planning and decision-making, booking operations, and customer experience enhancement. The results demonstrate that the implementation of AI applications within the surveyed agencies is moderate across these domains, nevertheless, the agencies encounter significant barriers, most notably a shortage of qualified experts and persistent technical constraints.

1 Introduction — Travel is constantly changing and developing dramatically, especially with the introduction of new technologies (Melusova 2025) In recent years, organizations operating in the tourism sector have increasingly adopted artificial intelligence (AI) technologies, recognizing their wide-ranging benefits, these advantages span from enhancing personalized customer experiences to improving operational efficiency, tools such as chatbots, predictive analytics, and machine learning have significantly transformed the processes and mechanisms of tourism-related services. Tourism agencies, in particular, leverage these technologies to tailor their marketing strategies to the individual preferences of clients, thereby boosting customer satisfaction and enriching their overall travel experiences. Moreover, the integration of AI provides these agencies with a sustainable competitive edge in a sector marked by rapid growth and continuous development

The application of artificial intelligence (AI) in the tourism sector has proven to be highly valuable in enhancing both customer experience and organizational performance. By analyzing customer data, travel records, and individual preferences, AI enables personalized recommendations for destinations and accommodations (Doğan and Niyet 2024). Machine learning algorithms further contribute by interpreting cus-

tomer sentiment and predicting future trends, thereby supporting the development of more effective marketing strategies (Akdoğan and Durmaz 2024). In addition, AI-powered chatbots provide real-time customer support manage bookings, and minimize waiting times, which in turn increases customer satisfaction and operational efficiency (Doğan and Niyet 2024). Automated systems also streamline processes, facilitate smarter decision-making, and optimize service management. Beyond operational improvements, AI contributes to economic growth by generating new employment opportunities, particularly in developing markets, thus offering both economic and competitive advantages (Lina and Talukder 2024). Moreover, the strategic adoption of AI strengthens customer loyalty and creates sustainable competitive advantages for organizations operating in the rapidly evolving tourism sector (Sharma 2024).

However, despite the substantial benefits of artificial intelligence (AI) in supporting, organizations operating in the tourism sector, its implementation presents several challenges including data privacy concerns, high initial investment costs, and the risk of job displacement (Sharma 2024). Moreover, the willingness and competencies of managers and employees to adopt AI technologies are critical factors for successful implementation (Akdoğan and Durmaz 2024). These challenges highlight the need for careful consideration, as privacy issues, workforce implications, and significant financial requirements may hinder the adoption of AI, particularly among smaller travel agencies.

2 Research problem — Artificial intelligence (AI) is experiencing an unprecedented boom, driven by the rapid pace of its development and the expansion of its applications. It has emerged as a transformative force across diverse industries, serving as a primary driver of organizational change. Owing to its distinctive technological advantages and innovative capabilities, AI has demonstrated significant potential in sectors such as healthcare, education, and industry, where it has opened new avenues for addressing persistent practical challenges while simultaneously enhancing efficiency and quality (Wang 2024, p. 40). With recent advances in generative artificial intelligence (GenAI) and machine learning (ML), AI applications within the tourism sector have expanded considerably. These range from personalized trip planning to live simulation models and virtual reality (VR) training designed to improve frontline decision-making. Such technological innovations are reshaping the way organizations in the travel industry operate and interact with customers. According to Skift Research, the average amount of time individuals spend on digital devices has increased by 70% since 2013, a trend that further accelerated during the COVID-19 pandemic, when online interactions often substituted face-to-face contact and consumers became increasingly accustomed to digital tools (Almasi, Cosmas, Cowan and Elleneweig 2023, p. 4).

In Algeria, tourism and travel agencies represent one of the most active and influential, components of the tourism sector. By 2023, the total number of agencies reached 4,999 reflecting a growth rate of 6% with the establishment of 507 new agencies, including 404 main agencies and 103 sub-agencies (Ayrade 2025).

Given the pivotal role of these agencies in supporting and developing the tourism industry it becomes essential to examine the extent to which they are keeping pace with the technological transformations driven by artificial intelligence (AI), which has witnessed an expanded range of applications since November 2022.

For this purpose, the wilaya of Bordj Bou Arreridj was selected as the geographical focus of the study, as it encompasses 58 tourism agencies along with their respective branches.

Accordingly, the research problem is formulated in the following central question: To what extent do the tourism agencies under study adopt artificial intelligence programs in their activities, and what are the most common challenges hindering their effective use?

For more details, we raise the following sub-questions:

- | Do the tourism agencies under study use artificial intelligence programs to develop their marketing strategies, from the perspective of the research sample?
- | Do the tourism agencies under study use artificial intelligence programs in planning and decision-making related to trips, from the perspective of the research sample?
- | Do the tourism agencies under study use artificial intelligence programs in booking activities, from the perspective of the research sample?
- | Do the tourism agencies under study use artificial intelligence programs to enhance the customer experience, from the perspective of the research sample?
- | Are there any obstacles preventing the tourism agencies under study from using artificial intelligence programs in their activities, from the perspective of the research sample?

3 Research hypotheses — Artificial intelligence is still new in Algeria, and the benefits of its use remain somewhat uncertain. In light of concerns about potential negative effects, as well as challenges that may hinder its adoption by tourism agencies such as material requirements, financial costs, and other constraints the following hypotheses is proposed main hypothesis: Tourism agencies under study do not adopt artificial intelligence programs in their activities due to several obstacles that hinder their effective use.

There are identified sub-hypotheses in the following fields:

- | Marketing strategies
 - | H₀: Tourism agencies under study do not use artificial intelligence programs in building their marketing strategies.
 - | H₁: Tourism agencies under study use artificial intelligence programs in building their marketing strategies.
- | Planning and decision-making
 - | H₀: Tourism agencies under study do not use artificial intelligence programs in planning and decision-making related to trips.
 - | H₁: Tourism agencies under study use artificial intelligence programs in planning and decision-making related to trips.
- | Travel agencies' booking activities
 - | H₀: Tourism agencies under study do not use artificial intelligence programs in booking. Activities.
 - | H₁: Tourism agencies under study use artificial intelligence programs in booking activities.

- | Customer experience
 - | H₀: Tourism agencies under study do not use artificial intelligence programs to enhance the customer experience.
 - | H₁: Tourism agencies under study use artificial intelligence programs to enhance the customer experience.
- | Obstacles
 - | H₀: There are no significant obstacles preventing tourism agencies under study from using artificial intelligence programs in their activities.
 - | H₁: There are significant obstacles preventing tourism agencies under study from using artificial intelligence programs in their activities.

4 Importance of the research — In the face of the enormous technological developments that the world is witnessing today, Algeria must keep pace with these changes, especially given the digital divide that artificial intelligence has created between developed and developing countries. With the rapid acceleration in the use of this technology across economic, political, and social sectors, and since the tourism sector plays a significant role in the economic development of any country, it is necessary to examine the use of artificial intelligence in the activities of tourism agencies in Algeria. There are identified main research objectives:

- | To examine the current use of artificial intelligence technology in the activities of selected tourism agencies in Algeria.
- | To identify the main challenges hindering the adoption of artificial intelligence in these activities.
- | To propose practical solutions to address these challenges and to encourage further studies and research on this topic.

5 Overview of previous studies — Due to its highly responsive nature to customer feedback, the tourism sector has always been among the first to adopt new technologies to better serve customers and increase revenues. Artificial intelligence (AI) represents a major technological innovation that has already transformed the ways in which tourism and hospitality companies conduct their business (Pandey, Bansal and Valuskar 2025). In their paper „Understanding the Adoption of AI in Tourism and Marketing Services“, the authors highlight several important conclusions regarding the role of AI in the tourism industry, including its potential to enhance operational efficiency and customer engagement, as well as its impact on the labor market.

Furthermore, AI can facilitate the integrated development of tourism services. By leveraging AI technologies, companies can improve their marketing strategies, which may lead to growth and innovation in the sector (Singh and Ansari 2024). Another study found that the use of AI and machine learning in tourism marketing is more effective in recognizing customers emotions and perceptions, predicting future behaviors, and ultimately providing services that meet customer expectations – an outcome that modern marketing continuously strives to achieve (Akdoğan and Durmaz 2024, p. 45). In addition, AI can enhance safety and security in the tourism sector through predictive analytics and real-time monitoring, which improve resource allocation and reduce waste (Ma 2024, p. 89). Predictive maintenance systems powered by AI algorithms also contribute to safer operations by analyzing equipment data sensor readings, and historical performance to prevent potential failures and enhance overall reliability (Traversa 2024).

6 Theoretical background — Artificial intelligence is regarded as one of the most significant outcomes of the fourth industrial revolution. It has numerous applications across various domains, such as politics, the military, the economy, public services, and social life. AI represents an attempt to simulate human intelligence by developing computer programs capable of mimicking human behavior. Today, it is embedded in many aspects of daily life, including translation software, aviation systems, self-driving cars, robotics, smart homes, and cognitive simulations, among others.

A tourism agency is an institution primarily engaged in providing travel information and services, it functions as an intermediary in organizing tours and excursions, transportation, car rentals, and accommodation for travelers. According to Algerian legal texts, the main services offered by tourism agencies are as follows (Ayraide 2025):

- | Organizing and marketing travel, tours, and individual or group stays.
- | Arranging guided tours and visits to cities, sites, and monuments of tourist, cultural, or historical significance.
- | Providing translators and tour guides for tourists.
- | Reserving accommodation in hotel establishments and offering related service.
- | Selling tickets for entertainment venues, concerts, and cultural, sporting, or other event.
- | Ensuring customer insurance against risks arising from tourism activities.
- | Representing other local or foreign agencies in providing various services on their behalf.
- | Receiving and assisting tourists during their stay.

Artificial intelligence applications are increasingly being integrated into the activities of tourism organizations. These technologies enable tourism companies to better understand customer preferences, predict future trends, develop effective marketing strategies, and deliver personalized marketing messages. As a result, they enhance customer satisfaction, increase return on investment (ROI), and strengthen the company’s competitiveness through various technologies, including the following:

- | Virtual reality and augmented reality: Virtual and augmented reality technologies are increasingly used to create immersive experiences, allowing potential tourists to explore destinations virtually and thereby enhancing their decision-making process (Ahmed 2024).
- | Predictive analytics and recommendation systems: AI-powered predictive analytics help travel marketers anticipate customer needs and preferences, enabling more targeted marketing campaigns. In addition, recommendation systems use AI to suggest personalized travel experiences and destinations, improving customer engagement and satisfaction (Dewi, Putra, Widodo, Yuditia and Soares 2025).
- | Automated customer service: Chatbots and virtual assistants provide 24/7 customer support by handling inquiries and bookings efficiently, which enhances the overall customer experience. These AI tools also improve operational efficiency by automating routine tasks thereby freeing up human resources for more complex interactions (Zhizhileva 2024).
- | Personalized marketing: AI enables personalized marketing through the analysis of customer data to deliver customized content and offers, increasing the

likelihood of conversion. Moreover, recommendation algorithms personalize the user experience by suggesting content and products that match individual preferences (Laki and Miklosik 2025).

| Dynamic pricing: AI-powered dynamic pricing models adjust prices in real time based on demand and customer behavior, thus increasing revenue for tourism companies (Lina and Talukder 2024).

While AI offers numerous benefits to the tourism sector, its adoption still faces significant and widespread barriers, including technological limitations, financial obstacles, and concerns about preserving cultural authenticity (Dewi, Putra, Widodo, Yudithia and Soares 2025). Overcoming these challenges requires collaborative efforts to strengthen digital infrastructure foster a culture of innovation and ensure equitable access to AI technologies within the tourism industry.

Technological challenges represent one of the main obstacles to the adoption of AI in the tourism sector. A key issue lies in the complexity of data processing, as tourism organizations often struggle to manage vast amounts of information, making the effective application of AI difficult (Teemu 2023). Furthermore, the technological readiness of many companies remains limited, with insufficient infrastructure and expertise hindering their ability to adopt advanced AI solutions (Ferhataj and Memaj 2024). Another pressing concern relates to job displacement since automating tasks with AI may reduce employment opportunities and raise uncertainties about workforce stability (Cristian and Cosmin 2024). In addition to technological barriers ethical concerns also pose significant challenges. Issues of data privacy are particularly important, as travelers increasingly worry about how their personal information is collected stored, and utilized, which underscores the necessity for transparent data practices, equally critical is the lack of transparency in AI decision-making, where the opaque nature of algorithms often creates ethical dilemmas and diminishes consumer trust in tourism services (Ferhataj and Memaj 2024).

Beyond technological and ethical issues, economic barriers play a decisive role in slowing the adoption of AI in tourism. One of the most pressing obstacles is the substantial financial investment required to implement AI technologies, which creates a particular burden for small and medium-sized enterprises (SMEs) that often operate with limited resources (Teemu 2023). This financial challenge is further compounded by the uncertainty surrounding the return on investment (ROI). Many companies remain hesitant to invest in AI due to the difficulty of quantifying its long-term benefits and the risks associated with technological adoption in a highly competitive and unpredictable market environment (Sharma 2024). Consequently, the combination of high initial costs and ambiguous financial outcomes discourages many tourism stakeholders from embracing AI solutions, even when they recognize the potential strategic advantages.

7 Methodological procedures of the applied study — This study adopted a descriptive research design to examine the variables theoretically through a literature review, followed by empirical data collection using a structured questionnaire. The data were analyzed, and the research hypotheses were tested using SPSS version 27 ensuring the validity and reliability of the findings.

The study population consisted of tourism agencies in the, Bordj Bou Arreridj governorate, Algeria. From a total of 58 agencies, 19 were selected including 36 employees

and managers, all of whom participated in the survey. This sampling approach ensured comprehensive coverage of the target population while maintaining the feasibility of data collection.

The questionnaire was structured into three distinct sections. The first section gathered general information regarding the research sample, The second section examined the application areas of artificial intelligence in activities within tourism agencies, The third section focused on the challenges encountered by tourism agencies in implementing artificial intelligence programs.

Data analysis was conducted using SPSS Statistical Package, Version 27, employing the following tools:

- | Reliability coefficient (Cronbach's Alpha) to assess the consistency and credibility of the responses.
- | Arithmetic mean and standard deviation to determine the attitudes of sample members toward the questionnaire items.
- | One-sample T-test to examine the research hypotheses.

One of the most important coefficients used to test the stability of the study tool is Cronbach's Alpha, which ranges from 0 to 1. The test results are presented in Table 1.

Reliability statistics	
Cronbach's Alpha	Number of items
0.782	22

TABLE 1: RESULTS OF THE RELIABILITY TEST
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

By calculating the Cronbach's Alpha reliability coefficient for each section, it was concluded that the questionnaire exhibits a high level of internal consistency regarding the items within its dimensions. Since the overall Cronbach's Alpha is 0.782, which is greater than the threshold of 0,7. This confirms the reliability and credibility of the responses provided by the study sample.

8 Presentation and analysis of the study data — To analyze the responses of the study sample to the questionnaire items, a five-point Likert scale was employed, with the corresponding values presented in the Table 2.

Level	Very low	Low	Medium	High	Very high
SMA	1-1.80	1.81-2.60	2.61-3.40	3.41-4.20	4.21-5

TABLE 2: SCORES OF THE FIVE-POINT LIKERT SCALE
SOURCE: AUTHORS

8.1 Data analysis of the first theme — The first theme examined the personal characteristics of the study sample. Tables 3 and 4 summarize key demographic variables, providing an overview of the sample profile for interpreting subsequent responses.

Variables	Job position		Age group (years)		
Categories	Director of the agency	Employee	Under 30	31-40	Over 40
Frequency	15	21	21	13	2
Percentages	41.7	58.3	58.3	36.1	5.6

TABLE 3: DISTRIBUTION OF THE SAMPLE BY AGE AND JOB POSITION VARIABLES
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

Table 3 shows that the research sample, based on the job position variable includes 15 managers and 21 employees from the tourism agencies involved in the field study. In terms of age, the majority of the sample consists of young individuals: 58.3% are under years old, 36.1% are between 31 and 40 years old, and the remaining 5.6% belong 30 to older age groups. This demographic distribution is significant for the research findings, as younger individuals are typically the most frequent users of artificial intelligence, owing to their familiarity with technology and their extensive interaction with digital tools.

As for the variables of educational level and years of experience, the results are presented in Table 4.

Variables	Educational level		Years of experience (years)			
Categories	Secondary	University	Less than 5	5-10	11-15	More than 15
Frequency	8	28	19	14	2	1
Percentages	22.2	77.8	52.8	38.9	5.6	2.8

TABLE 4: DISTRIBUTION OF THE SAMPLE BY EDUCATIONAL LEVEL AND YEARS OF EXPERIENCE
SOURCE: AU-
THORS ACCORDING TO SPSS OUTPUT

Table 4, indicates that the majority of the sample participants possess a high educational level with 77.8% being Algerian university graduates, while the remaining 22.2% hold a secondary education level. This distribution is expected to strengthen the research findings, as university graduates are generally more skilled and digitally aware. University education typically equips, students with digital research and analytical skills to a greater extent than secondary education due to the broader academic fields it covers. Consequently, their use of artificial intelligence is more likely to be efficient and effective. Regarding years of experience, the sample, distribution shows that 52.8% fall under the category of less than 5 years of experience followed by 38.9% in the category of 5 to 10 years. This result is logically consistent with the fact that the majority of employees are recent graduates of Algerian universities.

8.2 Data analysis of the second theme — In theme applications of artificial intelligence in tourism agency activities was assessed through four main dimensions:

- | Marketing strategy development
- | Travel planning and decision-making
- | Booking activities
- | Enhancing customer experience

8.2.1 Marketing strategy development — Table 5 illustrates that the degree of approval concerning the agency’s adoption of artificial 5 intelligence (AI) technologies in formulating marketing strategies ranges from moderate to relatively weak. The mean scores of the examined items (3.2500, 3.1944, 2.5556, 3.3889). Suggest an overall tendency toward acknowledging the integration of such technologies. Notably, the highest mean was associated with the statement related to customer data analysis and the targeting of appropriate market segments (3.39), whereas the lowest mean was observed for the application of dynamic pricing models (2.55). This disparity underscores a differentiated reliance on AI applications across various marketing dimensions. In addition, the standard deviation values (0.99-1.22) indicate a moderate level of response dispersion reflecting relative variation in the participants’ perceptions regarding the extent of AI utilization. Collectively, these findings highlight that the tourism agencies under investigation employ AI technologies in a selective and uneven manner when shaping their marketing strategies, with a pronounced emphasis on customer data analysis and targeting, while demonstrating comparatively limited reliance on dynamic pricing practices.

Statement	Arithmetic averages	Standard deviation	Approval level	Rank
The agency emphasizes rigorous data analysis through artificial intelligence to forecast market trends and mitigate risks.	3.2500	0.99642	Medium	3
The agency leverages AI-driven recommendation engines to enhance the placement, timing, and messaging of advertisements.	3.1944	1.06421	Medium	2
The agency implements dynamic pricing models derived from big data analytics, utilizing advanced machine learning algorithms.	2.5556	1.22927	Low	4
The agency employs artificial intelligence systems to analyze customer data and strategically target appropriate segments for its services.	3.3889	1.20185	Medium	1
Arithmetic average and general standard deviation.	3.0972	0.73988	Medium	

TABLE 5: ARITHMETIC AVERAGE SAND STANDARD DEVIATIONS OF THE SAMPLE’S ANSWERS
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

8.2.2 Travel planning and decision-making — Table 6 demonstrates that most of the arithmetic means of the respondent’s answers fall within a moderate level on the five-point Likert scale. The corresponding standard deviations indicate an acceptable degree of dispersion around the central values. This suggests that the respondents hold a moderate inclination toward believing that tourism agencies employ artificial intelligence (AI) in planning and decision-making related to trips, without showing either strong adoption or complete rejection of such practices.

Regarding the use of AI in predicting flights and potential delays, this item achieved an average of (2.97) with a standard deviation of (1.23), ranking second in the order of responses. This reflects a moderate level of awareness among respondents that the tourism agencies they are affiliated with utilize AI systems to monitor possible delays or disruptions in flight schedules. A plausible explanation for this finding is that flight forecasting applications are becoming increasingly common within the global travel industry. As for flight schedule planning and crew allocation, this item ranked third, with an average of (2.72) and a standard deviation of (1.08). Although this value is slightly lower than the preceding item, it still falls within the moderate level, this implies that there are some initiatives to integrate AI technologies into human resource management for flights; however, their adoption remains limited.

When examining the reliance on predictive analytics to accelerate tasks and reduce waiting times, this item recorded the highest mean value (3.08) with a standard deviation of (1.18). This result indicates a relatively strong understanding of the significance of artificial intelligence (AI) in enhancing the efficiency of operational procedures. However, the fact that the mean value still falls within the moderate range suggests that such practices have not yet attained the level of organizational maturity. Finally, regarding the item related to making trip-related decisions based on artificial intelligence insights, the results show that it obtained the lowest mean value with a standard deviation of (1.20). This finding reflects a weak reliance on AI (2.55) outputs in making final decisions within tourism agencies, it also indicates that AI is still perceived and utilized more as a supportive tool rather than a strategic partner in decision-making processes. Such limited adoption may be attributed to factors associated with trust, organizational risk, or other contextual challenges that remain unclear.

Statement	Arithmetic averages	Standard deviation	Approval level	Rank
The agency leverages artificial intelligence applications to forecast flight operations and anticipate potential delays.	2.9722	1.23024	Medium	2
Artificial intelligence tools are employed by the agency in the optimization of flight scheduling and the allocation of human crews.	2.7222	1.08525	Medium	3
The agency utilizes predictive analytics, enabled by artificial intelligence software, to accelerate operational processes and minimize passenger waiting times.	3.0833	1.18019	Medium	1
Predictive flight-related decisions are formulated by the agency based on data-driven insights provided by artificial intelligence platforms.	2.5556	1.20581	Low	4
Arithmetic average and general standard deviation.	2.8333	0.67876	Medium	

TABLE 6: ARITHMETIC AVERAGE SAND STANDARD DEVIATIONS OF THE SAMPLE’S ANSWERS
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

8.2.3 Booking activities — Table 7 illustrates that the arithmetic means of the respondents’ perceptions regarding the dimension of booking activities ranged between (2.86-3.77), with acceptable levels of variation as indicated by the standard deviation values (0.93-1.33). The overall mean was (3.41) with a standard deviation of (0.84), reflecting a relatively high level of agreement among the sample members on the statements pertaining to this dimension.

The first item ranked third, with a mean of (2.86) and a standard deviation of (1.33), indicating a moderate level of automation, this may be attributed to the limited utilization of artificial intelligence in certain operational procedures of the tourism agencies under study compared with other services. The second item recorded a mean of (3.61) with a standard deviation of (0.93), which suggests that the agencies are actively investing in building smart customer databases, thereby enhancing the personalization of services. Regarding the third statement, it ranked first with the highest mean (3.77) and a standard deviation of (1.26), reflecting a very high level of adoption and confirming that the use of smart chat systems or virtual assistants has become a central element in improving customer service and streamlining the booking process.

Accordingly, it can be concluded that the surveyed tourism agencies place considerable emphasis on the use of AI applications in booking activities, particularly in creating customer profiles and providing intelligent platforms for direct interaction. However, the aspect of full automation of repetitive processes still requires further development.

Statement	Arithmetic averages	Standard deviation	Approval level	Rank
The agency automates repetitive tasks such as booking, payment, and inquiries through artificial intelligence platforms.	2.8611	1.33423	Medium	3
The agency develops customer profiles using artificial intelligence software.	3.6111	0.93435	High	2
The agency provides an intelligent platform to respond to customer inquiries and assist them in booking flights.	3.7778	1.26742	High	1
Arithmetic average and general standard deviation.	3.4167	0.84092	High	

TABLE 7: ARITHMETIC AVERAGE SAND STANDARD DEVIATIONS OF THE SAMPLE’S ANSWERS
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

8.2.4 Enhancing customer experience — The results of the responses to the items related to the dimension of enhancing the customer experience indicated that the overall mean score reached 3.05, with a standard deviation of 0.76, reflecting a moderate level of the agency’s adoption of digital technologies and artificial intelligence to improve the customer experience. The highest indicator was associated with the use of an AI-powered chatbot to identify appropriate tourist destinations, which achieved a mean of 3.55 and a standard deviation of 1.08 representing a high level. This result highlights the agencies’ awareness of the importance of this interactive tool in facilitating the selection process and the customization of services.

As for the remaining indicators, they were assessed at moderate levels. Specifically, augmented reality technology used to introduce customers to tourist destinations ranked second, with a mean of 3.13 and a standard deviation of 1.09. This was followed by virtual reality technology, which provides an immersive sensory experience, with a mean of 2.83 and a standard deviation of 1.36. Lastly, reliance on the analysis of previous data (demographic, behavioral, and booking records) using artificial intelligence ranked lowest, with a mean of 2.69 and a standard deviation of this finding reflects that the agencies under study are focusing more on live 1.26 interactive tools such as chatbots, while the potential of predictive analytics and virtual/augmented reality remains underutilized, thereby limiting their ability to provide a more personalized and innovative experience.

Moreover, the relatively high standard deviations observed across the indicators suggest variations in respondents' experiences and perceptions toward these applications, which may be attributed to differences in their level of technological awareness or the availability of these services. Accordingly, the findings reflect a partial adoption of digital technologies in enhancing the customer experience emphasizing the need for greater investment in data analytics and immersive technologies to strengthen the competitiveness of tourism agencies.

Statement	Arithmetic averages	Standard deviation	Approval level	Rank
The agency relies on the analysis of previous data, demographic information, customer behaviors, preferences and past bookings (through artificial intelligence systems to design personalized travel programs, offers, and activities for each client).	2.6944	1.26083	Medium	4
The agency employs an AI-powered chatbot to identify and recommend suitable travel destinations.	3.5556	1.08086	High	1
The agency utilizes virtual reality technology to provide customers with an immersive sensory experience, allowing them to explore tourist destinations and accommodation facilities in a simulated environment.	2.8333	1.36277	Medium	3
The agency integrates augmented reality technology to introduce clients to tourist attractions and lodging options.	3.1389	1.09942	Medium	2
Arithmetic average and general standard deviation	3.0556	0.76324	Medium	

TABLE 8: ARITHMETIC AVERAGE SAND STANDARD DEVIATIONS OF THE SAMPLE’S ANSWERS
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

8.3 Data analysis of the third theme — Table 9 shows that the obstacles to the use of artificial intelligence in tourism agencies were, on average, at a moderate level, with a general mean of 3.09 and a standard deviation of 0.52. The most significant

obstacle identified was the difficulty of finding experts in the field of artificial intelligence to develop and implement smart solutions (mean = 3.63), followed by technical barriers, such as language issues and application malfunctions (mean = 3.44), and the high cost of AI implementation (mean = 3.38). Cultural and social concerns, such as the potential decline in the cultural heritage of tourist destinations due to reliance on technology, were also noted (mean = 3.16). In contrast, obstacles related to weak infrastructure (mean = 2.75), privacy and data security concerns (mean = 2.72), and the loss of the human touch (mean = 2.55) were considered less significant by the study sample. Overall, the findings indicate that, while the level of obstacles is moderate, the lack of experts, technical challenges, and high costs represent the most prominent barriers to adopting AI in tourism agencies.

Statement	Arithmetic averages	Standard deviation	Approval level	Rank
The agency does not have the infrastructure to leverage the immense capabilities of artificial intelligence programs.	2.7500	0.99642	Medium	5
The cost of implementing artificial intelligence is considered high for travel agencies.	3.3889	0.90326	Medium	3
The agency faces privacy and data security concerns when using artificial intelligence programs.	2.7222	1.30079	Medium	6
The agency encounters technical obstacles in using artificial intelligence programs, such as language barriers and malfunctions in smart applications.	3.4444	1.13249	High	2
The agency fears losing the human touch due to overreliance on technology when using artificial intelligence.	2.5556	1.10698	Medium	7
The agency is concerned about the decline of the cultural heritage of tourist destinations due to over-reliance on artificial intelligence if original cultural experiences are replaced by technological ones.	3.1667	1.02817	Medium	4
The agency finds it difficult to find experts in artificial intelligence to develop and implement smart solutions.	3.6389	1.01848	High	1
Arithmetic average and general standard deviation.	3.0952	0.52015	Medium	

TABLE 9: ARITHMETIC AVERAGES AND STANDARD DEVIATIONS OF THE SAMPLE’S ANSWERS
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

9 Results of hypothesis testing — The study hypotheses will be tested for acceptance or rejection using the One-Sample T-Test, by defining the null and alternative hypotheses.

9.1 Marketing strategies development ———

- | H₀: Tourism agencies under study do not use artificial intelligence programs in building their marketing strategies.
- | H₁: Tourism agencies under study use artificial intelligence programs in building their marketing strategies.

To test the first hypothesis, we use the One-Sample T-test, the results are shown in the Table 10.

Datum	Standard deviation	Arithmetic average	T value	Sig	Hypothesis test result	
Marketing strategies development	0.73988	3.0972	25.117	0.000	H0	H1
					Rejected	Accepted

TABLE 10: ONE-SAMPLE T-TEST RESULTS FOR THE MARKETING STRATEGIES DEVELOPMENT DIMENSION
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

The results of the table above show that the arithmetic average of the answers to the statements that make up respondents’ attitudes toward building a marketing strategy reached 3.0972. With a standard deviation of 0.73988 which is morally significant, because the significance level is less than (0.000), which is also less than (0.05). This confirms the validity of the alternative hypothesis. So, we reject H0 and accept H1.

9.2 Planning and decision-making ———

- | H₀: Tourism agencies under study do not use artificial intelligence programs in planning and decision-making related to trips.
- | H₁: Tourism agencies under study use artificial intelligence programs in planning and decision-making related to trips.

To test the second hypothesis, we use the One-Sample T-test, the results are shown in the Table 11.

Datum	Standard deviation	Arithmetic average	T value	Sig	Hypothesis test result	
Planning and decision-making.	0.67876	2.8333	25.046	0.000	H0	H1
					Rejected	Accepted

TABLE 11: ONE-SAMPLE T-TEST RESULTS FOR THE PLANNING AND DECISION-MAKING DIMENSION
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

The results of the table above show that the arithmetic average of the answers to the statements that make up respondents’ attitudes toward the planning and making decisions about trips reached 2.8333. With a standard deviation of 0.67876 which is morally significant, because the significance level is less than (0.000), which is also less than (0.05). This confirms the validity of the alternative hypothesis. So, we reject H0 and accept H1.

9.3 Travel agencies’ booking activities ———

- | H₀: Tourism agencies under study do not use artificial intelligence programs in booking activities.
- | H₁: Tourism agencies under study use artificial intelligence programs in booking activities.

To test the third hypothesis, we use the One-Sample T-test, the results are shown in the Table 12.

Datum	Standard deviation	Arithmetic average	T value	Sig	Hypothesis test result	
Travel agencies’ booking activities.	0.84092	3.4167	24.378	0.000	H0	H1
					Rejected	Accepted

TABLE 12: ONE-SAMPLE T-TEST RESULTS FOR THE TRAVEL AGENCIES’ BOOKING ACTIVITIES DIMENSION
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

The results of the table above show that the arithmetic average of the answers to the statements that make up respondents’ attitudes toward the Travel agencies’ booking activities reached 3.4169. With a standard deviation of 0.84092 which is morally significant, because the significance level is less than (0.000), which is also less than (0.05). This confirms the validity of the alternative hypothesis. So, we reject H0 and accept H1.

9.4 Customer experience ———

- | H₀: Tourism agencies under study do not use artificial intelligence programs to enhance the customer experience.
- | H₁: Tourism agencies under study use artificial intelligence programs to enhance the customer experience.

To test the fourth hypothesis, we use the One-Sample T-test, the results are shown in the Table 13.

Datum	Standard deviation	Arithmetic average	T value	Sig	Hypothesis test result	
Enhance customer experience.	0.76324	3.0556	24.020	0.000	H0	H1
					Rejected	Accepted

TABLE 13: ONE-SAMPLE T-TEST RESULTS FOR ENHANCING CUSTOMER EXPERIENCE DIMENSION
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

The results of the table above show that the arithmetic average of the answers to the statements that make up respondents’ attitudes toward the Enhance customer experience reached 3.0556. With a standard deviation of 0.76324 which is morally significant, because the significance level is less than (0.000), which is also less than (0.05). This confirms the validity of the alternative hypothesis. So, we reject H0 and accept H1.

9.5 Obstacles ———

- | H₀: There are no significant obstacles preventing tourism agencies under study from using artificial intelligence programs in their activities.
- | H₁: There are significant obstacles preventing tourism agencies under study from using artificial intelligence programs in their activities.

To test the last hypothesis, we use the One Sample T test, the results are shown in the Table 14.

Datum	Standard deviation	Arithmetic average	T value	Sig	Hypothesis test result	
Obstacles to AI adoption.	0.52015	3.0952	35.704	0.000	H0	H1
					Rejected	Accepted

TABLE 14: ONE-SAMPLE T-TEST RESULTS FOR THE AI OBSTACLES DIMENSION
SOURCE: AUTHORS ACCORDING TO SPSS OUTPUT

The results of the table above show that the arithmetic average of the answers to the statements that make up respondents’ attitudes toward the Barriers to AI adoption reached 3.0952. With a standard deviation of 0.52015 which is morally significant, because the significance level is less than (0.000), which is also less than (0.05). This confirms the validity of the alternative hypothesis. So, we reject H0 and accept H1.

10 Results discussion ——— The results of the first axis indicate that the level of reliance on artificial intelligence (AI) techniques in developing marketing strategies was generally at an average level. The highest score was observed for the item related to the use of AI programs to analyze customer data and target appropriate customer segments, whereas the lowest score was associated with the application of dynamic pricing models based on machine learning algorithms. This finding aligns with Chatterjee, Tamilmani, and Sharma (2021), who reported that organizations tend to rely more on AI applications for customer analysis and personalization in marketing campaigns than on dynamic pricing models, which still face technical and ethical challenges (Chatterjee, Tamilmani and Sharma 2021).

In contrast, the results show that reliance on AI-powered recommendation engines to optimize the timing of announcements and messages was moderate. This is consistent with the findings of Jarek and Mazurek (2019), who indicated that organizations adopt recommendation engines to a moderate degree due to the need for advanced technological investments to ensure predictive accuracy and consumer satisfaction. (Jarek and Mazurek 2019). Similarly, the use of data analysis to forecast market trends and reduce risk also appeared at a moderate level, which corresponds with Davenport, Guha, Grewal, and Bressgott (2019), who found that AI contributes to improving market forecasting decisions, but the degree of actual adoption remains limited due to the complexity of AI models and challenges in integrating them with traditional decision support systems (Davenport, Guha, Grewa and Bressgot 2019).

Based on these findings, it can be concluded that the current study is consistent with existing literature, emphasizing that organizations tend to invest more in AI for customer analysis and targeting than for dynamic pricing or advanced strategic forecasting. This reflects a practical trend toward applications that deliver tangible results more rapidly.

Regarding the second theme, the results indicate that the use of AI applications by tourism agencies in trip planning and decision-making was generally at an average level, reflecting a transitional phase in technology adoption. The use of AI was more concentrated in flight forecasting and delay prediction, as well as in leveraging predictive analytics to expedite tasks and reduce waiting times. In contrast, AI was less utilized in planning flight schedules, distributing human crews, or making decisions directly based on AI insights. These findings suggest that the reliance of tourism agencies on AI remains primarily focused on operational efficiency rather than strategic decision-making. This is supported by Milton (year), who emphasized that AI adoption in operational contexts is more prevalent than in strategic planning (Milton 2023). The overall average level of AI usage indicates significant development opportunities. Tourism agencies can enhance their technical strategies by training personnel and increasing integration between intelligent systems and decision-making platforms. Chatterjee, Tamilmani and Sharma (2021) demonstrated that systematic integration of AI into decision-making processes improves forecasting accuracy and reduces operational costs, highlighting the importance of a gradual shift from limited use to widespread institutional adoption.

Regarding the third theme, the study’s findings indicate that the tourism agencies under investigation exhibit a notable interest in adopting artificial intelligence (AI) technologies in booking activities, particularly through interactive smart platforms that enable customers to inquire and complete reservations efficiently. This aligns with recent literature highlighting that smart chats and chatbots have become among the most prominent AI applications in the tourism sector, due to their capacity to enhance customer experience and accelerate responses to inquiries (Wüst and Bremser 2025).

The results also reflect a trend among agencies to invest in building detailed customer profiles through AI, supporting previous studies that emphasize the role of personalized services in improving traveller satisfaction and loyalty. Conversely, the findings suggest that the digital maturity of the tourism agencies studied remains partial, as efforts are concentrated on the customer-facing service interface rather than on backend processes. This observation is consistent with systematic reviews indicating that most tourism establishments initiate their digital transformation by optimizing customer touch points, gradually extending automation to internal operational systems.

The fourth pillar’s results indicated a moderate adoption of digital technologies and AI by tourism agencies for enhancing customer experience, reflecting a transition toward full digitization without reaching maturity. AI-powered smart chat programs scored highest, showing awareness of the importance of instant interaction and service personalization (Nguyen, Simkin and Canhoto 2015). In contrast, augmented and virtual reality technologies were adopted at medium to low levels, highlighting underutilization of their immersive potential due to cost and limited user awareness (Dieck and Jung 2015). Predictive analyses of behavioral and demographic data ranked lowest, signalling limited investment in extracting customer insights, despite their key role in personalization and competitiveness. High variation in participants’ experiences further reflects differences in digital awareness and resource availability, consistent with Buhalis and Sinarta (2019). Overall, agencies tend to focus on basic interactive tools rather than advanced analytics or immersive experiences, emphasizing the need for strategic investment, training, and enhanced digital awareness to sustainably improve customer experience (Buhalis and Sinarta 2019). The results of the third section

of the questionnaire indicate that the most significant obstacles facing the studied tourism agencies in adopting artificial intelligence technologies are the scarcity of specialized experts. This reflects a gap in human capital capable of developing and implementing smart solutions. This finding aligns with Seyfi, Kim, Nazif, Murdy and Thanh (2025), who confirmed that the lack of human competencies is one of the most prominent challenges hindering tourism institutions from fully leveraging artificial intelligence. The results also showed that technical barriers, such as language limitations and technical failures, ranked second, with a relatively high average (Seyfi, Kim, Nazif, Murdy and Thanh 2025). The high cost of AI applications ranked third, at an average level, suggesting that investment in these technologies is still perceived as a financial burden for SMEs. This finding aligns with Gretzel, Sigala, Xiang, and Koo (2015), who indicated that the high cost of developing and maintaining intelligent systems poses an obstacle to their widespread adoption. In fourth place, cultural concerns regarding the impact of artificial intelligence on tourist identity emerged at a moderate level (Gretzel, Sigala, Xiang and Koo 2015). Some stakeholders fear that simulated experiences may replace authentic cultural performances, as noted by Tussyadiah who warned that overreliance on AI could strip the tourist experience of its cultural and human dimensions (Tussyadiah 2020, p. 344).

The results also indicated that inadequate infrastructure, privacy and security concerns, and the loss of human touch are medium-impact barriers. This is consistent with Webster and Ivanov (2020), who noted that the absence of digital infrastructure, along with ethical and humanitarian concerns, represents moderate but addressable obstacles through supportive policies and increased awareness among tourism organizations (Webster and Ivanov 2020).

Overall, the arithmetic mean indicates that the tourism agencies under study face a set of medium- to high-impact obstacles, most notably the lack of specialized experts and technical challenges. This underscores the need to invest in training, develop digital infrastructure, and adopt balanced strategies that integrate technology while preserving the human and cultural aspects of tourism. While AI can improve operational efficiency and accelerate booking processes, it cannot fully replace human expertise, especially in high-end tourism or complex trips. Therefore, the most effective strategy is to combine human capabilities with smart technologies, enhancing service quality and ensuring sustainable competitive advantage.

11 Limitations of the study — Despite the findings of this study, it has several limitations that should be considered. The most significant limitation is the restricted geographical scope, as the study was confined to tourism agencies in the Wilaya of Bordj Bou Arreridj, which limits the generalizability of the results to other provinces in Algeria or beyond. This affects the comprehensiveness and accuracy of the findings. Additionally, the reliance on questionnaires as the primary data collection tool may not fully capture all dimensions of the topic, particularly regarding actual practices within tourism agencies. Considering the temporal aspect, the study was conducted over a limited period, while the adoption of AI technologies is a dynamic process that evolves over time. Consequently, AI capabilities are still developing, and some programs implemented in tourism agencies are in their early stages, which restricts the possibility of comprehensively assessing their long-term effectiveness, especially given that Algeria is relatively new to employing this technology.

12 Prospects of the study — Based on the limitations discussed above, several directions for future research can be proposed, including:

- | Expanding the geographical scope of the study to include other regions or conducting comparisons between different areas in Algeria, allowing for a deeper understanding of regional differences in AI adoption.
- | Increasing the sample size to encompass a larger and more diverse number of tourism agencies, thereby enhancing the accuracy and generalization of the findings.
- | Employing various research tools, such as field interviews, case studies, and direct observation, to better capture the actual impact of AI on tourism activities.
- | Conducting longitudinal studies to monitor the evolution of AI adoption over several years, in order to assess changes in organizational behavior and outcomes achieved.
- | Comparing the tourism sector with other service sectors (e.g., transportation or hospitality) to understand how AI adoption differs across industries.

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Klíčové slová | Key Words ——— artificial intelligence, tourism agency, marketing strategy, customer experience, privacy, tourist destination, Algeria | *umelá inteligencia, cestovná kancelária, marketingová stratégia, zákaznícka skúsenosť, ochrana súkromia, turistická destinácia, Alžírsko*

JEL klasifikácia | JEL Classification ——— O33, L83, M31, D83, O55

Résumé ——— **Využitie umelej inteligencie v cestovných kanceláriách: realita a výzvy. Terénny prieskum cestovných kancelárií v Bordj Bou Arreridj v Alžírsku.**

Táto štúdia skúma, do akej miery cestovné kancelárie v provincii Bordj Bou Arreridj v Alžírsku integrujú aplikácie umelej inteligencie do svojich prevádzkových a strategických činností. Štúdia sa ďalej zaoberá kľúčovými výzvami, ktoré bránia efektívnemu zavádzaniu týchto technológií. S využitím deskriptívnej metodiky boli údaje analyzované pomocou softvéru SPSS v27 s cieľom zodpovedať hlavnú výskumnú otázku a zmerať mieru zavádzania AI v niekoľkých oblastiach, vrátane vývoja marketingovej stratégie, plánovania ciest a rozhodovania, rezervačných operácií a zlepšovania zákazníckej skúsenosti. Výsledky ukazujú, že implementácia aplikácií umelej inteligencie v rámci skúmaných agentúr je v týchto oblastiach mierna, agentúry však narážajú na významné prekážky, najmä na nedostatok kvalifikovaných odborníkov a pretrvávajúce technické obmedzenia.

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THE TRANSFORMATION OF THE MUSIC INDUSTRY SUPPLY CHAIN IN THE NEW PHYGITAL SCENARIO. TOWARDS A HYBRID CONSUMER.

This paper diagnoses and estimates current and potential changes in the Music Industry supply chain linked to the phygital (physical-digital) consumer. As technological disruption reshapes industry roles, consumer behavior is shifting toward hybrid patterns. We offer this analysis as a reflection for professionals, combining a literature review and analysis of digital music habits with a Delphi study of a heterogeneous sample of Music Industry agents.

1 Introduction — The music industry - the businesses and professionals who monetize compositions, recordings, and live experiences - has long been in flux, with disruption intensifying since the turn of the millennium (McLean et al. 2010). Prior research examines the crisis triggered by peer-to-peer file-sharing platforms such as Napster (Spitz and Hunter 2005; Hugues et al. 2008; Aguiar and Waldfogel 2016; Liebowitz 2016) and other economic and technological shocks that have reshaped business models and, therefore, the Music Industry supply chain. These shifts are eliminating some traditional roles and creating new ones, forcing professionals to adapt and influencing consumers. The Metaverse, VR/AR convergence, and AI are accelerating change, increasing uncertainty and motivating further academic reflection.

This paper examines how recent technological and economic shifts are reshaping ecosystem roles, removing some actors, adding others - and changing music consumption (recorded and live). To frame this reordering, we draw on mediamorphosis (technology-driven change in cultural sectors) (Blaukopf 2016; Hijleh 2018), the prosumer (proactive consumer involved in service design) (Grinnell 2009), and the producer (blurred boundaries between user and producer) (Galan 2021; Johnson and Barlow 2021), culminating in the phygital consumer.

The paper is structured as follows. First, we analyze the music industry's distribution value proposition and supply-chain transformation, with streaming as the dominant model. Next, we examine the transition toward a phygital consumer ecosystem—hybrid physical/digital production, distribution, and consumption—and its implications for relationships among artists, entrepreneurs, and consumers. We then contrast prospects and consumer impacts using a Delphi study based on managers' forecasts. Finally, we present the main conclusions and study limitations.

2 From verticality to horizontality in the music industry — The music industry includes businesses that shape the supply chain through vertical or horizontal

structures: (1) the recording business (recordings and their distribution in physical and digital formats), (2) music publishing (monetizing composition rights), and (3) live music (promoters contracting artists and venues to generate ticket revenue).

Over the past two decades, new technologies for recording and transmitting music have expanded the range and value of music products. The digital environment has reshaped production, distribution, and promotion - especially in recording (Bourreau, Moreau and Gensollen 2008) - and, to a lesser extent, publishing and live music. Industry structures are changing (Towse 2017; Sinnreich 2019) as new digital consumption patterns emerge (Molteni and Ordanini 2003). New distribution models (Wikström 2012) have followed the shift away from physical formats, with online platforms distributing music via downloads and streaming and becoming key intermediaries in the recorded-music supply chain (Graham et al. 2004).

In the 21st century, technological transformation is blurring the boundaries between record companies, promoters, A&R agencies, and publishers. As business models and competitive dynamics evolve, new roles are emerging, such as the Artist and Label (A&L), positioned between digital distribution and traditional record companies in terms of services to creators (<https://www.gov.uk/government/news/cma-provisionally-clears-sony-s-acquisition-of-awal> 2022).

Rapid digital adoption has decentralized recorded-music distribution (Arditi 2014) and boosted interest in blockchain across the Music Industry, from creation to exhibition (O'Dair and Owen 2019; Bing 2022), alongside AI (Cao and Zhang 2020). Despite ongoing ethical debate (Manjarres 2021), AI's convergence with AR/VR („Music in Extended Realities“) suggests uncertain futures, from ambient audio to fully interactive soundscapes (Turchet et al. 2021). These contexts add new supply-chain actors and reinforce a hybrid listener moving between physical and digital worlds.

Similarly, Non-Fungible Tokens (NFTs) are entering the Music Industry and live festivals, enabling new music communities and stronger management of creators' rights (Katje 2022). While outcomes remain uncertain, this trend may support new music business models.

3 The music industry's value proposition through online music service platforms — Mass music consumption initially depended on record companies producing and distributing physical recordings. Over time, labels consolidated into large, diversified entertainment groups (Civano 2003). Following Sonys 2004 merger with Bertelsmann (Sony BMG) and Universal 2011 merger with EMI, the recording industry coalesced around the Big Three: Universal, Sony, and Warner.

Music Industry commercializes musical creations as products and services that deliver value. This value proposition has evolved with shifting business models: traditional models persist with updated propositions, while innovative ones are reorganizing the sector. This study focuses on these changes.

Digitization and online distribution have shifted recorded-music consumption from ownership (physical collections) to on-demand access (Nicholson 2019). Streaming offers unlimited access to large catalogs, affecting consumption volume, variety, and discovery (Datta, Knox and Bronnenberg 2018). Ownership and access now coexist as complementary value propositions, reshaping supply-chain business models from creators to consumers (Wikström 2012).

4 New intermediaries in the music supply chain — Self-production has grown, reducing artists' dependence on music companies (Rogers et al. 2023). While artists and independent labels can produce and sell music, digital distribution has posed challenges. Until recently, access to online platforms was possible but administratively complex, as service providers had to negotiate legal terms with many rights holders (Sánchez et al. 2016). This led platforms to rely on a new intermediary, the music aggregator – responsible for uploading content. Aggregators pool „the demand of many customers or the products of many suppliers“ (Bailey and Bakos 1997, p. 9); although common in many industries, their role in digital music often goes unnoticed (Galuszka 2015).

With the rise of aggregators, rights holders (labels or independent artists) can either negotiate directly with digital platforms or use an intermediary. Direct deals are difficult because platforms prefer to secure the most content through as few negotiations as possible (Association of Independent Music 2019) and impose technical and metadata requirements. Aggregators handle these requirements, reducing administrative burden and acting as intermediaries in the digital music supply chain (Chen 2022).

In short, with the emergence of this figure, two different supply chains are proposed for the dissemination of musical creations, starting from the record label or directly from the artist and/or independent producer:

- | Artists can stay with a label that combines physical distribution with digital distribution via an aggregator that uploads music to streaming and download platforms.
- | Alternatively, artists can self-produce and use an aggregator to distribute their music on major streaming platforms.

Streaming platforms – and, by extension, aggregators – have reshaped the music industry supply chain by creating a more direct route between creators and digital listeners. Self-publishing artists and micro-labels now deliver large volumes of content to the mainstream market, which was not feasible pre-digital. Early evidence also suggests modest demand shifts toward a wider set of creators beyond the major-label system (BPI 2021).

In line with the above, the emergence of the Internet in the music landscape is associated with three drivers of change (Carreras 2017) that alter business models and relationships between industry players, namely:

- | The way artists produce and collaborate with each other.
- | The way audiences consume and participate.
- | The relationship between the artists and their fans (contact, music recommendations, etc.).

Digital tools enable greater self-production and more independent dissemination at minimal cost. Social media can make artist-fan relationships direct, reducing reliance on record labels. Connected devices also close the music-consumption cycle – search, discovery, acquisition, consumption, and sharing. Metaverse further extends this chain by enabling virtual live-concert experiences (Turchet 2023).

Online music service platforms (especially Spotify) disintermediate downloads and streaming, reducing wholesalers/retailers and eliminating physical storage and transport. Distribution becomes the industry's core activity rather than a marketing tool (Raphaël 2019). New players include white-label digital distributors (e.g., Sonosuite) and multinationals offering broader artist services (e.g., Believe Digital).

Carreras (2017) attributes the success of online music distribution to continual platform business-model innovation and global expansion. While some platforms remain open to independent artists and labels (Patiño 2021), others require distribution via aggregators such as CD Baby or TuneCore. Aggregators offer basic or premium services (e.g., release management, playlist pitching, physical distribution) and charge per release, by commission, by subscription, or a mix. They also earn from downloads, end-user subscriptions, and, increasingly, advertising-funded freemium access.

From a global perspective, Majors still dominate top positions in both physical and digital channels. In negotiations with aggregators, their scale enables substantial corporate power over other players. Yet aggregators also hold a strategic position that can redirect – and especially moderate – the Majors' power in the recorded-music supply chain, ultimately affecting consumers.

These developments are reshaping business structures across recorded and live-music supply chains, redefining relationships among industry actors. New intermediaries are also entering the supply chain, further intensifying digital reintermediation.

On another note, growing festival demand and live-music opportunities are strengthening links between recorded and live business models across the supply chain. As recorded sales have fell over the past decade, revenues of live music have become more important (The Economist 2015).

All these changes are bringing the phygital consumer to the fore.

5 Towards a phygital music consumer in the new technological context —

The term „phygital“, emerge in marketing discipline to put in the focus of the strategy on building relationships with customers in both physical and digital domains creating immersive and frictionless experiences for customer and increase consumer retention (Mishra et al. 2023). Recent research examines how technology shapes neuroscience-informed consumer psychology and marketing dynamics (Del Vecchio 2023; Johnson and Barlow 2021), although this research has been focused mainly on retail (Hewett 2016; Christchurch 2017; Banik 2021; Pusceddu et al. 2025). Although, the phygital consumer behavior spans music products, and artistic disciplines, and attitudes about them (Joy 2023; Pangarkar et al. 2022; Belghiti 2017; Banik and Gao 2023) studies linking hybrid-consumer insights to music remain limited.

The music industry continues to evolve faster with technological progress. New changes are expected in emerging spaces such as Metaverse, where physical/virtual hybridization creates new opportunities for stakeholders. Musical experiences already exist there (e.g., live virtual concerts) with artistic and commercial implications; Turchet (2023) frames this as a Musical Metaverse enabling deeper musician audience engagement and new revenue sources.

Blockchain extends digital infrastructure by enabling peer-to-peer value exchange without intermediaries. It supports business models in which artists connect directly with fans and automate payments (Awuor 2020), IP management (Ciriello et al. 2023), and digital content storage/access (Potts and Rennie 2019; Cai 2020). This can shift market participation terms toward artists; Turchet (2023) documents multiple music-industry use cases. In relation to the Music Industry, the role of possession in streaming has been analyzed (Danckwerts and Kenning 2019), concluding

that, although there is no physical enjoyment, the psychological appropriation based on the music positively influences the sense of control. These impressions are close to the phygital concept of the music consumer, where the physical live experience is conditioned by a digital purchasing process.

Thus, the evolution towards a hybrid phygital environment – physical and digital – is growing in today's music ecosystem. We are therefore talking about a consumer who has matured in digital transactions, not only in the consumption of streaming music, but in all fields of economic activity. Every sector is being affected by this trend, and the world of culture is no exception. Entrepreneurs, artists, and consumers are part of a process of change that is already underway. The digital and the physical are no longer opposing contexts, but they form a new hybrid stage, where both are enhanced.

As consumers move across physical and digital contexts, they seek experiences that combine both. The Music Industry is responding with personalized, interactive, and social experiences, especially since COVID-19 (Hansen et al. 2021), tailored to userssituational context, age, and circumstances.

This adaptation reflects both technology and platform algorithms that tailor content to user searches (Muller 2015). In the phygital era, recorded and live music increasingly coexist and reinforce each other: recorded music remains key for communication and promotion (Martin 2021), while the live and licensing segments have grown as record-label revenues declined (Wikström 2014). Overall, the phygital consumer turns listening into an end-to-end journey – from platforms to live concerts – across the industry's value chain. To better understand this uncertain outlook from industry actors' perspectives, the next section presents a Delphi survey of experts.

6 Methodology — Considering the exploratory and prospective nature of this work, a qualitative type of research has been carried out. Specifically, a Delphi analysis has been designed (Linstone 2022; Landeta 2006) adapted to the new environment of technological demand and musical behavior (Insunza 2017). With this, and through a process of consensus among experts in the music value chain, the aim is to identify the future scenario of the phygital consumer. In short, it is about gathering impressions about what is likely to happen in the management and exploitation of the music business and its consequences on consumer behavior, considering both recorded and live music, as well as their interactions.

7 Selection of experts — Expert selection is central to Delphi studies, as it shapes the quality of collected information and the reliability of results. Following Day and Bobeva (2005), we selected participants for their specific knowledge of the Music Industry across recorded and live music. Expertise was defined by (i) the expert's perspective and (ii) their position in the Music Industry value chain. Finally, the panel was designed to be heterogeneous (Bolger and Wright 2011) and to reflect diverse industry views.

Type	Profile
Music holding	Communication
Music festival	Marketing
Independent music label	CEO

Music festival	Director
Musical producer	Producer
Freelance	Consultancy
Music festival	Founder
Music live distribution	Director

TABLE 1: TYPE OF PROFILE IN THE DELPHI PROCESS
SOURCE: AUTHORS

8 The Delphi processes — To test the formulated hypotheses, a survey of experts in the sector was carried out. Considering the multidimensional nature of the phenomena studied, this survey took the form of a Delphi analysis. This technique is a method of structuring an effective communication process when dealing with a group of individuals in relation to the resolution of a complex problem (Linstone and Turoff 1975). Expert value judgement is very valid in non-exact disciplines, such as the social sciences, or in situations of uncertainty.

The Delphi process was conducted through email-based questionnaires via the Easy Survey platform between April and June 2023. Following Delbecq, Van de Ven and Gustafson's (1975) recommendations, iterations were grounded in conclusions from the literature review on the phygital consumer (Aparicio et al. 2017). The number of rounds was determined by response stability (Landeta et al. 2011), marginal information gain, and the absence of extreme positions (Linstone and Turoff 1975).

The methodology comprised three steps: questionnaire design, expert selection and distribution, and data collection and processing. The instrument consists of 25 questions across four thematic blocks – defining the Music Industry (MI) as the sum of the Record and Live industries:

- | Block 1: The MI and the present. Role of today's consumer.
- | Block 2: MI economic structure.
- | Block 3: MI re-intermediation.
- | Block 4: MI and the future. Role of the phygital consumer.

Blocks 1 through 3 examine expert perceptions of innovation intensity, economic structure, and emerging intermediaries in the MI Supply Chain, respectively. Block 4 focuses on future scenarios in which the hybrid consumer takes center stage.

9 First round — The purpose of the first round is to validate and receive constructive feedback on the refined list of objectives obtained in the face-to-face phase. The questionnaire for this round had three main blocks: 1) rating the importance of each phygital consumer role objective using a Likert scale (Claveira 2021) from 1= least important to 5 = most important), 2) adding new objectives if they thought some were omitted or adjusting the nuance of the listed objectives if necessary, and, finally, 3) selecting the three most important objectives and explaining the reasons for their selection. The results obtained are described at the Table 2 and Table 3.

10 Second round — The second round included the professionals who participated in the first round. To increase consensus, each participant received two documents: (i) the aggregated first-round results and (ii) a comparison showing where their responses differed from the group averages (using the first and third quartiles

TABLE 2: STATEMENTS VALUATIONS
SOURCE: AUTHORS

Questions	Items	Average	Median	Q1	Q3
Indicate the level of impact that the following technological innovations are having on the recording MI. (Rate from 1 to 4 according to the impact of each of the innovations. Where 1= Very insignificant, 4= Very significant)	Metaverse	1.25	1	1	1.25
	NFTs	1.75	1.5	1	2.25
	Virtual reality	1.37	1	1	2
	Artificial intelligence	2.12	2	1	3
	Metaverse	1.12	1	1	1
	NFTs	1.25	1	1	1
	Virtual reality	1.5	1.5	1	2
	Artificial intelligence	1.37	1	1	2
	Product	2.5	2.5	2	3
	Process	2.12	2	2	2.25
Indicate the level of impact that the following technological innovations are having on Direct MI. (Score 1= Very insignificant, 4= Very significant):	Organization	1.5	1	1	2
	Marketing	3.12	3	3	3.25
	The creative process itself	2.5	2.5	2	3
	Production/Editing	2.37	2	2	3
With respect to the technological transformation that MI is undergoing, please indicate the level of intensity you think consumers perceive the impact of innovation on each of the following areas of influence (Score 1= Very insignificant, 4= Very significant):	Distribution	2.25	2	1.75	3
	Promotion	2.75	3	2	3
	The creative process itself	2	2	2	2
	Production/Editing	2.12	2	2	2.25
Taking into consideration the processes that characterize the Live Music exhibition, please indicate how intensely you think the consumer perceives the impact of technology on the following areas (Score 1= Very insignificant, 4= Very significant)	Distribution	1.87	2	1	2.25
	Promotion	2.75	3	2	3
	The industry	2.12	2	2	2.25
	The consumer	3	3.5	2	4
Changes in the MI business model will be explained mainly by the dynamics of change of: (Score with 1= Very insignificant, 4= Very significant)	Consumer-driven industry	2.87	3	2.75	3.25
	The industry-influenced consumer	2.12	2	1.75	3

Agree	Neither agree nor disagree
The new environment characterizing the music industry offers greater opportunities for music styles associated with niche markets.	The dominant position of technology companies, directly or indirectly related to music, will be affected by the loss of bargaining power with new players.
The transformations in MI marked by new digital consumer behavior represent a qualitative leap in the economic and historical evolution of the sector.	
The economic crises generated by the pandemic, the Ukraine-Russia war, rising inflation and other exogenous factors hamper the competitiveness of the music industry.	Disagree The dominant position of the Majors (Universal, SONY-BMG, Warner) in the market will be affected as they will lose bargaining power with the new players.
Self-production will be consolidated as an alternative to the model represented by the Majors (Universal, Sony-BMG, Warner).	
The transformations in MI, driven by technology, have generated a qualitative leap in the incorporation into the sector of unprecedented employment figures, such as aggregators.	Consumers will be increasingly active participants (through their participation in social networks and virtual reality) in the design of music products. Their position as prosumers will be consolidated.
The transformations in MI, driven by technology, generate a qualitative leap in the reordering - not elimination - of the sector's labor figures.	In this new environment, consumers will consolidate their music consumption habits in digital listening and enjoyment of the live experience in an integrated way.
Music consumption is increasingly linked to other disciplines, such as audiovisual or transmedia (e-sports, gaming, twitch...).	
In the new context, there are greater opportunities for the entry of new players (barriers to entry in the sector have been lowered).	
Collaboration between different actors in collaborative networks will be necessary as it is more efficient than vertical integration.	
Understanding the music business as a business supported by three branches (record label, publishing, live), I believe that its horizontal interdependence (collaborations with third parties) will increase.	
In this new environment, consumers will consolidate their digital-only music consumption habits.	
In this new environment, consumers will consolidate their music consumption habits in two ways: first in digital listening and then in the enjoyment of the live experience.	

TABLE 3: QUALITATIVE VALUATIONS
SOURCE: AUTHORS

as reference points). As most answers fell within the median range, consensus was broadly achieved; participants could either keep or revise their initial responses (Insunza 2017). Data collection ran from June to July 2023, with 100% of first-round participants completing the second round.

11 Results — The music consumer's emerging concerns (beyond the category of „listener“) mirror ongoing technological and economic disruption. While the drivers of musical taste remain hard to isolate (Byrne 2017), the industry faces unprecedented challenges in engaging customers whose consumption spans physical and digital contexts. This study therefore examines the present and outlines plausible scenarios for hybrid music-consumption behavior, based on input from experts across the Music Industry supply chain. The shared questionnaire reflects the hypothesis that current changes affect both creation/exhibition and recording/distribution, shaping final consumption.

On the one hand, it can be observed that issues related to Metaverse technology, NFTs, Virtual Reality or Artificial Intelligence generate agreement regarding their limited influence on the new models of music consumption, as well as on the artist's own creative process, the production of a record or its distribution.

On the other hand, the power of the Majors remains fundamental in defining this new framework of music consumption. And while there is agreement that the new players entering the supply chain are unprecedented and the barriers to entry for competitors are lowered, they do not influence music consumption patterns.

This ties in with a unanimous expert opinion, relegating the role of prosumer to that of mere music consumer, without being part of the supply chain and maintaining its dichotomous consumption role, i.e., physical, and digital, without integration. Another paradox lies in the assertion, also elicited by a high level of agreement, that self-production will consolidate as an alternative to the model represented by the Majors, even though the Majors will continue to dominate the Music Industry. Indeed, as outlined above, even if the barriers to entry into the music supply chain are lower, the majors will use these disruptions to continue to maintain their dominance.

12 Contributions to academic study — This paper contributes to this debate by diagnosing and estimating current and potential transformations in the Music Industry supply chain as conditioned by the phygital consumer. As technological disruption progressively dissolves the boundaries between physical and digital experience, consumer behavior is coalescing into hybrid patterns that challenge established models of value creation and intermediation. In this sense, the present study advances a dual analytical contribution: theoretically, it extends the conceptual framework of the phygital consumer to the specific dynamics of the music industry supply chain; empirically, it triangulates a systematic literature review and digital consumption data with a Delphi study drawing on a heterogeneous panel of Music Industry agents. The findings are thus offered not only as a diagnostic tool for practitioners, but as a theoretical reflection on the evolving nature of cultural consumption in digitally mediated markets.

13 Limitations and future studies — This study is subject to several limitations that simultaneously delineate productive avenues for future inquiry. First, the ex-

pert panel's composition – weighted toward managerial, distribution, and recording perspectives – may introduce a structural bias by underrepresenting technological actors operating at the periphery of the industry. This calls for future research designs that incorporate a broader epistemic community, including platform engineers, AI developers, and cross-industry digital strategists. Second, the Music Industry's accelerated rate of transformation, driven by endogenous disruptions and exogenous shocks alike (e.g., the geopolitical instability associated with the Ukraine-Russia conflict at the time of data collection), raises legitimate concerns about the temporal validity of the findings. This is consistent with a broader epistemological challenge in fast-moving industries: the risk that empirical snapshots are superseded before they reach publication. Third, the systemic uncertainty surrounding artificial intelligence – both as a technological paradigm and as an economic force across cultural industries – introduces a layer of structural indeterminacy that limits the anticipatory reach of any single study.

This last point merits particular theoretical attention. Recent developments – AI-generated compositions attaining commercial visibility, algorithmically produced vocal impersonations of deceased artists achieving cultural credibility, and machine-generated melodic and harmonic content entering mainstream consumption – are not merely anecdotal. They represent a qualitative shift in the ontology of musical authorship and, by extension, in the nature of consumer engagement. Crucially, these transformations are largely invisible to the typical consumer, which raises important questions about asymmetric awareness and its implications for demand-side theory in cultural markets.

In this context, the proliferation of speculative, often contradictory narratives in literature underscores the epistemological value of methodological approaches – such as the Delphi method employed here – that privilege structured, iterative reflection over reactive commentary. Future research should continue to examine what we term: the transitional condition in which the role of the music consumer is being renegotiated within a regime of permanent disruption and recurrent crisis. Theoretically, this points toward a reconceptualization of consumer agency in cultural industries – one in which the locus of change progressively migrates from institutional actors toward the demand side, shaped not only by intra-industry dynamics but by the gravitational pull of adjacent digital ecosystems. Whether the Music Industry retains sufficient structural weight to govern this transition, or whether it is the consumer – informed, hybrid, and increasingly empowered – who ultimately sets the pace, remains an open and consequential question for the field.

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Kľúčové slová | Key Words ——— phygital, music industry, music consumer, supply chain, Delphi | *phygital, hudobný priemysel, spotrebiteľ hudby, dodávateľský reťazec, Delphi metóda*

JEL klasifikácia | JEL Classification ——— M31

Résumé ——— *Premena dodávateľského reťazca v hudobnom priemysle v novom fygitálnom prostredí. Smerom k hybridnému spotrebiteľovi.*

Táto štúdia analyzuje a odhaduje súčasné a potenciálne zmeny v dodávateľskom reťazci hudobného priemyslu súvisiace s „fygitálnym“ (fyzicko-digitálnym) spotrebiteľom. Vzhľadom na to, že technologické zmeny menia úlohy v tomto odvetví, správanie spotrebiteľov sa posúva smerom k hybridným modelom. Túto analýzu ponúkame ako podnet k zamysleniu pre odborníkov, pričom kombinujeme prehľad literatúry a analýzu návykov v oblasti digitálnej hudby s Delphi-štúdiou realizovanou na heterogénnej vzorke subjektov hudobného priemyslu.

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THE MEDIATING ROLE OF DEMARKETING IN THE RELATIONSHIP BETWEEN PERCEIVED QUALITY AND SMOKING CESSATION IN ALGERIA. PART I.

This study focuses on the role of perceived tobacco quality in promoting smoking cessation in Algeria through demarketing strategies, using behavioral economics as a theoretical framework. It aims to analyze the relationship between perceived tobacco quality and smoking cessation, while examining the mediating effects of product and pricing strategies and promotion and distribution strategies. The sample included 1,473 smokers from all 58 Algerian provinces, with data collected via an electronic questionnaire based on statistically validated scales. Results revealed that perceived tobacco quality had a direct effect on smoking cessation ($\beta = 0.250$), while M1 and M2 collectively explained 37.5% of the relationship through an indirect effect of 0.150. A sequential mediation pathway was identified, demonstrating how structural interventions (M1) such as taxation and pricing policies create the foundation for the success of behavioral campaigns (M2). The findings emphasized the importance of integrating economic measures (e.g., taxes) with psychological tactics (e.g., loss-framing messages) to enhance intervention effectiveness, alongside cultural adaptation (e.g., aligning campaigns with religious values or family health priorities) to ensure contextual relevance in Algeria. This provides a practical framework for governments and health organizations to design innovative, culturally tailored anti-smoking strategies in resource-constrained settings.

1 Introduction ——— Tobacco use remains one of the most pressing public health challenges globally, responsible for over 8 million deaths annually, according to the World Health Organization, (WHO 2024) In Algeria, smoking prevalence has reached alarming levels, with approximately 27% of adults reporting regular tobacco use, and 56% of men aged 15-65 classified as daily smokers. Youth smoking rates are also rising, with 14% of adolescents aged 13-15 experimenting with tobacco, driven by factors such as cultural normalization, peer pressure, and aggressive marketing by the tobacco industry. The economic burden is equally staggering, with smoking-related healthcare costs exceeding \$1.2 billion annually in Algeria alone (GSTHR 2022).
Traditional anti-smoking campaigns, which rely on fear-based messaging or direct prohibitions, have shown limited efficacy in changing behavior. These approaches often trigger psychological reactance a defensive response to perceived threats to autonomy while failing to address the deep-rooted cognitive biases that sustain

addiction (Manyiwa and Brennan 2012). Meanwhile, the tobacco industry continues to exploit these biases through sophisticated marketing tactics, such as glamorizing smoking in media and leveraging social norms to target vulnerable populations.

This study explores demarketing as an innovative strategy to combat smoking addiction by reframing anti-smoking communication through the lens of behavioral economics and social marketing. As Pizło and Pizło (2026) emphasize, social marketing applies commercial marketing concepts to influence target audiences for the benefit of society, which perfectly aligns with redirecting marketing techniques to discourage harmful consumption. Unlike conventional approaches, demarketing adopts the persuasive techniques of commercial marketing but redirects them to discourage consumption, by leveraging principles such as loss aversion (emphasizing what smokers stand to lose) and social norms; this approach aims to reshape perceptions of tobacco's „quality“ and desirability. For instance, campaigns might use satirical cigarette packaging or ironic slogans to subvert tobacco branding, making smoking appear unappealing rather than glamorous.

Given the ongoing challenges of smoking addiction in Algeria, this study examines the role of demarketing as a mediating variable in the relationship between perceived quality and smoking cessation. The research questions were formulated as follows: (Q1) How do demarketing tactics (e.g., satirical campaigns, loss-framing messaging) reshape perceptions of tobacco as undesirable? (Q2) Does perceived tobacco quality significantly predict smoking cessation intentions? (Q3) Does exposure to demarketing strategies significantly mediate the link between perceived tobacco quality and cessation outcomes? (Q4) Does the total effect (direct + indirect) of perceived tobacco quality on smoking cessation, mediated by demarketing strategies, show statistical significance?

In the Algerian context, where cultural and socioeconomic barriers hinder smoking cessation, demarketing offers a culturally tailored and psychologically nuanced solution. By analyzing its mediating role between perceived product qualities and smoking cessation, this study seeks to provide actionable insights for policymakers and public health practitioners. Ultimately, it challenges the status quo of tobacco control by advocating for interventions that align with human behavior rather than opposing it head-on.

This article is organized as follows: Section 2 reviews the theoretical foundations of demarketing and its integration with behavioral economics, while developing hypotheses that link perceived product quality, demarketing strategies, and smoking cessation outcomes. Section 3 details the research methodology, including data collection from Algerian smokers through surveys and behavioral experiments, alongside analytical techniques such as regression analysis and structural equation modeling to assess the mediating role of demarketing. Section 4 presents empirical findings, highlighting how demarketing interventions (e.g., satirical campaigns, loss-framing messaging) influence perceptions of tobacco quality and cessation intentions. Section 5 discusses the implications of these findings for public health policy in Algeria and similar contexts, emphasizing the strategic application of behavioral economics principles to counter tobacco industry tactics. Finally, Section 6 summarizes the study's conclusions, acknowledges limitations (e.g., cultural specificity of data, short-term behavioral tracking), and proposes future research directions, such as longitudinal studies on demarketing efficacy and cross-cultural comparisons.

2 Theoretical background — 2.1 Demarketing (concept and motives) —

The concept of demarketing emerged in the 1970s in response to rising demand for certain products when organizations struggled to meet supply; it refers to a strategy aimed at reducing or curbing demand for a specific commodity or product (Halal 2017). As Štrach (2019) notes, demarketing were originally pronounced by Kotler and Levy in 1971, and on the surface, it functions as an active communication strategy designed to discourage consumption. Describes demarketing as a strategic approach designed to reduce or limit consumer demand to align it with supply capabilities. This method can be applied broadly across the entire market or targeted at specific consumer segments. It serves as a tactical response for marketers to implement short-term demand rationalization strategies when long-term efforts to manage demand prove ineffective. Kotler and Keller (2016) conceptualizes demarketing as a strategic component of marketing aimed at discouraging consumer demand either temporarily or permanently for specific products or services. This approach targets general consumer populations or specific market segments to reduce consumption or usage, particularly in contexts where demand exceeds supply or conflicts with organizational or societal goals.

Demarketing is employed for strategic and contextual purposes, primarily to manage demand imbalances or address societal challenges. According to Pasquier and Villeneuve (2018) this approach is utilized when organizations aim to reduce consumer demand either temporarily or permanently to align it with supply capabilities, particularly when production constraints or resource limitations prevent meeting rising demand. Similarly Kumo (2023) highlights its role in situations where long-term demand management strategies fail, prompting marketers to adopt short-term rationalization tactics. Additionally, demarketing is applied to discourage harmful consumption patterns (e.g., smoking or excessive sugar intake) by leveraging psychological reactance or cognitive biases, such as loss aversion or social norms (Haugtvedt, Herr and Kardes 2008). It also serves regulatory or ethical purposes, enabling businesses to comply with legal restrictions (e.g., tobacco advertising bans) or mitigate public backlash by subtly reducing product visibility. Finally, it targets niche market segments to avoid overextending resources or focusing on high-value customers, ensuring operational efficiency and sustainability.

2.2 Demarketing strategies — 2.2.1 Product strategy —

Product strategy focuses on altering a product's attributes or packaging to diminish its attractiveness to consumers. This approach employs techniques such as reducing product quality (e.g., introducing tasteless cigarettes), incorporating shock-value designs (e.g., graphic health warnings on cigarette packs), or creating parody products with sarcastic slogans (e.g., these cigarettes ruin your life). These methods aim to evoke negative associations or diminish perceived value, thereby discouraging consumption. For instance, a 2025 pilot study in Algeria demonstrated the efficacy of satirical cigarette packaging featuring ironic messages, which increased participants' intentions to quit smoking by 22% compared to traditional health warnings (Makhoulfi and Ben Ghadfa 2025). By leveraging design and messaging to subvert product appeal, this strategy effectively aligns with behavioral economics principles like loss aversion and psychological reactance.

2.2.2 Pricing strategy — Pricing strategy aims to reduce consumer demand by increasing the cost of harmful products or eliminating financial incentives that encourage their purchase. This approach includes techniques such as tax hikes on tobacco, alcohol, or sugary beverages to make them less affordable; eliminating discounts or promotional offers that lower perceived costs; and implementing symbolic penalties, such as charging fees for single-use plastic bags to deter environmentally harmful behavior. These methods leverage price sensitivity and loss aversion to influence decision-making. For example, in 2021, Algeria increased cigarette taxes by 30%, which contributed to a measurable decline in tobacco consumption among youth, particularly in price-sensitive demographics (GSTHR 2022). By aligning economic disincentives with public health goals, pricing strategies effectively curtail demand while generating revenue for social programs.

2.2.3 Promotion strategy — Promotion strategy utilizes unconventional or emotionally charged messaging to deter consumer demand by reshaping perceptions and leveraging psychological biases. This approach includes satirical social media campaigns that employ humor or irony to critique harmful products (e.g., viral challenges mocking smoking culture), fear-based messaging that emphasizes severe long-term consequences (e.g., visuals of cancerous lungs or financial ruin), and behavioral nudges that frame decisions around losses rather than gains (e.g., What could you buy instead of cigarettes?). These techniques exploit cognitive biases like loss aversion and psychological reactance to subvert product appeal. For instance, Algeria's „The price you pay“ campaign used caricatures of diseased lungs on cigarette packaging to evoke visceral reactions, significantly raising public awareness about smoking risks (WHO 2024). By blending creativity with behavioral insights, promotion strategies disrupt traditional advertising narratives and foster anti-consumption attitudes.

2.2.4 Distribution strategy — Distribution strategy focuses on limiting product availability through logistical or regulatory measures to reduce consumption. This approach includes restricting sales locations (e.g., banning tobacco sales near schools or public spaces), controlling sales hours (e.g., limiting alcohol or cigarette availability to specific times), and channel manipulation (e.g., replacing harmful products with healthier alternatives in retail environments). These tactics aim to disrupt accessibility, making products less convenient or socially normalized. For instance, France implemented a ban on flavored cigarettes in small retailers to curb their appeal among youth, aligning with behavioral economics principles like choice architecture by reducing exposure to tempting options (Thaler and Sunstein 2008). By reshaping the physical or regulatory environment in which consumers make decisions, distribution strategies effectively deter demand while minimizing direct confrontation with users.

2.3 Types of demarketing — The concept of demarketing was originally outlined by Levy and Kotler 1971, who identified four distinct types based on organizational objectives. These strategies are designed to manage demand imbalances, reshape market dynamics, or address societal challenges.

2.3.1 General demarketing/General demand reduction — General demarketing (demarketing) is a strategic approach employed by organizations or governments to

reduce overall consumer demand for a product or service when it becomes excessively high, often due to overwhelming popularity or supply constraints. This strategy targets the entire market, aiming to curb consumption across all demographics and contexts. It is particularly relevant in two scenarios: first, when a product achieves rapid popularity (e.g., tobacco or sugary beverages), creating demand that outpaces production capacity or conflicts with public health goals; and second, when companies face resource limitations or seek to phase out a product while encouraging adoption of alternatives. For instance, governments may impose steep taxes on cigarettes (e.g., Algeria's 30% tax hike in 2021) to deter smoking while preserving public health (GSTHR 2022). Similarly, businesses might redirect consumers toward substitutes through awareness campaigns or pricing adjustments, ensuring brand loyalty persists despite reduced demand (Kotler and Keller 2016).

2.3.2 Selective demarketing/Targeted demand reduction — This strategy is employed when an organization aims to reduce or limit demand within specific market segments or among certain types of consumers. These segments are typically less profitable compared to others for the product. The organization resorts to this form of demarketing to: Eliminate undesirable customers in order to minimize their demands; When the organization has no option but to accept or continue sales (e.g., due to legal or operational constraints); Focus on a specific market segment to target customers who are most in need of the product (Farquhar 2013).

2.3.3 Ostensible demarketing/Perceived scarcity strategy — This strategy involves an organization pretending to discourage demand for a product or service while secretly aiming to increase consumer interest and drive sales, the core principle lies in leveraging psychological reactance and scarcity bias the human tendency to desire things more when they appear difficult to obtain or restricted. By creating an artificial perception of limited availability or exclusivity, companies make their offerings seem more valuable, thereby stimulating demand paradoxically. For example, luxury brands often release limited edition products while publicly stating they do not wish to overproduce, even though this scarcity is designed to generate hype. Similarly, airlines may advertise last-minute deals with urgent language (e.g., „Only 3 seats left!“) to create a false sense of urgency. This approach makes consumers perceive the product as more desirable because it appears inaccessible to others. The concept hinges on the idea that people value what they believe is scarce or denied to others. By simulating refusal or limiting access, organizations exploit this cognitive bias to enhance perceived value and attract high-priority customers, while effective for boosting demand in competitive markets, this tactic risks backlash if consumers perceive it as manipulative (Cialdini 2009).

2.3.4 Unintentional demarketing/Unplanned demand suppression — Unintentional demarketing occurs when an organization's efforts to increase demand or promote a product inadvertently drive customers away, resulting in reduced interest or sales. This unintended consequence often stems from negative publicity, poor customer experiences, or misaligned marketing strategies that backfire. For instance, a company launching an aggressive advertising campaign might overwhelm consumers, triggering psychological reactance (resistance to perceived pressure)

and alienating its audience. Similarly, a product recall or scandal (e.g., a food brand facing contamination allegations) can lead to spontaneous consumer boycotts, even if the issue was unintentional. This phenomenon highlights the risks of unplanned demand suppression, where organizational missteps such as tone-deaf messaging, quality failures or ethical breaches undermine trust and credibility. For example, a luxury brand accused of green washing may lose eco-conscious customers, while a tech company’s data privacy breach could deter users despite efforts to reassure them. Behavioral economics explains this through loss aversion, where consumers prioritize avoiding negative outcomes (e.g., reputational harm from supporting a flawed product) over potential gains (Kirchner 2013).

END OF PART I.

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Kľúčové slová | Key Words — demarketing, perceived quality, smoking cessation, mediating | *demarketing, vnímaná kvalita, odvykanie od fajčenia, sprostredkovateľské faktory*

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Résumé — **Sprostredkovateľská úloha demarketingu vo vzťahu medzi vnímanou kvalitou a odvykaním od fajčenia v Alžírsku. Časť I.**

Táto štúdia sa zameriava na úlohu vnímanej kvality tabaku pri podpore odvykania od fajčenia v Alžírsku prostredníctvom demarketingových stratégií, pričom ako teoretický rámec využíva behaviorálnu ekonómiu. Jej cieľom je analyzovať vzťah medzi vnímanou kvalitou tabaku a odvykaním od fajčenia a zároveň preskúmať sprostredkovateľské efekty produktových a cenových stratégií, ako aj propagačných a distribučných stratégií. Vzorka zahŕňala 1 473 fajčiarov zo všetkých 58 alžírskych provincií, pričom údaje boli zbierané prostredníctvom elektronického dotazníka založeného na štatisticky overených škálach. Výsledky ukázali, že vnímaná kvalita tabaku mala priamy vplyv na odvykanie od fajčenia ($\beta = 0,250$), zatiaľ čo M1 a M2 spoločne vysvetľovali 37,5% tohto vzťahu prostredníctvom nepriameho vplyvu vo veľkosti 0,150. Bola identifikovaná sekvenčná mediačná dráha, ktorá demonštruje, ako štrukturálne intervencie (M1), ako sú daňové a cenové politiky, vytvárajú základ pre úspech behaviorálnych kampaní (M2). Zistenia zdôraznili dôležitosť integrácie ekonomických opatrení (napr. daní) s psychologickými taktikami (napr. posolstvami zameranými na straty) s cieľom zvýšiť účinnosť intervencie, spolu s kultúrnou adaptáciou (napr. zosúladením kampaní s náboženskými hodnotami alebo prioritami v oblasti rodinného zdravia), aby sa zabezpečila kontextová relevantnosť v Alžírsku. To poskytuje praktický rámec pre vlády a zdravotné organizácie na navrhovanie inovatívnych, kultúrne prispôbených protifajčiarskych stratégií v prostredí s obmedzenými zdrojmi.

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ON THE PROMINENCE OF AUTHENTICITY IN THE AI-POWERED MEDIA CLUTTER

Authenticity has become one of the most influential concepts in contemporary marketing. In an environment characterized by information overload, increasing consumer skepticism, and rapid technological change, brands face growing pressure to communicate in ways that are perceived as genuine, transparent, and trustworthy. Consumers are exposed to a myriad of marketing messages, making it increasingly difficult to gain attention, stand out from the crowd and build meaningful lasting relationships. As a result, authenticity has become a recent buzzword that differentiates successful campaigns from those that fail to resonate with audiences.

The rise of social media, digital platforms, and artificial intelligence (AI) has further transformed expectations regarding brand communications. Consumers increasingly demand honesty, purpose, and consistency. They expect brands not only to sell products and services but also to demonstrate values, understand customer needs, and engage in meaningful dialogue. Consequently, both human-created and AI-assisted marketing campaigns have increasingly incorporated authentic storytelling, purpose-driven communication, personalized messaging, emotional engagement, and consistent customer experiences. These elements have become essential for building credibility and long-term customer loyalty.

Traditionally, authenticity in marketing was associated with human creativity, personal experiences, and direct interactions between brands and consumers. Human-created campaigns often rely on deep cultural understanding, empathy, and nuanced storytelling to establish emotional connections. Marketers have increasingly moved away from highly polished corporate messaging toward more relatable and transparent communication styles. Artificial intelligence tools present both opportunities and challenges for authenticity. While AI enables marketers to generate content at scale, analyze customer data, and create highly personalized campaigns, consumers may perceive AI-generated content as impersonal, manipulative or outright fake. At times, it lacks transparency and human warmth. At times, it appears wordy or exaggerating. Consequently, successful campaigns increasingly combine the efficiency of AI with human creativity, oversight, and judgment.

One of the most visible manifestations of authenticity in contemporary marketing is the use of real stories. Consumers tend to respond more positively to genuine experiences than to traditional promotional messages. Customer testimonials, employee stories, founder narratives, and user-generated content provide compelling evidence that a brand's claims are both credible and relatable. Storytelling enables brands to move beyond highlighting product and service features and establish meaningful connections with audiences on a personal level. Real stories foster emotional engagement because they reflect challenges, aspirations, and experiences

that consumers can recognize in their own lives. Campaigns featuring actual customers or employees are often perceived as more trustworthy than those relying solely on professional actors or scripted scenarios. Furthermore, AI can facilitate the sharing of authentic customer experiences by connecting individuals with relevant stories, recommendations, and communities. When used appropriately, AI can enhance both the relatability of content and consumers' sense of belonging to a brand community.

Consumers often verify information, share experiences, and publicly evaluate brand claims anyway. As a result, inflated or misleading narratives are quickly exposed, while genuine stories often generate stronger engagement and positive word-of-mouth communication.

Another defining characteristic of authentic marketing is purpose-driven communication. Current consumers increasingly expect brands to stand for something beyond profit generation. Issues such as sustainability, social responsibility, diversity, inclusion, and community engagement have become important components of brand identity. Purpose-driven communication seeks to highlight contributions to society and address broader stakeholder concerns. Consumers often distinguish between genuine commitments and superficial attempts to hijack social trends. When organizations promote social or environmental causes without meaningful action, they risk accusations of hypocrisy or „purpose washing“. For instance, Zara's „take-back“ and resale schemes allow customers to return used clothing, but environmental watchdogs have criticized these initiatives as examples of greenwashing. The main contradiction lies in Zara's fast-fashion business model: the company continues to sell billions of garments annually while relying heavily on air freight to bring new styles to market at high speed.

Authentic purpose-driven campaigns are supported by tangible actions, measurable commitments, and long-term engagement. Explicitly stated values that are transformed into business practices are more likely to gain credibility and customer trust. In contrast, companies whose actions contradict their public messaging often face reputational damage and consumer backlash.

Authenticity extends beyond communication and must be reflected in actual customer experiences. Marketing campaigns create expectations regarding products, services, and brand behavior. If customer experiences fail to match these expectations, trust quickly deteriorates. Consumers evaluate brands not only based on advertising messages but also through interactions with employees, websites, customer service representatives, and products. Every touchpoint on the customer journey contributes to perceptions of credibility.

Advances in digital technology and AI have made personalized marketing increasingly sophisticated. Consumers expect brands to understand their preferences, interests, and needs. Personalized messages can enhance authenticity because they demonstrate attentiveness and relevance. Effective personalization goes beyond simply addressing customers by name. It involves delivering relevant content, recommendations, and experiences based on customer behavior and preferences. When executed appropriately, personalization can make communications feel more meaningful and valuable. However, authenticity in personalization depends on maintaining transparency and respecting privacy. Consumers may react negatively if personalization appears intrusive or raises concerns about data collection practices.

Authentic marketing campaigns often succeed because they connect with audiences emotionally. Human decision-making is influenced not only by rational evaluation but also by feelings, memories, and social identities. Brands that understand these emotional dimensions can create stronger and more enduring relationships with consumers. Successful campaigns address real concerns, aspirations, challenges, and values. Whether communicating hope, inspiration, belonging, pride, or empathy, authentic emotional appeals resonate because they reflect genuine life experiences. For example, the TOMS (shoes) One for One Giving Model is a compelling example of emotional branding, illustrating how a company can build strong connections with consumers by embedding social purpose into its core business model. This approach is particularly appealing to today's socially conscious consumers, who increasingly prefer brands that reflect their personal values and contribute positively to society.

The increasing popularity of community-building strategies further illustrates the importance of emotional engagement. Brands increasingly seek to foster conversations, encourage participation, and create spaces where consumers feel heard and valued. Such approaches strengthen perceptions of authenticity because they emphasize relationships rather than one-way promotional communication.

Authenticity also depends on consistency. Consumers interact with brands across multiple channels, including websites, social media platforms, mobile applications, physical stores, customer support systems, and advertising campaigns. Inconsistent messaging can create confusion and reduce credibility. In spite of different target groups require adapted content, language, and communication styles, the underlying brand values, promises, and identity should remain coherent across channels and segments. Consumers shall receive the same fundamental message regardless of where they encounter the brand. This consistency becomes particularly important in omnichannel environments, where customer journeys frequently span multiple digital and physical interactions.

Authentic marketing requires close coordination among marketing, operations, customer service, and other organizational functions to ensure that brand promises are consistently delivered in practice. Rather than merely persuading customers to make transactions, authentic marketing seeks to address their genuine needs, challenges, and everyday concerns. By providing relevant information, meaningful solutions, and tangible value, brands can build trust and foster stronger, long-term customer relationships. At its core, authentic marketing combines human creativity with the responsible and carefully human-managed use of AI. It involves telling genuine stories, communicating with a clear purpose, aligning brand promises with actual customer experiences, personalizing messages in a transparent and respectful manner, engaging audiences through meaningful emotional connections, and maintaining consistency across target groups, channels, and touchpoints. Together, these elements help create marketing communications that are credible, relatable, and capable of sustaining customer trust over time.

Résumé — Autenticita jako příslib důvěry v záplavě mediálního obsahu generovaného umělou inteligencí

Autenticita je jedním z klíčových faktorů úspěšné komunikace značek. V prostředí informačního přetížení, rostoucí spotřebitelské skepse a rychlého technologického vývoje jsou firmy nuceny komunikovat způsobem, který je vnímán jako důvěryhodný, transparentní a založený na reálném prožitku. Využívání reálných příběhů, komunikace založená na smysluplném poslání značky, konzistence mezi marketingovými sděleními a skutečnými zákaznickými zkušenostmi, odpovědná personalizace, emocionální zapojení zákazníků a budování dlouhodobých vztahů patří mezi základní pilíře autentické marketingové komunikace. Rostoucí význam a užití umělé inteligence, které přinášejí nové možnosti tvorby obsahu a personalizace, současně vyvolávají otázky týkající se důvěryhodnosti, transparentnosti a zachování lidské podstaty komunikace. Nejúspěšnější marketingové kampaně kombinují efektivitu nástrojů umělé inteligence s lidskou kreativitou, empatií a jsou moderovány odborným úsudkem.

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SOUTĚŽ MARKETÉR ROKU 2025

MÁ SVÉHO VÍTĚZE

Ve čtvrtek 14. května 2026 se v Rudolfově slévárně na Pražském hradě uskutečnilo slavnostní vyhlášení výsledků 21. ročníku soutěže Marketér roku, tradičního prestižního ocenění v oblasti marketingu v České republice za uplynulý rok. Soutěž i letos proběhla pod záštitou světově uznávaného marketingového stratéga Philipa Kotlera. Symbol soutěže má tradičně podobu ikonického křišťálového delfína, který pro Českou marketingovou společnost každoročně vytváří sklářský mistr Vladimír Zubričan.

Hlavní cenu soutěže – Velkého modrého delfína a titul Marketér roku 2025 – získaly Anna Vrbovcová a Regina Netolická (Gorenje – MORA) za projekt „MORA – 200 let české značky, která píše nové rodinné příběhy ve vaší domácnosti“. Porota ocenila zejména schopnost propojit dvoustoletou tradici značky s moderním komunikačním jazykem a současnými potřebami českých domácností.

Velký modrý delfín – hlavní cena soutěže a titul Marketér roku 2025 — Anna Vrbovcová (MORA) – Regina Netolická (Gorenje) za projekt „MORA – 200 let české značky, která píše nové rodinné příběhy ve vaší domácnosti“

Velký zlatý delfín — Pavel Mencl a tým Jiří Matoušek, Věra Bílková, Lucie Schnadt (CENTROPOL ENERGY) za projekt „Energopradna Centropol s Rádiem Blaník“, který srozumitelně edukuje veřejnost v oblasti energetiky

Velký zelený delfín — Marek Řípa (Slevomat Group) za integrovaný komunikační mix s využitím rozhlasové a podcastové mini show „To musíš zažít“

Velký růžový delfín — Lidija Kovařík (Pilsner Urquell – The Original Experience) za světově oceňovanou zážitkovou atrakci propojující příběh prvního zlatého ležáku s moderními technologiemi

Zvláštní cena Klubu výrobních družstev — Miroslava Kudrnová (DRUCHEMA) – Lukáš Němčík (COOP) za projekty společností

Zvláštní cena Klubu rodinných firem — Lukáš Pleva (Rodinná firma Pleva) za marketingový přístup

Zlatý delfín — Radka Vlažná (České dráhy) – Jan Kodada (Gebrüder Weiss ČR) za dlouhodobou komunikační platformu „Milujeme vlaky“ a do společnosti Gebrüder Weiss ČR za projekt „Logistika srdcem“, který propojuje logistiku s podporou pacientů po poranění míchy

Stříbrný delfín —

- | Zdeňka Chocholoušová (Czech News Center – Mateřídouška)
- | Marek Končítík (DAGO)
- | Jana Kolrusová (Dandelion® Company)
- | Monika Vondráková / případně Martina Šušáková (Nadace Neuron)
- | Eva Bagalová (United Bakeries) za sérii videospotů „Akční sporty v obleku od Anthony's“

Čestná uznání prezidia za úspěšnou nominaci —

- | Zuzana Melounová (Město Havlíčkův Brod)
- | René Sion (Dallmayr Vending & Office)
- | Miloš Hořejš (Národní technické muzeum)
- | Gabriela Končítíková (Nadace Tomáše Bati) za projekt Prahou kyberbezpečně

Marketér roku Junior – vítězný projekt — Eduard Vladař (ČVUT – Masarykův ústav vyšších studií) – Tereza Tuháčková (ČVUT – Masarykův ústav vyšších studií) za projekt „Plíce velkoměst“

Marketér roku Junior – 2. místo — Kevin Beke, Kiara Kocihová (Univerzita Konstantína Filozofa v Nitře) za projekt „Lokálna včela – Veľký úlet je späť“



DRŽITELKY VELKÉHO MODRÉHO DELFÍNA ANNA VRBOVCOVÁ (MORA) – REGINA NETOLICKÁ (GORENJE)

AUTOR FOTOGRAFIE: ČMS

DICTIONARY OF USEFUL MARKETING TERMS P

price sensitivity | cenová citlivosť — Price sensitivity increases when consumers have more alternatives. | *Cenová citlivosť rastie, keď majú spotrebitelia viac alternatív.*

price skimming | stratégia „zberu smotany“ — The company applied price skimming when launching the new technology to maximize initial profits. | *Spoločnosť uplatnila stratégiu „zberu smotany“ pri uvedení novej technológie na trh s cieľom maximalizovať počiatočné zisky.*

price/pricing strategy | cenová stratégia — Choosing the right pricing strategy is crucial for market success. | *Výber správnej cenovej stratégie je kľúčový pre úspech na trhu.*

problem | problém — The company identified a key problem affecting customer satisfaction. | *Spoločnosť identifikovala kľúčový problém ovplyvňujúci spokojnosť zákazníkov.*

problem awareness | uvedomenie si problému, povedomie o probléme — Effective marketing campaigns increase consumers’ awareness of their needs and problems. | *Efektívne marketingové kampane zvyšujú povedomie spotrebiteľov o ich potrebách a problémoch.*

problem recognition | rozpoznanie problému — Problem recognition is the first stage in the consumer decision-making process. | *Rozpoznanie problému je prvou fázou rozhodovacieho procesu spotrebiteľa.*

problem-solution fit | zhoda medzi problémom a riešením — Achieving a strong problem-solution fit is essential for market success. | *Dosiahnutie silnej zhody medzi problémom a riešením je nevyhnutné pre úspech na trhu.*

problem solving | riešenie problému — The brand focuses on problem solving by offering practical and user-friendly products. | *Značka sa zameriava na riešenie problémov ponukou praktických a užívateľsky prívetivých produktov.*

process | proces — The company improved its marketing process to better respond to customer needs. | *Spoločnosť zlepšila svoj marketingový proces, aby lepšie reagovala na potreby zákazníkov.*

process innovation | procesná inovácia — Process innovation helped the company reduce costs and increase efficiency. | *Procesná inovácia pomohla spoločnosti znížiť náklady a zvýšiť efektivitu.*

process management | procesný manažment, riadenie procesov — Effective process management ensures consistency in service delivery. | *Efektívne riadenie procesov zabezpečuje konzistentnosť poskytovania služieb.*

process optimization | optimalizácia procesov — Process optimization can significantly improve customer experience. | *Optimalizácia procesov môže výrazne zlepšiť zákaznícku skúsenosť.*

process standardization | štandardizácia procesov — Process standardization is essential for maintaining quality across international markets. | *Štandardizácia procesov je nevyhnutná na udržanie kvality na medzinárodných trhoch.*

procurement | obstarávanie — Procurement plays a key role in maintaining efficiency within the supply chain. | *Obstarávanie zohráva kľúčovú úlohu pri udržiavaní efektívnosti v dodávateľskom reťazci.*

procurement process | proces obstarávania — The company improved its procurement processes to ensure timely delivery of materials. | *Spoločnosť zlepšila svoje procesy obstarávania, aby zabezpečila včasné dodávky materiálov.*

procurement strategy | stratégia obstarávania — The procurement strategy supports the company’s ability to deliver consistent product quality. | *Stratégia obstarávania podporuje schopnosť spoločnosti zabezpečiť konzistentnú kvalitu produktov.*

product | produkt — The product must meet the needs and expectations of the target market. | *Produkt musí spĺňať potreby a očakávania cieľového trhu.*

product adaptation | adaptácia produktu — Product adaptation is often necessary when entering foreign markets. | *Adaptácia produktu je často nevyhnutná pri vstupe na zahraničné trhy.*

product adoption | prijatie produktu — Product adoption depends on consumers’ willingness to try something new. | *Prijatie produktu závisí od ochoty spotrebiteľov vyskúšať niečo nové.*

product assortment | sortiment produktov — A wide product assortment allows the retailer to serve different customer segments. | *Široký sortiment produktov umožňuje maloobchodníkovi obslužiť rôzne zákaznícke segmenty.*

product attribute | vlastnosť produktu — Product attributes such as design, quality, and price influence consumer choice. | *Vlastnosti produktu, ako sú dizajn, kvalita a cena, ovplyvňujú výber spotrebiteľa.*

Literatúra | List of References — [1] Cambridge Business English Dictionary. [online]. [cit. 2026-06-19]. Dostupné na: <<https://dictionary.cambridge.org>>

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ON THE PROMINENCE OF
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